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
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, Asterina camarinensis Sydow & Sydow and Asterina anisoptericola Hansf. have nodulose appressoria in the mycelium (Saccard, 1924). Hence, these are the doubtful species of the genus Asterina. Asterina hopeae differs from Asterina rizalensis Hansf. in having unicellular appressoria and from Asterina zizalensis Hansf. in absence of 90% opposite appressoria (Hansford, 1949).
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A. plurispora Ryan, known from India, differs from the present new species in having crook-shaped appressoria.

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References

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.

Figure 1. Asterina hopeae sp. nov.
a - Appressoriate mycelium; b - Staellately dehisced thyriothecium; c - Ascus; d - Ascospores

7µm