

STUDIES ON FOLIICOLOUS FUNGI - IV
A NEW SPECIES OF *ASTERINA* AND KEY TO OTHER SPECIES
ON DIPTEROCARPACEAE

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Abstract

Asterina hopeae is the new species described and illustrated on *Hopea ponga*. Key is provided to other *Asterina* species known on the members of Dipterocarpaceae

Keywords

Foliicolous fungi, Asterina hopeae, new species, Dipterocarpaceae

Abbreviations

TBGT - Tropical Botanic Garden, Thiruvananthapuram

***Asterina hopeae* V.B. Hosagoudar et M. Kamarudeen, sp. nov.**
 (Fig. 1)

Material examined

Holotype: 10.i.2001, M. Kamarudeen HCIO, on leaves of *Hopea ponga* (Dennst.) Mabberley (Dipterocarpaceae), in the campus of Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram, Kerala, India.

Isotype: TBGT

Distribution

India: Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram, Kerala.

Diagnostic features

Coloniae epiphyllae, subdensae, ad 3mm diam., confluentes. Hyphae rectae vel subrectae, alternate vel irregulariter acuteque ramosae, laxe reticulatae, cellulae 16-24 x 3-4µm. Appressoria altemata vel unilateralia, plerumque conoidea, clavata, ovata, attenuata et late rotundata, ad apicem, integra, 6-10 x 4-7µm. Thyriothecia dispersa, raro connata, orbicularia, ad 176µm diam., stellato dehiscentes ad centro, margine fimbriatae, hyphae fringiorae longae, flexuosae; asci numerosi, globosi vel ovati, octospori, ad 45µm diam.;

ascosporae oblongae, conglobatae, brunneae, uniseptatae, constrictae, 24-28 x 11-13µm, parietus glabrus, tuberculatus ad maturitatus.

Colonies epiphyllous, subdense, up to 3 mm in diameter, confluent. Hyphae straight to substraight, branching alternate to irregular at acute angles, loosely reticulate, cells 16-24 x 3-4µm. Appressoria alternate to unilateral, mostly conoid, clavate, often ovate, attenuated and broadly rounded at the apex, entire, 6-10 x 4-7µm. Thyriothecia scattered, rarely connate, orbicular, up to 176µm in diameter, stellately dehisced at the centre, margin fimbriate, fringed hyphae long, flexuous; asci many, globose to ovate, actosporous, up to 45µm constricted at the septum, 24-28 x 11-13µm, wall smooth, tubercled in matured spores.

So far six species of the genus *Asterina* are known on the host genera *Anisoptera*, *parashorea* and *Shorea* of the family Dipterocarpaceae (Hosagoudar & Abraham, 2001). Of these, *Asterina shoreana* Sacc. does not represent external mycelium, while, *A. camarinensis* Sydow & Sydow and *A. anisopterae* Sydow & Sydow have nodulose appressoria in the mycelium (Saccardo, 1924). Hence, these are the doubtful species of the genus *Asterina*. *Asterina hopeae* differs from *A. anisoptericola* Hansf. in having unicellular appressoria and from *A. rizalensis* Hansf. in absence of 90% opposite appressoria (Hansford, 1949).

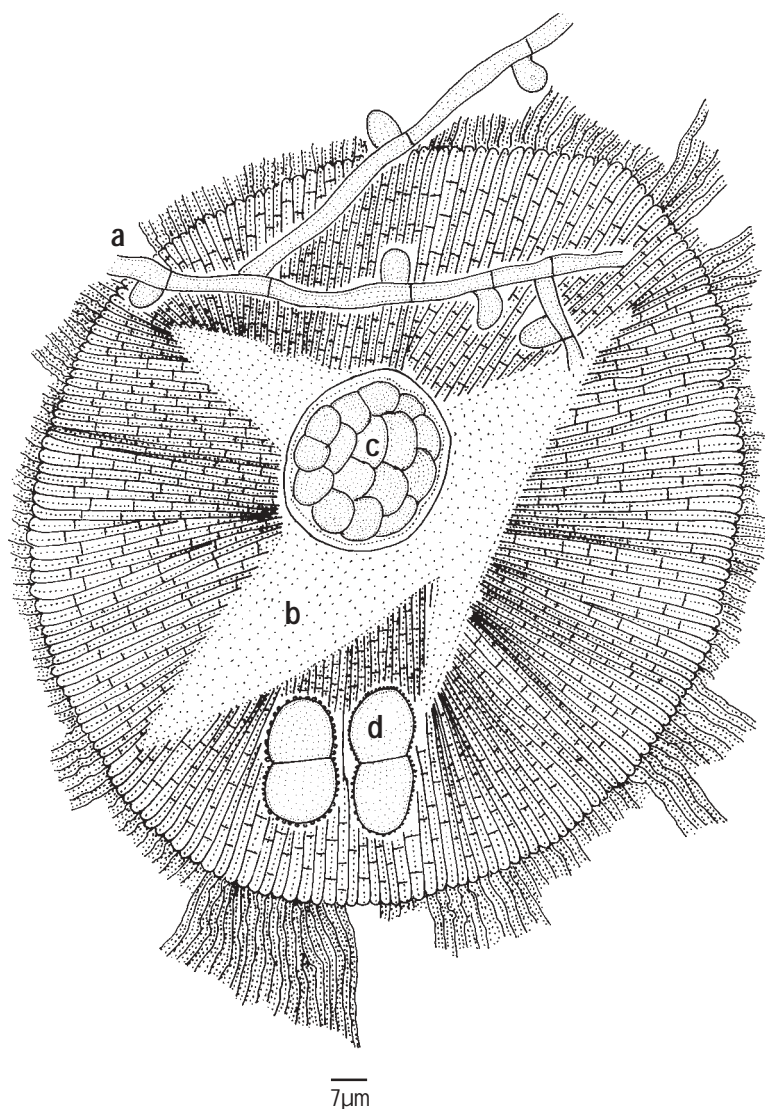


Figure 1. *Asterina hopeae* sp. nov.
 a - Appressoriolate mycelium; b - Staellately dehiscid thyriothecium;
 c - Ascus; d - Ascospores

A. plurispora Ryan, known from India, differs from the present new species in having crook-shaped appressoria.

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References

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Key to *Asterina* species known on Dipterocarpaceae

- 1. Appressoria bicellular *anisoptericola*
- 1A. Appressoria unicellular 2
- 2. Appressoria 90% opposite *rizalensis*
- 2A. Appressoria alternate only 3
- 3. Appressoria crook-shaped, ascospores 40-42 x 24µm *plurispora*
- 3A. Appressoria conoid to ovate, ascospores 24-28 x 11-13µm *hopeae* sp. nov.