

STUDIES ON FOLIICOLOUS FUNGI VI

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An account is given of three foliicolous fungi from India. Two new species, viz. *Clasterosporium cyperacearum* and *Questieriella grewiae* are described. *Dysrhychnis uncinata* forms a new generic and specific record to India and is reported on an endemic host.

1. *Clasterosporium cyperacearum* Hosag., *spec. nov.* — Fig. 1

Coloniae hypophyllae, densae, anthracinae, ad 10 mm diam., confluentes, portio supra correspondionis pallide. Hyphae rectae vel anfractuae, cinnamomeae, irregulariter ramosae, cellulae, 5–7 µm crassae. Appressoria lateralia, irregulariter dispersa, ovata, globosa, unicellula, stipitata vel sessilia, irregulariter sublobata vel lobata, 16–20 × 8–16 µm. Setae myceliales numerosae, dense dispersae, simplices, rectae vel curvulae, obtusae vel acutae ad apicem, pallid brunneae vel brunneae, ad 400 µm longae. Conidiophora lateralis oriunda, ascendora, integra, unicellula, fusca, 19–32 × 4–7 µm. Conidia terminalia, simplices, solitaria, recta, obclavata, attenuata ad superne et late rotundata ad apicem, truncata ad basim, 115–164 µm longa; 4–6 µm crassa ad apicem, 13–16 µm crassa ad subbasim, 5–8 µm crassa ad basim, ad 8-septatae, raro leniter constrictae ad septae, tunica glabra. Ad folia *Scleria* sp. (Cyperaceae).

Holotypus: India, Kerala, Kombe, Peppara and Neyyar Wildlife Sanctuaries, Thiruvananthapuram, 19 Feb. 1977, V.B. Hosagoudar (HClO 43980; TBGT 4691, isotype).

Colonies hypophyllous, dense, carbonaceous black, up to 10 mm in diam., confluent, inducing yellowing of the corresponding upper surface of the leaf. Hyphae straight to crooked, cinnamon brown, irregularly branched, cells 5–7 µm wide. Appressoria lateral, irregularly scattered, ovate, globose, unicellular, stipitate to sessile, irregularly sublobate to lobate, 16–20 × 8–16 µm. Mycelial setae numerous, densely scattered, simple, straight to curved, obtuse to acute, pale brown to brown, up to 400 µm long. Conidiophores borne laterally, ascending, entire, unicellular, dark brown, 19–32 × 4–7 µm. Conidia borne as blown-out ends, terminal, simple, solitary, straight, obclavate, tapering towards apex and broadly rounded at the tip, truncate at the base, 115–164 µm long; 4–6 µm broad at the tip, 13–16 µm broad at the broadest part, 5–8 µm broad at the base, up to 8-septate, rarely constricted at the septa, wall smooth.

Clasterosporium cyperacearum is similar to *C. caricinum* Schw. and *C. flagellatum* Syd. in having smooth walled conidia (Ellis, 1958, 1971). The new species differs from *C. caricinum* Schw. in having unicellular conidiophores. It also differs from *C. flagellatum* Syd. in having sublobate to deeply lobate appressoria and smaller conidia.

