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RARE COELOMYCETES FUNGI FROM AMRAVATI INDIA

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Abstract

During mycological investigation and routine collection of rare and interesting fungal specimens, three rare Coelomycetes fungi are belonging to form genera Coryneum, Diachorella and Pestalozziella growing saprophytically on dead stem of Ficus benghalensis Linn. Sehima sulcatum (Hack.) A. and dead unidentified twig of monocot stem respectively. For their specific identity, detailed morphological characters and dimensions of various fruiting bodies of these collections were studied and compared with the already described ones. These collections thus proved to be distinct and as such described here as new species. The exsiccate of these fungi have been deposited in the "Ajrekar Mycological Herbarium", Agharkar Research Institute, Pune, India, under their respective accession numbers.

Keyword*: Mycological, specimens, morphological characters.*

Introduction

In the collection of fungi from different localities of Vidarbha, some were found to be species of *Coryneum, Diachorella* and *Pestalozziella*. These rare fungi are described here under.

Materials and Methods

The specimens were wrapped immediately on collection in butter paper and bagged in separate envelops, with proper indexing. By taking hand sections, semi-permanent microscopic slides were prepared using cotton blue as stain. The materials were studied with the help of relevant keys and literature (Barnett and Hunter 1972; Ainsworth et al 1973; Bilgrami et al 1991; Sarbhoy et al 1996; Jamaluddin et al 2004 and Sutton,1980). The specimens were deposited in Mycological Herbarium, Agharkar Research Institute (ARI) Pune, Pin – 411 004.

Result and Discussion

1. *Coryneum ficium* sp. nov. (Plate I, Fig.1) (Etymology : After host)

Acervuli subepidermal, erumpent, black, shining, elliptic, 400-720 □m; condiophores hyaline to pale brown, septate, simple, 12 – 20 x 3-5 □m; conidia holoblastic, clavate, elongated, brown, smooth, disto-septate, 40 – 64 x 16 – 20 □m.

Acervuli subepidermales, erumpentes, nigri, nitentes, illiptici, 400 – 720 □m; conidiophora hyalina vel pallide brunnea, septata, simpticia, brunnea, laevia, distoseptata, 40 – 64 x 16 – 20 □m.

Matrix: On dead stems of *Ficus benghalensis* Linn. (Moraceae),legit. DVH at Dhamangaon Rly, Distt. Amravati on 08-09-2000, No. AMH. 8786, holotype.

Table 1. Comparison between the species of *Coryneum*

Species	Acervuli	conidiophores	conidia	References
C.glochidicola Seshadri	-	-	29.6 - 44.4 x 5.55 – 6.4 □m	Seshadri V. S. (1966)
C.ajrekarii Patil, S. D.	0.7 – 1.5 □m across	20 – 60 x 4- 7 □m	60 – 100 x 14 – 19 □m	Patil, S. D. (1968)
C. biseptata Kapoor & Munjal	400 – 500 x 300 – 400 □m	20 – 30 x 1.5 □m	11 -13 x 3.5 – 5.5 □m	Kapoor & Munjal (1968)
C. indicum Sutton & Rizwi	upto 600 □m diam.	25 – 40 x 4 – 8 □m	117 – 135 x 17.5 – 19 □m	Sutton & Rizwi (1980)
C. psidii Sutton	upto 250 □m wide	20 – 35 x 3 -5 □m	35 – 48 x 15 – 17 □m	Sharma, N. D. (1980)
C. ficium (under study)	400 – 720 □m	12 – 20 x 3 – 5 □m	40 – 65 x 16 – 20 □m	Author.

On comparison with other species the present collection was found to be different evident from the size of acervulus, conidiophore and conidia (table 1.)

