

## STUDIES ON FOLIICOLOUS FUNGI - XVI *CLASTEROSPORIUM FLAGELLATUM* AND ITS TELEOMORPH

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### ABSTRACT

*Clasterosporium flagellatum* is a new record to India and its teleomorph, *Clasterosphaeria indica*, is a new species. The latter genus is reported here for the first time from India. Both the taxa are described and illustrated in detail.

### KEYWORDS

Clasterosporium, Clasterosphaeria, new species, Kerala, India

### ABBREVIATIONS

HCIO - Herbarium Cryptogamae Indiae Orientalis, New Delhi; TBGT - Tropical Botanic Garden, Thiruvananthapuram

### *Clasterosporium flagellatum* (Sydow) Ellis, 1958

(Fig. 1)

1958. Mycol. Pap. 70: 5. *Cheirpodium flagellatum* Sydow, Ann. Mycol. 13: 42, 1915.

#### Materials examined

22.ix.2002, In the forest near Kusavoor, Palode, Thiruvananthapuram, Kerala, India, on leaves of *Scleria* sp. (Cyperaceae), coll. A. Manojkumar, HCIO 44696 (*p.p.*), TBGT 977 (*p.p.*).

#### Diagnostic features

Colonies foliicolous, amphigenous, on leaf sheaths and stem, black, cause grey lesions, up to 2mm in diameter, confluent. Hyphae straight to slightly flexuous, branching irregular at acute angles, loosely reticulate, cells 32-48x5-7µm. Appressoria scattered, alternate to unilateral, straight to curved, antrorse to retrorse, oval, globose to cylindrical, stellately lobate to irregularly sublobate to deeply lobate up to the base, often bifid, lobes acute to mostly truncate, 19-32x11-26µm. Mycelial setae simple, straight, flexuous to mostly uncinuate, charcoal black, obtuse at the tip, up to 400µm long, 5-7µm broad, wall smooth. Conidiophores arise singly from the sides of the hyphae, upright in position, simple, straight to rarely flexuous, micronematous, mononematous, deep brown to dark brown, aseptate to rarely septate, wall smooth, 15-90x5-7µm. Conidiogenous cells pale brown, monoblastic, terminal, integrated, determinate to percurrent. Conidia straight to slightly curved at the basal portion, acrogenous, simple, obclavate to rostrate, 4-8 septate, deep brown to dark brown at the sub-basal portion, pale brown at the apical portion and the basal cell, truncate at the base, constricted at the septa at the basal portion, 96-210µm long, 5-7 mm broad at the truncate portion, 14-16µm broad at the broadest sub-basal portion, 4-7µm broad at the apical portion, wall smooth.

#### Remarks

This species was known on *Carex breviculmis* from Japan and is reported here for the first time from India on a hitherto unrecorded host plant (Bilgrami *et al.* 1991; Ellis, 1958).

### *Clasterosphaeria indica* V.B. Hosagoudar et

A. Manojkumar, sp. nov.

(Fig. 2)

#### Materials examined

Holotype: 22.ix.2002, In the forest near Kusavoor, Palode, Thiruvananthapuram, Kerala, India, on leaves of *Scleria* sp. (Cyperaceae), coll. A. Manojkumar, HCIO 44696 (*p.p.*).

Isotype: 22.ix.2002, In the forest near Kusavoor, Palode, Thiruvananthapuram, Kerala, India, on leaves of *Scleria* sp. (Cyperaceae), coll. A. Manojkumar, TBGT 977(*p.p.*).

