

RARE COELOMYCETES FUNGI FROM AMRAVATI INDIA

Hande D.V.

Department of Botany, Shri Shivaji Science College, Amravati-444 603, M.S., India.
(E-mail: dvhande@rediffmail.com)

ABSTRACT

During mycological investigation and routine collection of rare and interesting fungal specimens, three rare Coelomycetes fungi belonging to form genera *Coryneum*, *Diachorella* and *Pestalozziella* growing saprophytically on dead stem of *Ficus benghalensis* Linn. *Sehima sulcatum* (Hack.) 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.

KEY WORDS: Coelomycetes, *Coryneum*, *Diachorella*, Fungi, *Pestalozziella*.

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 envelopes, 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, Figure1)
(Etymology : After host)

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

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

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

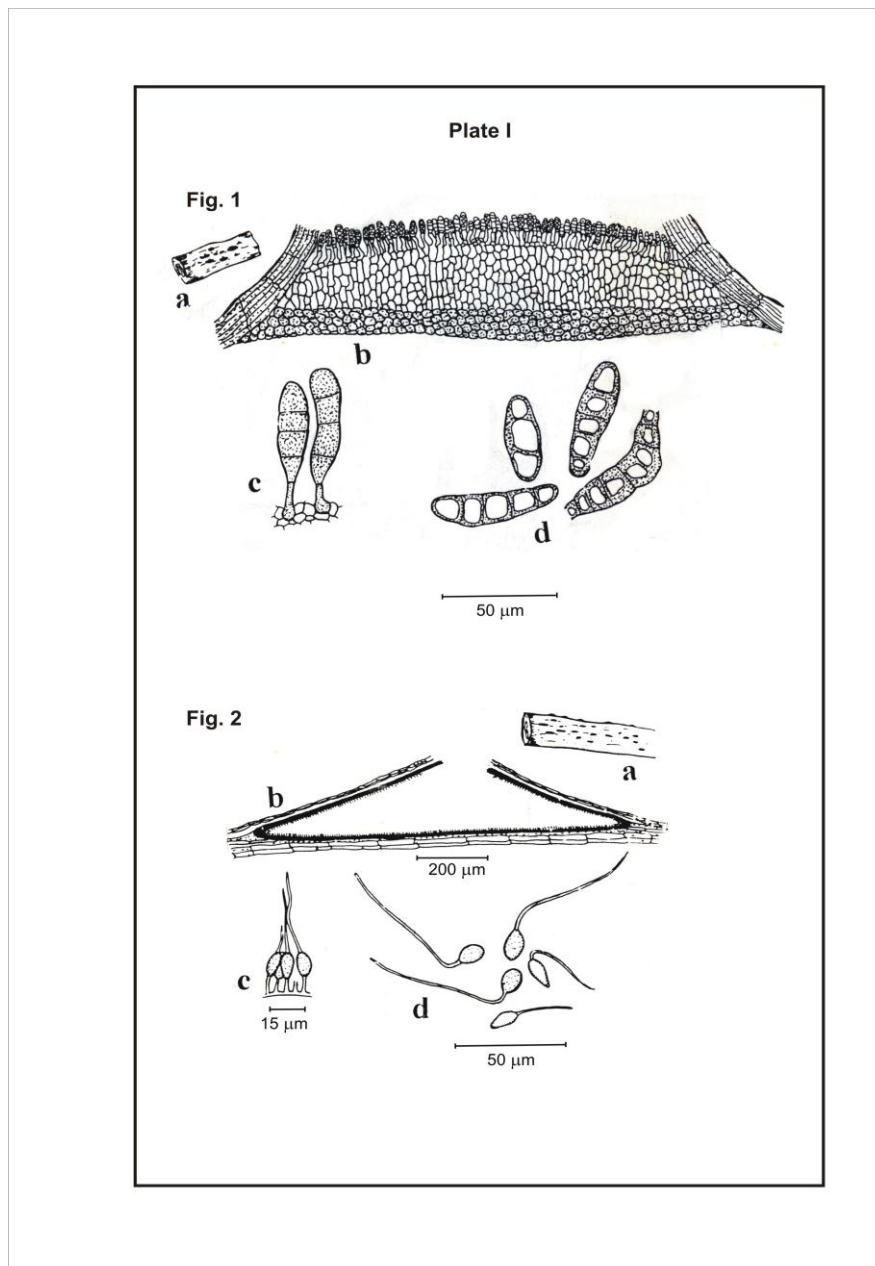


Plate I, Figure 1. - *Coryneum ficium* sp. nov.

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, Figure 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 μ 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 μ m, conidia measure 15 – 20 x 10 -12 μ 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, cylindrica, magnit. 8 – 16 x 3 – 4 μ 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 μ m, conidia magnit. 15 – 20 x 10 -12 μ 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.

