Aquatic hyphomycetes from Union Territory of India, Dadra, Nagar Haveli

Sapkale A B and Borse K N

S.S.V.P. S’s L. K. Dr. P. R. Ghogrey Science College, Dhule, (M.S.) India 424002.
*Email: kingborse@rediffmail.com

INTRODUCTION

The saprobe, parasites, endophytes, and mutualistic species are comprised in “Freshwater fungi”. They play an important role in breakdown and mineralization of organic matter in freshwater environment. Freshwater environment has a wide range of micro-habitats and substrates like submerged leaves, submerged woody debris. Aquatic hyphomycetes are found in all types of freshwater habitats like lotic and lentic water includes lakes, ponds, rivers, streams, ditches, wasteland etc. Aquatic hyphomycetes also termed as freshwater hyphomycetes (Nilsson, 1964), Ingoldian fungi (Webster and Descals, 1981), Water-borne Hyphomycetes (Webster and Descals, 1979). Investigation on aquatic fungi in India was carried by Patil and Kapadnis, 1980; Subramanian and Bhat, 1981; Sridhar and Kaveriappa, 1984, 1985,1986, 1989; Borse and Patil, 2007; Pawara et al., 2009; Patil et al., 2014; Patil and Borse, 2015; Jadhav and Borse, 2017a, 2017 b. The present study reports six Species of hyphomycetes from Vaghchauda boating point (Madhuban dam), Sakaltond River and Talavali from Union Territory of India, Dadra, Nagar Haveli.

MATERIALS AND METHODS

The foam is formed from movement of water against natural barriers like stones, twigs, logs, constitutes a natural trap for the conidia of Aquatic Hyphomycetes specially in lotic systems. Foam samples were collected in clean wide mouthed plastic bottles and it was preserved by FAA. After 24 hours to enable the foam is dissolve. The samples were brought to the laboratory and observed under research microscope for the presence of conidia of Hyphomycetes. The slides were made permanent by using double cover glass method given by Volkman-Kohlmeier and Kohlmeyers (1996). Identification of species with the help of Ingold CT (1942, 1975).

RESULTS AND DISCUSSION


Conidia: mostly with four cells to each column, 25-40 × 14-30 µm, with septate appendages 12-80 µm long, 5-8 µm thick at the base, 2-4 µm at the apex.
Sometimes a second type of conidium is formed with 2 cells to each column, 8-18 × 7-12 μm, with appendages 90-320 μm long, 3-6 μm thick at the base and 1-2 μm at the apex.

**Habitat:** Conidia in foam sample, Vagchauuda boating point (Madhuban Dam), 09 Aug 2015. **Leg. A.B. Sapkale**

**Distribution in India:** Andhra Pradesh, Karnataka (Sridhar et al., 1992); Maharashtra (Patil, 2003); Madhya Pradesh: (Upadhyaya et al., 2012); Tamil Nadu: (Udaiyan and Monian, 1991).

**Remark:** It is being reported for first time from Dadra, Nagar Haveli.


**Conidia:** Y-or V-shaped, light brown, 8-celled, consisting of a 2-celled 30-47μm long main axis and two divergent 25-38 x 10-12μm, bilaterally symmetrical appendages, each with 2 oblique septa and with two terminals 34-40 x 1.5-2μm, hyaline non-septate projections. The basal cell of the axis is 8-10 x 3-4μm.

**Habitat:** Conidia in foam sample, Vagchauuda boating point (Madhuban Dam), 09 Aug 2015. **Leg. A. B. Sapkale**

**Distribution in India:** Uttarakhahend: (Belwal and Sati, 2007); Maharashtra: (Pawara et al., 2009).

**Remark:** It is being reported for first time from Dadra, Nagar Haveli.


**Conidia:** multi-radiate, consisting of a main axis and 5 to 10 radiating arms. Main axis 14-30x 1.5-22μm, septate with terminal cell obclavate, each arm 8-14 septate, 50-90 x 4.5-5 μm.

**Habit:** Conidia in foam sample, Sakaltondriver, Talavali **Leg. A. B. Sapkale**

**Distribution in India:** Karnataka (Sridhar and Kaveriappa, 1984, 1986, 1989; Ramesh and Vijaykumar 2000) Kerala (Sridhar and kaveriappa, 1985); Maharashtra: (Patil and Kapadnis, 1980) Western Ghats (Subramanian and Bhatt, 1981)

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Six species of freshwater borne hyphomycetes encountered in foam samples of Sakalton River and Madhuban Dam from Dadra, Nagar Haveli. Frequency occurrence of fungi found is not similar. *Diplocladiella longibrachiata* and *Diplocladiella sclaroideas* are common in occurrence while *Tetraploa aristata*, *Fabellospora acuminata*, *Fabellospora multiradiata* and *Fabellospora verticillata* are occasional in occurrence.

http://bioscienceediscovery.com 811  ISSN: 2231-024X (Online)

ACKNOWLEDGEMENT
The author is thankful to Principal Dr. M. V. Patil and Dr. Sandhya Patil, Head, P.G. Department of Botany, S. S. V. P. Sanstha’s L. K. Dr. P. R. Ghogrey Science College, Dhule (M. S.) for library and laboratory facilities.

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Sapkale and Borse


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How to cite this article