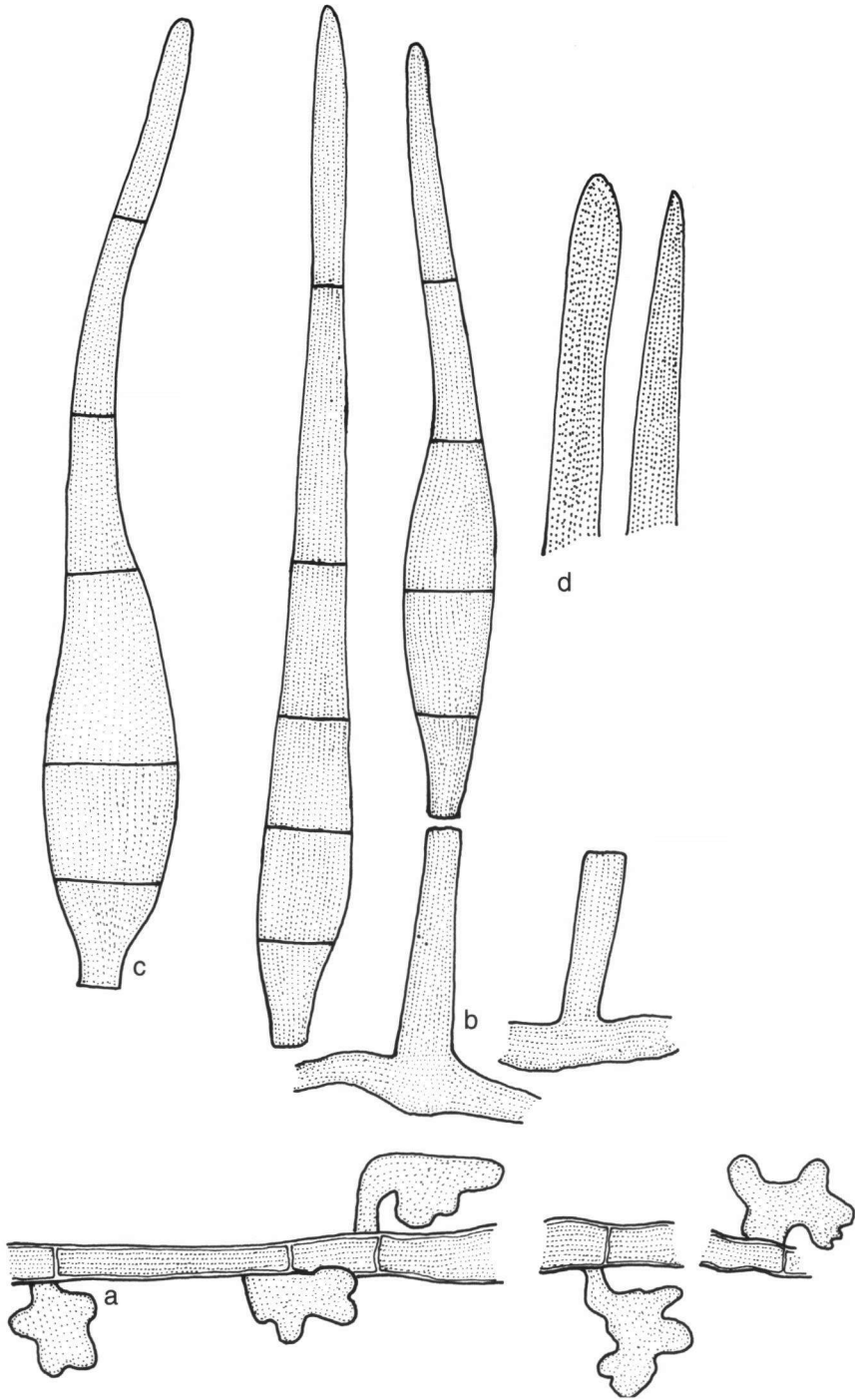


Fig. 1. *Clasterosporium cyperacearum*. a. Appressorium; b. conidiophores; c. conidia; d. setae.

2. *Dysrhyinchis uncinata* (Syd.) Arx in E. Müller & Arx

Dysrhyinchis uncinata (Syd.) Arx in E. Müller & Arx, Beitr. Kryptogamenflora der Schweiz 2 (1962) 191.

Balladyna uncinata Syd., Ann. Mycol. 12 (1914) 546.

Meliolinella uncinata (Syd.) Hansf., Sydowia 9 (1955) 85.

Kusanobotrys bambusae Hino & Katum., Bull. Yamaguti Univ. 5 (1954) 218.

Neoballadyna butleri Boedijn, Persoonia 1 (1961) 398.

Colonies hypophyllous, dense, running parallel along the veins, up to 3 mm long and 1 mm broad, confluent and covering larger leaf areas. Hyphae straight to crooked, branching irregular at acute angles, loosely to closely reticulate, cells 11–15 × 4–7 µm. Appressoria absent. Mycelial setae numerous, carbonaceous black, septa not visible, simple, straight, flexuous, uncinata to arcuate, obtuse to broadly rounded at the apex, up to 140 µm long. Perithecia slightly stipitate, globose, ovate, ostiolate, 32–44 µm in diam.; asci visible in mature perithecia, 1 or 2 in numbers, ovate to globose, octosporous, 35–45 µm in diam.; ascospores conglobate, oblong, brown, 1-septate, constricted at the septum, broadly rounded at both ends, 25–28 × 11–13 µm, wall smooth in young ascospores but distinctly echinulate in germinating ascospores, germinate by producing germ tube.

Material examined. INDIA: Attayar, Peppara and Neyyar Wildlife Sanctuary, Thiruvananthapuram, Kerala, 20 March 1997, on leaves of *Ochlandra travancorica* Benth. ex Gamble (Poaceae), V.B. Hosagoudar (HCIO 43966, TBGT 470).

The present collection differs slightly from earlier records by having shorter mycelial setae and echinulate germinating ascospores. So far *Dysrhyinchis uncinata* (Syd.) Arx was known from the Philippines, occurring on *Schizostachyum* sp., *Bambusa* sp., and *Gigantochloa* sp. (Müller & Arx, 1962). A new generic and specific record for India is therefore described here, occurring on an endemic plant (compare Bilgrami et al., 1991).