2. *Diachorella sehimae* sp. nov. (Plate I, Fig.2) (Etymology : After host)

Acervuli epidermal, dark-brown, large, measure 0.22 – 0.44 x 1.28 – 1.92 mm; conidiophores simple, hyaline to pale-brown, thin-walled, non-septate, cylindrical, measure 8-16 x 3 – 4 □m; conidia hyaline to pale brown, aseptate, smooth, thin-walled, pyriform, apex prolonged into a filiform, irregular, unbranched, hyaline, non-septate, appendage measure 16 – 76 x 0.8 – 1 □m, conidia measure 15 – 20 x 10 -12 □m.

Acervuli epidermalia, atro-brunnea, longa, magnit. 0.22 – 0.44 x 1.28 – 1.92 mm; conidiophora simplicia, hyalina vel pallide – brunnea, non-septate, cylindricia, magnit. 8 – 16 x 3 – 4 □m; conidia hyalina vel pallide – brunnea, non-

septata, laevia, pyriformia; appendice foliformia, irregularia, non-ramosa, hyalina, non-septata, magnit. 16 – 76 x 0.8 – 1 □m, conidia magnit. 15 – 20 x 10 -12 □m.

Matrix : On dead stems of *Sehima sulcatum* (Hack). A. (Poaceae), legit.DVH at Melghat forest (Distt. Amravati) on 27– 09-2001, No. AMH. 8790, holotype.

Table 2. Comparison between the species of *Diachorella*

Species	Acervuli	conidiophores	conidia	References
D. onobrychidis (De. ex. Fr.) Hohn (Type species)	150 – 250 □m diam x 100□m high	3 – 5 x 1.5 – 3 □m	4.5 – 8.5 □m long	Hohnel, (1918)
D. caraganae (Danilova) Sutton	-	12 – 20 x 1 – 2.5 □m	13 – 42 □m long	Satton (1980)
D. lathyri (Fckl) Sutton	80 – 100 □m diam.	5 -12 x 1.5 – 2.5 □m	10 -30 □m long	Sutton (1980)
D. sehimae (under study)	0.22 – 0.44 x 1.28 –1.98 mm	15 – 20 x 10 -12 □m	16 – 76 x 10 -12 □m	Author

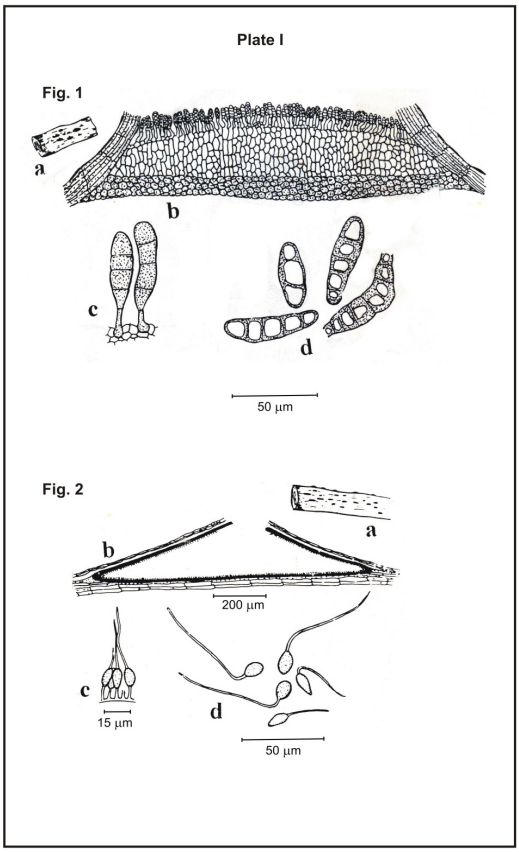
On comparison with other species the present collection was found to be different evident from the size of acervulus, conidiophore and conidia (table 2.)