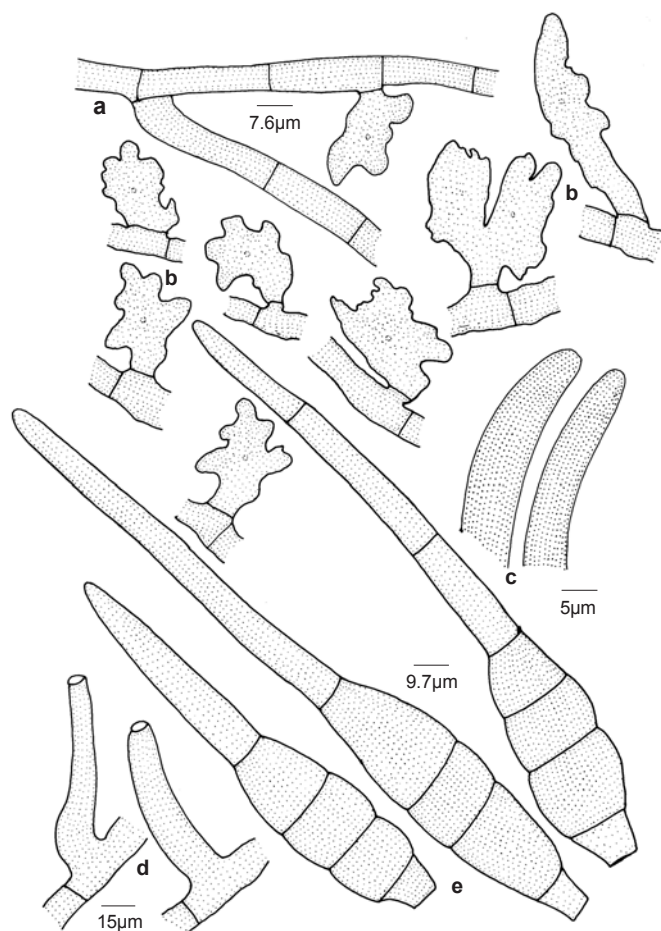
#### Diagnostic features

*Perithecia superficialia, globosa, nigra, amictus setiis myceliales, 250-450µm diam., ostiolata; asci numerosi, plerumque late clavati, saepe cylindrici, octospori, unitunicati et crassa tunicati, apertura apicalis visa, stipitati, 140-160x20-25µm. Paraphysis non visa. Ascospores ellipsoideae vel fusiformae, rectae vel curvulae, hyalinae vel leniter pallidae, 3-septatae, constrictae interiores ad septatis, cellulae terminalis obtusae ad apicem, 43-48x11-13µm, parietus glabrus.*

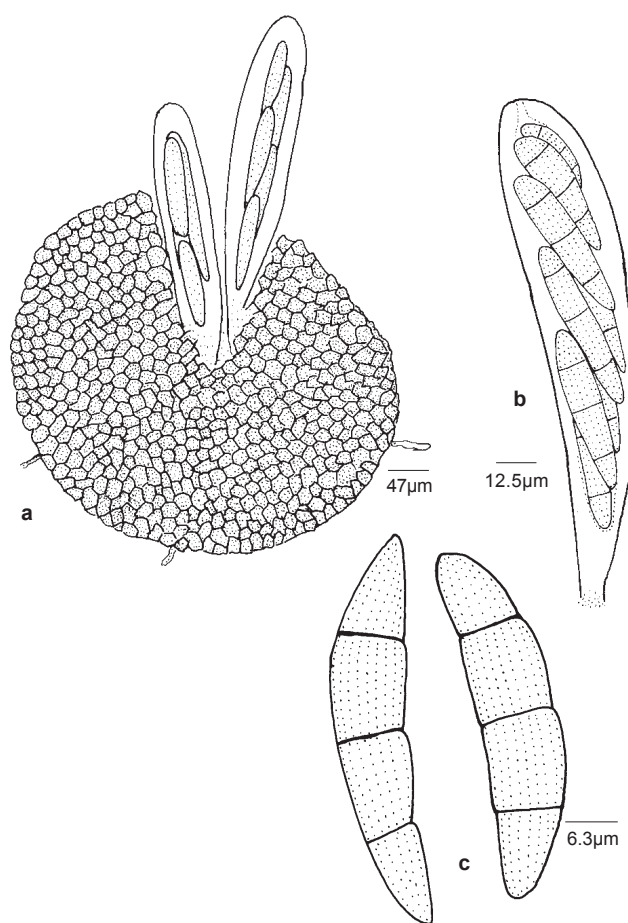
Perithecia superficial, globose, black, covered with uncinuate mycelial setae, 250-450µm in diameter, ostiolate; asci many, mostly broadly clavate, often cylindrical, octosporous, unitunicate but thick walled, apical aperture visible, stipitate, 140-160x20-25µm. Paraphyses not seen. Ascospores ellipsoidal to fusiform, straight to curved, hyaline to slightly pale, 3-septate, inner side slightly constricted at the septa, terminal cells obtuse at the tip, 43-48 x 11-13µm, wall smooth.

#### Remarks

To accommodate the teleomorph of the genus *Clasterosporium*, Sivanesan (1984) proposed the genus *Clasterosphaeria* with the type, *C. cyperi* Sivan. Though, the present teleomorph does not differ much from *C. cyperi* Sivan., to accommodate the teleomorph of *Clasterosporium flagellatum* (Sydow) Ellis, it has been proposed here as a new species. The genus *Clasterosphaeria* is reported here for the first time from India



**Figure 1.** *Clasterosporium flagellatum* (Sydow) Ellis  
 a - Appressoriate mycelium, b - Appressoria, c -  
 Mycelial setae, d - Conidiophores, e - Conidia



**Figure 2.** *Clasterosphaeria indica* V.B. Hosagoudar et  
 A. Manojkumar, sp. nov.  
 a - Broken perithecium with two young asci; b - Ascus;  
 c - Ascospores

and the present addition is the second species of the genus (Bilgrami *et al.* 1991; Sivanesan, 1984).

#### REFERENCES

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- Sivanesan, A. (1984). Teleomorph of *Clasterosporium anamalum* and *C. cyperi*. *Transactions of the British Mycological Society* 83: 710-718.

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