3. *Questieriella grewiae* Hosag. & C.K. Biju, *spec. nov.* — Fig 2

Coloniae amphigenae, formans surroundibus insulae, nigrae, densae, ad 5 mm diam., raro confluentes. Hyphae rectae, subrectae, flexuosae vel anfractuae, alternate vel opposite acuteque ramosae, laxae reticulatae, cellulae 25–32 × 4–7 µm. Appressoria alternata, unilateralia, dispersa, hemispherica, integra, 9–12 × 9–10 µm. Conidiophora producentis lateralis, macronemata, mononemata, simplices vel raro ramosa, 0–1-septata, 16–32 × 4–7 µm; cellulae conidiogenae terminaliae, cylindraceae, pallid luteae, 15–17 × 4–7 µm. Conidia ellipsoidea, falcata, 3-septata, leniter constricta, cellulae terminalis acutae et late rotundatae, pallidae, cellulae centralis dense brunneae, conidia 40–48 × 11–13 µm. Ad folia *Grewia* sp. (Tilaceae).

Holotypus: India, Mannavan Shola, near Munnar, Idukki, Kerala, 11 May 1999, C.K. Biju, (HCIO 43972; TBGT 482, isotypus).

Colonies amphigenous, often forming round, isolated patches, up to 5 mm in diam., rarely confluent. Hyphae straight, substraight, flexuous to crooked, branching alternate to opposite at acute angles, loosely reticulate, cells 25–32 × 4–7 µm. Appressoria alternate to unilateral, scattered, hemispherical, entire, 9–12 × 9–10 µm. Conidiophores produced lateral to the hyphae, macronematous, mononematous, simple to rarely branched, 0- or 1-septate, 16–32 × 4–7 µm; conidiogenous cells terminal, cylindrical,

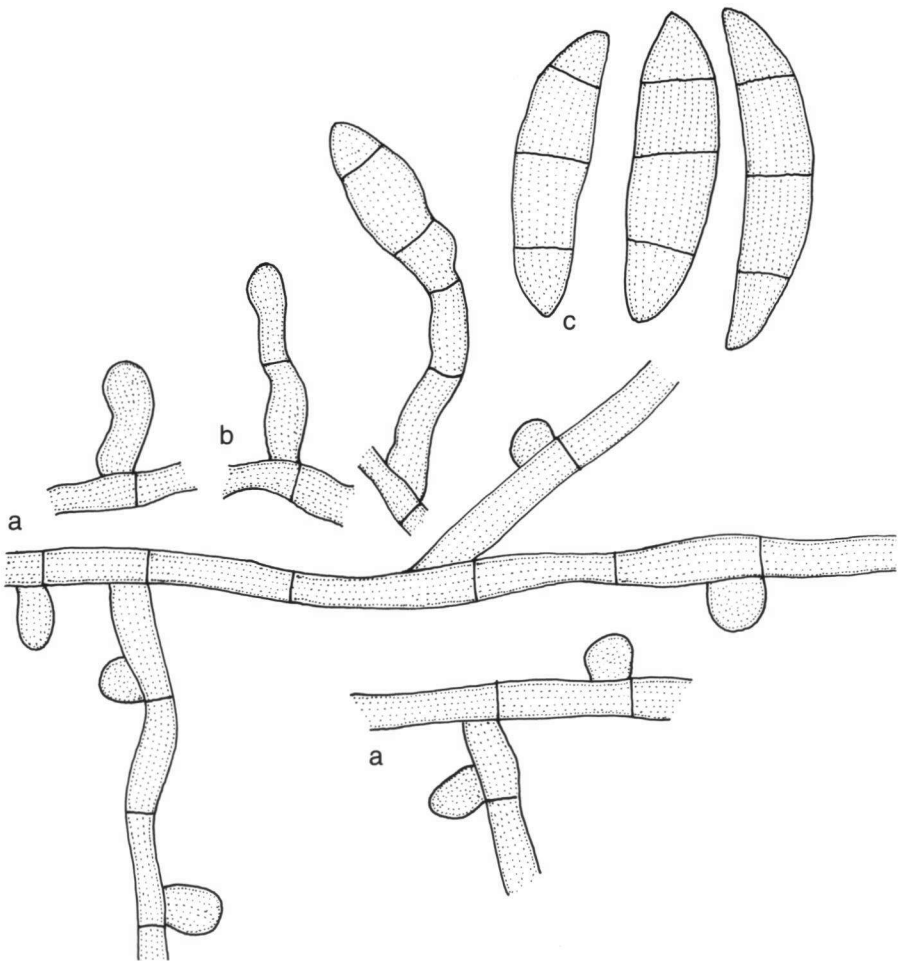


Fig. 2. *Questieriella grewiae*. a. Appressoriate mycelium; b. conidiophores; c. conidia.

pale yellow, $15\text{--}17 \times 4\text{--}7 \mu\text{m}$. Conidia ellipsoidal, falcate, 3-septate, slightly constricted at the septa, terminal cells acute and broadly rounded, pale, middle cells deep brown, conidia $40\text{--}48 \times 11\text{--}13 \mu\text{m}$.

This is the first record of the genus *Questieriella* on members of the family Tiliaceae (Hughes, 1987).

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