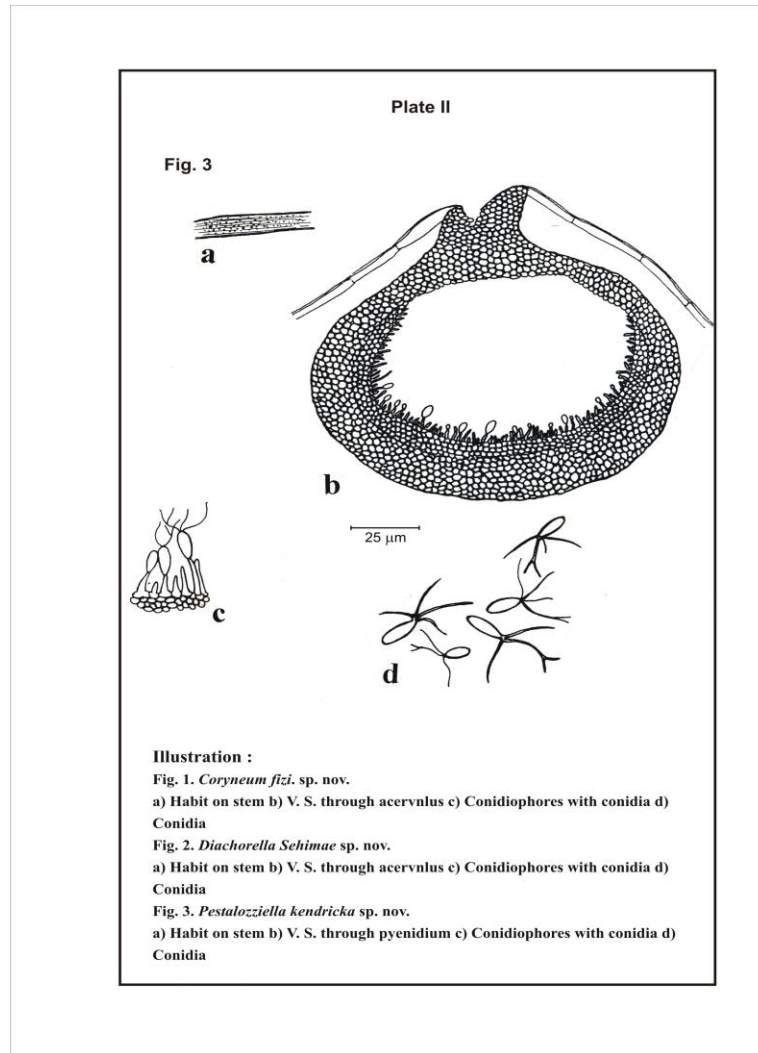


Plate II

Table 2. Comparison between the species of *Diachorella*

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

Fructifications pycnidial, amphigenous, immersed then erumpent, scattered or aggregate, globose or depressed globose, gelatinous, brown, measure 92 – 132 x 100 – 180 µm; conidiophores cellular, hyaline, smooth-walled, measure 4 – 14 x 1 µm, bearing apical holoblastic conidia; conidia ovoid to oblong, unicellular, hyaline, smooth-walled, measure 10 – 18 x 3 – 4 µm, 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 µm.

Fructification pycnidium simititis, primum immersa, deinde erumpens, dispersa vel aggregata, primum globosa vel depresso – globosa tandem poculiformis, gelatinosa, brunnea, magnit. 92 – 132 x 100 – 180 µm; conidiophora unicellularia, hyalina, laevia, magnit. 4 14 x 1 µm; conidis ovoidis vel oblongis, unicellularis, hyalinis, laevis, magnit. 10 – 18 x 3–4 µm, appendicibus apicalibus instructis; appendices duae ad quatuor, filiformis, hyalinae, atque rames divergentes cellulae angustae apicalis exorientes, magnit. 10 – 22 x 1 µm.

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

Table 3. Comparison between the species of *Pestalozziella*

Species	Acervuli	conidiophores	conidia	References
<i>P. subsessilis</i> Sacc. and Ell. (Type species)	-	-	14.5 – 22.5	Nag Raj and Kendrick (1972)
<i>P. parva</i> Nag Raj	80 – 190 x 75 – 160 µm	-	5 – 15 x 1.5 - 3.5 µm	Nag Raj (1969)
<i>P. andersonii</i> Ell. and Everh	30 – 75 x 100 – 270 µm	-	12 – 26 x 4.5 – 8.5 µm	Nag Raj and Kendrick (1972)
<i>P. artocarpi</i> Nag Raj and Kendrick	104 – 285 x 95 – 385 µm	2.5 – 56 x 1 - 2 µm	14 – 26.5 x 2.5 – 4.5 µm	Nag Raj and Kendrick (1972)
<i>P. kendricka</i> (Under Study)	92 – 132 x 100 – 180 µm	4 – 14 x 1 µm	10 -18 x 3 – 4 µm	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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