



A new species of *Corynespora* from Sonebhadra forest of Uttar Pradesh, India

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Abstract

Corynespora moracina is described and illustrated on *Ficus hispida* (Moraceae) collected from forest flora of Sonebhadra, Uttar Pradesh, India.

Key words – Fungal diversity – foliar disease – morphotaxonomy – Sonebhadra forest – *Corynespora* – new species

Introduction

The genus *Corynespora* caused foliar disease on angiosperms especially in tropical and subtropical regions.

During our survey of the forest region of Sonebhadra of District Mirzapur, Uttar Pradesh, India many collections showing foliar diseases have been collected. Upon critical morphological examination and comparison with closely related taxa *Corynespora moracina* on *Ficus hispida* (Moraceae) appeared as a novel species and is described here.

Materials & Methods

Surface scrapping and free hand cut sections were made with razor blade of infected leaf samples, collected from forest flora of Sonebhadra of district Mirzapur, Uttar Pradesh, (24°42' N to 25°3'55' N and 83°3' 24" E to 83°22'55" E). Sections were taken through infection spots and mounted in lactophenol cotton blue for microscopic examination. Detailed observations of morphological characters were carried out using an Olympus CX-31 light microscope (1000×). Measurements were made of 20 conidia and conidiophores. Line drawings were prepared by camera lucida at a magnification of 1000×. Type specimen has been deposited in Herbarium Cryptogamiae Indiae Orientalis (HCIO), Indian Agriculture Research Institute (IARI), New Delhi and an isotype retained in the departmental herbarium (Banaras Hindu University). Descriptions and nomenclatural details were deposited in MycoBank (www.Mycobank.org).

