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RNI MAHMUL/2011/38595

ISSN No.2231-5063

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## FRESH WATER FUNGI FROM SUKI RIVER, DIST. JALGAON (M.S)



V. R. Patil<sup>1</sup> and L. C. Nemade<sup>2</sup>

### INTRODUCTION

Freshwater Mitosporic fungi are characterized as those dwell in freshwater ecosystems for all or part of their life cycle. According to Goh and Hyde, 1996; Chan et al., 2000; Descals and Moralejo, 2001, this definition of freshwater fungi is vague, as it includes all fungi that may be present in a freshwater environment regardless of their origin. The isolated fungi from freshwater habitats in this work show that there are plenty of higher fungi (Ascomycota, Basidiomycota, and Anamorphic / Mitosporic fungi) in freshwater environment. Most of the species have been described and recorded from terrestrial samples before. The results are in accordance with the broad definition of freshwater fungi (Thomas, 1996). Furthermore, Cai et al. (2003) noted "of the 58 species of fungi identified from bamboo submerged in the Liput River, 18 species overlapped with those on terrestrial bamboo samples in the Philippines, Hong Kong and China". The above examples demonstrate that many species from freshwater environment also exist in terrestrial ecosystems.

### Abstract

*The present paper deals with three species of Mitosporic fungi viz Pleiochaeta setosa (Kirchn.) Hughes Retiarius bovicornutus Olivier, Subulispora procurvata Tubaki, Conidia of these fungi were encountered in foam samples from freshwater habitats. All of these are being recorded as addition to the fungi of Maharashtra state (India). The data provides information on the distribution of these fungi in India, apart from description and illustrations.*

**Keywords :** Freshwater, foam samples, Mitosporic fungi, suki river.

### SHORT PROFILE

The present paper deals with eleven species of Anamorphic / Mitosporic fungi viz., Pleiochaeta setosa (Kirchn.) Hughes Retiarius bovicornutus Olivier Subulispora procurvata Tubaki, Conidia of these fungi were encountered in foam samples from freshwater habitats. All of them are being recorded for the first time from Maharashtra state (India). The data provides information on the distribution

of these fungi in India, apart from description and illustrations.

### MATERIALS AND METHODS:

The foam is a mass of bubbles of air or gas in a matrix of liquid film, especially an accumulation of fine and frothy bubbles formed in or on the surface of a liquid. In freshwater habitats, foam is formed by the movement of the water against natural barriers like stones, logs, twigs, especially in lotic habitats, constitutes a natural trap for the conidia of freshwater Mitosporic fungi. In the present studies, foam samples were collected at morning and evening time from study sites.

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Approx. 10 ml of foam formed due to fast flowing turbulent water at each study site was collected in plastic bottles and kept for 24 hours to enable the foam to dissolve. Samples of foam were fixed in FAA to yield 5 % foam solution at the collection spot or fixed in FAA taking 4 ml foam solution and 1 ml FAA. These foam samples were brought to the laboratory and examined under a low or high power of microscope using 15X Eyepiece to detect the conidia of freshwater Mitosporic fungi.

Permanent voucher slides of fungi were prepared according to the "double cover glass method" described by Volkmann-Kohlmeyer and Kohlmeyer (1996). Identifications of the encountered fungi were confirmed with the help of Ellis (1971), Hudson and Ingold (1960), Ingold (1942), Jones and Slooff (1966), Kagel (1906), Kuthubutheen and Nawawi (1987), Matsushima (1975), Olivier (1978), Sutton (1980), Sutton and Alcorn (1990), and Tubaki and Yokoyama (1971). Reports of the fungi studied were confirmed with the help of Bilgrami et al. (1991), Sridhar et al. (1992), Jamaluddin et al. (2004) and relevant literature.

#### Systematic account:

1) *Pleiochaeta setosa* (Kirchn.) Hughes  
Mycol. Pap., 36: 39 (1951).  
= *Ceratophorum setosa* Kirchn., Z. Pflk. Pflp. Pfls., 2: 324 (1892).

**Conidia:** 4-8-septate, 60-90 x 14-22  $\mu\text{m}$ , scar 7-11  $\mu\text{m}$  wide, appendages up to 100  $\mu\text{m}$  long, 3-4  $\mu\text{m}$  thick at the base, tapering to about 1  $\mu\text{m}$ .

**Habitat:** Conidia in foam samples; Suki River (Garkheda, Tal.- Raver, Dist.- Jalgaon), 15Aug. 2013; Leg., V.R.Patil

**Distribution in India:-** Maharashtra: Conidia in foam samples (Present).

#### 2) *Retiarius bovicornutus* Olivier

Trans. Br. Mycol. Soc., 71: 195 (1978).

**Conidia:** hyaline, septate, branching symmet-

rically from the main axis. Main axis is 15-20  $\mu\text{m}$  long, 2-3-septate, branches 30-45  $\mu\text{m}$  long, 4-5-septate, slightly incurved at tips.

**Habitat:** Conidia in foam samples; Suki River (Garkheda, Tal.- Raver, Dist.- Jalgaon), 15Aug. 2013; Leg., V.R.Patil

**Distribution in India:-** Karnataka: On bracket leaves and trapeed leaf litter of a fern *Drynaria quercifolia* (Sridhar et al., 2006); Maharashtra: Conidia in foam samples (Present studies).

#### 3) *Subulispora procurvata* Tubaki

Trans. Mycol. Soc. Japan, 12: 20 (1971).

**Conidia:** subuliform, hyaline; base abruptly truncate, tip acute and bent sharply, 34-45  $\mu\text{m}$  long, including bent apical part; continuous, but frequently one or two septa may lie down at middle and upper, become empty at maturity, 2-3  $\mu\text{m}$  wide at lower part.

**Habitat:** Conidia in foam samples; Suki River (Garkheda, Tal.- Raver, Dist.- Jalgaon), 15Aug. 2013; Leg., L.C.Nemade

**Distribution in India:-** Karnataka: On submerged leaves (Rajashekhar and Kaveri appa, 1992); Maharashtra: Conidia in foam samples (Present studies).

#### ACKNOWLEDGMENTS:

Authors are thankful to Dr. R.T. Chaudhary, Principal S.V.S. Naik Arts, Comm. and Sci. college, Raver-425508, Maharashtra for providing laboratory and library facilities. We are thankful to Dr. B.D.Borse, Principal, U.P.College, Dahivel providing pdf files of rare research articles on aquatic fungi.

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**Fig. Legends:**

**Fig. 3. *Pleiochaeta setosa* (Kirchn.) Hughes,**



**Fig. 5. *Retiarus bovicornutus* Olivier,**



**Fig. 7. *Subulispora procurvata* Tubaki,**



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