3. **Pestalozziella kendricka sp. nov**. (Plate II, Fig.3)

Fructifications pycnidial, amphigenons, immersed then erumpent, scattered or aggregate, globose or depressed globose, gelatinous, brown, measure 92 – 132 x 100 – 180 □m; conidiophores cellular, hyaline, smooth-walled, measure 4 – 14 x 1 □m, bearing apical holoblastic conidia; conidia ovoid to oblong, unicellular, hyaline, smooth-walled, measure 10 – 18 x 3 – 4 □m, bearing apical appendages; appendages two to four, filiform, hyaline, divergence, arising simultaneously as apical branches of the narrow apical cell, measure 10 – 22 x 1 □m.

Fructification pycnidium simitis, primum immersa, deinde erumpens, dispers a vel aggregata, primum globosa vel depresse – globosa tandeum poculiformis, gelatinosa, brunnea, magnit. 92 – 132 x 100 – 180 □m; conidiophora unicellularia, hyalina, laevia, magnit. 4 14 x 1 □m; conidis ovodis vel oblongs, unicellularis, hyalinis, laevis, magnit. 10 – 18 x 3 – 4 □m, appendicibus apicalibus in structis; appendices duae ad quatuor, filiformis, hyalinae, at que rames divergentes cellulae angustae apicalis exorientes, magnit. 10 – 22 x 1 □m.

Matrix: On dead monocot stems from Amravati an 15-10-2001, Legit,DVH No. AMH. 9912, holotype.



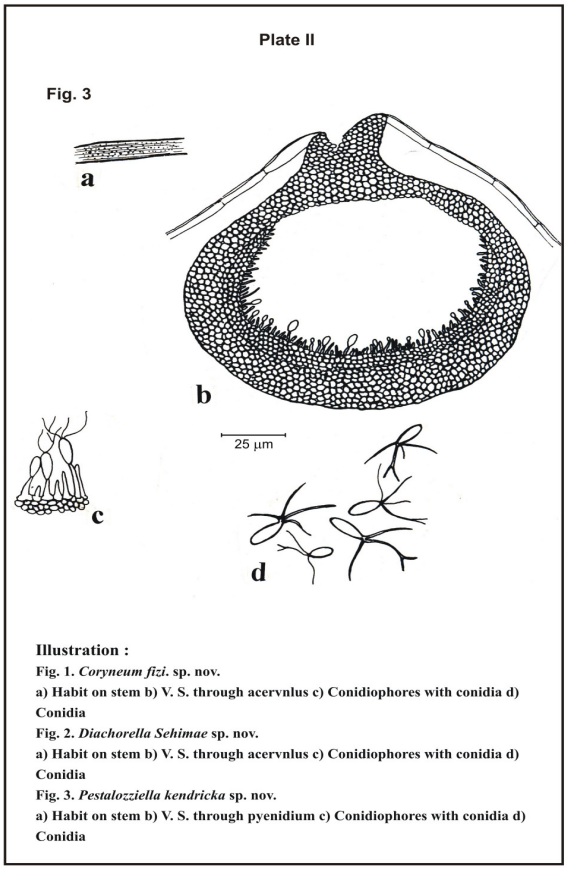


Table 3. Comparison between the species of *Pestalozziella*

Species	Acervnli	conidiophores	conidia	References
P. subsessilis Sacc. & Ell. (Type species)	-	-	14.5 – 22.5	Nag Raj & Kendrick (1972)
P. parva Nag Raj	80 – 190 x 75 – 160 □m	-	5 – 15 x 1.5 - 3.5 □m	Nag Raj (1969)

P. andersonii Ell. & Everh	30 – 75 x 100 – 270 □m	-	12 – 26 x 4.5 – 8.5 □m	Nag Raj & Kendrick (1972)
P. artocarpi Nag Raj & Kendrick	104 – 285 x 95 – 385 □m	2.5 – 56 x 1 - 2 □m	14 – 26.5 x 2.5 – 4.5 □m	Nag Raj & Kendrick (1972)
P. kendricka (Under Study)	92 – 132 x 100 – 180 □m	4 – 14 x 1 □m	10 -18 x 3 – 4 □m	Author

On comparison with other species the present collection was found to be different evident from the size of acervulus, conidiophore and conidia (table 3.)

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