Results

Taxonomy

Corynespora moracina Archana Singh, Sham. Kumar, R. Singh & Dubey **sp. nov.**

MycoBank MB 801328

Fig. 1

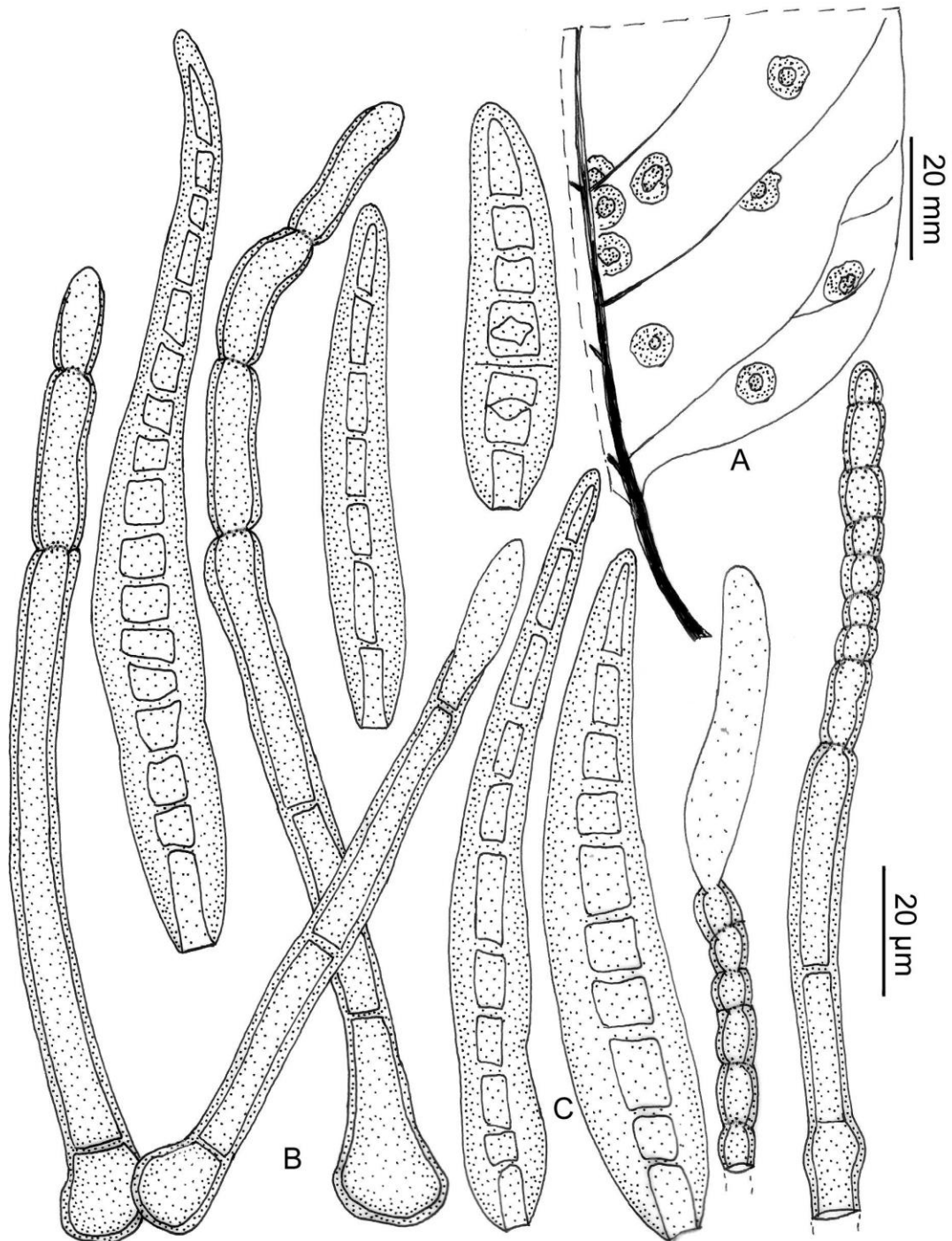


Fig. 1 – *Corynespora moracina*. 1 Infection spots. 2 Conidiophores. 3 Conidia. Bars a = 20 mm, b = 20 µm.

Etymology – *Moracina*, refers to the host family Moraceae.

Infection spots amphigenous, circular to sub circular, spreading on entire leaf surface, greyish brown to dark brown, up to 7 mm in diam. Colonies hyphophyllous, effuse. Mycelium internal, composed of branched, septate, thin-walled, smooth, subhyaline to olivaceous hyphae. Stroma absent. Conidiophores macronematous, mononematous, arising singly from hyphae, erect, straight to flexuous, smooth, thick-walled, cylindrical, unbranched or rarely branched, 2 to 7 septate, 1–8 successive, cylindrical terminal proliferations, dark brown, $135\text{--}412 \times 7\text{--}9 \mu\text{m}$. Conidiogenous cells integrated, terminal to intercalary, monotretic, smooth, cylindrical, scars unthickened, swollen towards apex. Conidia acrogenous, solitary, simple, dry, thin-walled, smooth, straight to slightly curved, obclavato-cylindrical, 5–16 distoseptate, apex obtuse to rounded, base obclavate, light olivaceous-brown, hilum unthickened, $27\text{--}163 \times 12\text{--}20 \mu\text{m}$.

Type: On living leaves of *Ficus hispida* L. (Moraceae), Sonebhadra, (U.P.), India, Nov. 2009, coll., Archana Singh HCIO 50141 (**holotype**), BHU herb No. 9054 (**isotype**).

Literature survey revealed that three species of *Corynespora* have been described on host genus *Ficus* viz. *C. fici-altissimae* Zhang & Xu (2005), *C. fici-benjaminiae* Zang, Fu & Zhang (2009) and *C. ficigena* Singh et al. (2012). Hence the morphological comparison of present species is done with these three closely related taxa for its novelty.

From morphological comparison it is clear that conidiophores are unbranched in previously described closely related species while branched in *C. moracina*. The conidiophores are comparatively longer ($135\text{--}412 \times 6\text{--}8 \mu\text{m}$) in *C. moracina* than those of *C. fici-altissimae* ($30\text{--}65 \times 5\text{--}6 \mu\text{m}$) and shorter than *C. fici-benjaminiae* ($152\text{--}467 \times 5.5\text{--}11 \mu\text{m}$). The conidiophores of present species have fewer (1–8) successive proliferations as compared to earlier described related species (up to 3). The conidia in *C. moracina* are ($27\text{--}163 \times 12\text{--}20 \mu\text{m}$) and average distoseptate (5–16) than *C. fici-altissimae* ($55\text{--}85 \times 9\text{--}12 \mu\text{m}$, 7–13 distoseptate) and *C. fici-benjaminiae* ($51.5\text{--}71 \times 8\text{--}11 \mu\text{m}$, 5–10 distoseptate).

The dimension of conidiophores and conidia of both (*C. moracina* and *C. ficigena*) are similar but *C. moracina* is distinctly different due to presence of unbranched conidiophores as compared to *C. ficigena* having branched conidiophores. Therefore, the present species merits recognition as a new taxon.

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