

Dictyoarthrinium anamorphic fungi from Amravati region (MS) India.

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ABSTRACT

During mycological survey of Amravati District, many interesting fungi has been collected, among collected various species; a rare species *Dictyoarthrinium microsporum* has been reported in during survey. For the specific identification of species; morphological characters and dimension of various fruiting bodies were studied. These collections proved to be distinct as such described here rare hyphomycetes fungal species. The exsiccata of these fungi have been deposited in Ajrekar Mycological Herbarium of Agharkar Research Institute, Pune under their respective accession numbers. The present paper deals with description *Dictyoarthrinium microsporum*,

KEYWORDS

Dictyoarthrinium microsporum,
Hyphomycetes
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INTRODUCTION

The anamorphic fungi are a group of microfungi that are reproduced asexually. (Kirk et al., 2001). The Hyphomycetes produce conidia directly from vegetative structures or on distinct conidiophores. The genus *Dictyoarthrinium* is characterized by muriform conidia borne on terminal and lateral, septate, basauxic conidiophores Hughes (1952). Subramanian (1952) reported *D. quadratum* first time from India. Nair and Tyagi (1961) reported same fungi from Rajasthan. Rao and Rao (1964) reported *D. liliputeum* and *D. microsporum* new species from Hyderabad. A synnematosus species of *Dictyoarthrinium* from Thailand is reported by Sayanh Somrithipol (2007). This is first case of report of *Dictyoarthrinium* species Amravati region.

MATERIALS AND METHODS

Decaying bamboo culms were collected at Melghat forest. Samples were wrapped in butter paper and place in envelop and returned to the laboratory for examination. They were cut in small pieces and incubated in plastic containers lined with moist filter

paper. Permanent slides were prepared using lactophenol cotton-blue as mounting medium. Slides were observed and fungus identified on the basis of morphological characteristics.

RESULTS AND DISCUSSIONS

Dictyoarthrinium microsporum:

Colonies pulvulent, black, powdery, irregular up to 1mm wide, often coalescing. Mycelium composed of closed network of pale brown hyphae, septate, septa upto 11 μ apart, anastomosing, hyaline to sub hyaline. Conidiophore crowded simple and aggregated, straight or slightly curved pale brown, 75-206 μ long, 5-8 μ wide unbranched with transverse septa appearing as dark bands, distance between septa is up to 15 μ . Conidia dark brown on maturation thick walled, dictyosporous. warty, crucially septate with four cell, squarish in outline and constricted at septa 9-12 μ in diameter attached to conidiophores laterally or apically. Apical conidia borne on the apex are sessile, lateral conidia many arising from cells of conidiophores in single whorls. Above characters are compared with already described species of *Dictyoarthrinium*.

Table 1: Comparison of different species of *Dictyoarthrinium*

Name of species	Conidiophore (μ)	Conidia (μ)	Authors
<i>Dictyoarthrinium quadratum</i>	155 μ long, 3-5 μ wide	11-13 μ diameter, 8-10 μ thick, 4 celled conidia, verrucose	(Subramanian, 1952)
<i>D. liliputium</i>	36-54 μ long, 3.6-6.4 μ wide	7-15 μ diameter, 4 celled, warty	(Rao and Rao, 1964)
<i>D. sacchari</i>	55-124 μ long, 4-5.5 μ broad	11-14 μ diameter, verrucose, 4 celled	(Nayar and Tyagi, 1961)
<i>D. synnematum</i>	450 μ long, 4-5 μ wide	10-14 μ diameter, 4 celled, Synnemata present.	(Sayanh, 2007)
<i>D. microsporum</i> (under study)	75-255 μ long, 5-9 μ wide	6.8-11 μ diameter warty, 4-celled	(Rao and Rao, 1964)

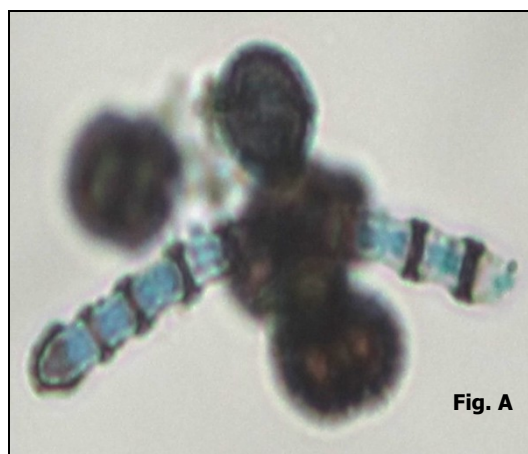


Fig. A



Fig. B

Fig. A & B. Conidiophore with conidia

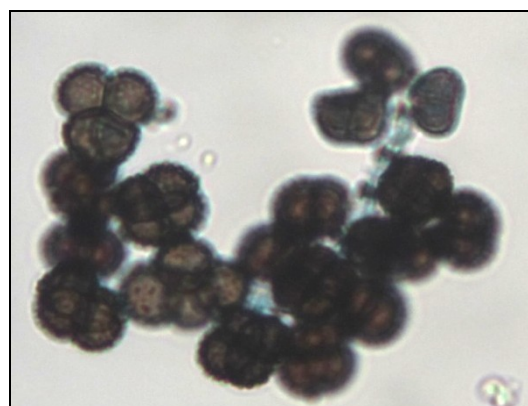


Fig.C: Conidia

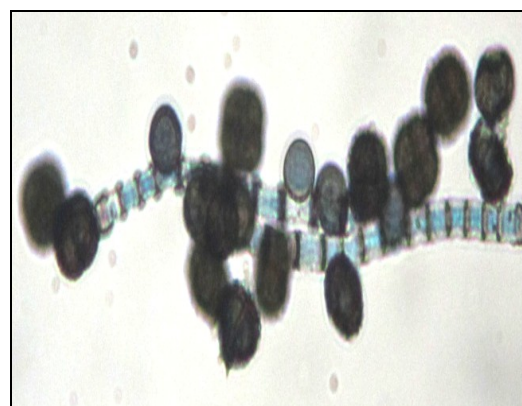


Fig. D: Apical sessile conidia

CONCLUSION

From the description and comparison of the present *Dictyoarthrinium* species with other species it is clear that the conidia are smaller hence it is described as *Dictyoarthrinium microsporum*. It is rare one and first time reporting from Amravati region of Maharashtra.

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