WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Aquatic Hyphomycetes from Dang District of Gujarat

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ABSTRACT:

The present paper deals with three species of Aquatic fungi belonging to two genera of hyphomycetes isolated from foam samples collected from the Gira river of Dang District. The foam spora of this region represents mixture of both tropical and temperate species. Brief notes and illustration are given for each taxon. Geographical distribution of each species in India is also provided.

Key Words: Aquatic hyphomycetes, Dang, Gujarat.

Introduction:

The occurrence of water borne hyphomyectes was studied from various parts of India by Ingold and Webster (1973), Subramanian and Bhat (1981), Shridhar *et. al*. (1992), Galiah and Manoharachary (1987), Agrawal *et. al*. (1990), Sati and Tiwari (1997), Sati *et. al*. (2002), Rajshekhar and Kaveriappa (2003).

In Maharashtra, these fungi were reported by Thakur (1977), Patil and Kapadnis (1980), Talde (1981), Patil (1998), Borse and Patil (2006), Borse and Patil (2007), Nemade *et. al*. (2009). In the present investigation three species of aquatic hyphomycetes studied from foam samples from the Gira river of Dang District were reported.

Materials and Methods:

The foam samples were collected from the Gira river of Dang District (**Gujarat**) during August 2023. Soon after collection in small plastic vials, the foam was fixed by adding a few drops of formalin - acetic acid- alcohol (FAA) mixture. They were latter scanned under microscope in the laboratory for the presence of conidia.

The encountered fungal species were identified with the help of Ingold (1975), Marvanova (1997). The distribution of these fungi were confirmed with the help of Kamat *et. al*. (1971), Bhide *et. al*. (1987), Bilgrami *et. al*. (1991), Sarbhay *et. al*. (1986, 1996), Shridhar *et. al.* (1992), Jamaluddin *et. al.* (2004) and relevant literature.

Result and Discussion:

Isthmotricladia gombakiensis Nawawi (Plate - 1, Fig. 1)

Trans. Br. Mycol. Soc., **64:** 243, 1975.

Conidia: hyaline, main axis 20 - 27 X 2 - 3 µm, 1 - 3 septate, mature conidia consisting of four to six arms, the arms are fusiform, 74 - 102 µm long, 4 - 5.5 µm wide, 9 - 15 septate, tapering to 1 - 1.5 µm at the apex by very narrow isthmus, 2 - 4.5 µm long, 1 - 1.5 µm wide.

Habitat: Conidia found in foam samples of the Gira river.

Distribution in India: Karnataka: (Sridhar and Kaveriappa, 1982, 1984a,; Ramesh and Vijaykumar, 2000); Andhra Pradesh: (Sarma and Manoharachary, 1989); Western Ghats: (Rajashekhar and Kaveriapp, 2003); Maharashtra: (Borse and Patil, 2006; Nemade *et. al.*, 2010, 2016; Wagh *et. al.* 2009, 2014); Madhya Pradesh (Chaudhari *et. al.* 2016).

Isthmotricladia laeensis Matsushima (Plate - 1, Fig. 2)

Microf. Soloman., 1st Kobe., P.33, 1971.

Conidia: stalked clavate, as wide as branches, mostly shorter than branches, three branches, 70 - 100 µm long, basal branching of the arm initial arising from the stalk cell.

Habitat: Conidia found in foam samples of the Gira river.

Distribution in India: Karnataka (Sridhar and Kaveriappa, 1984b, 1988d), Kerala (Sridhar and Kaveriappa, 1985a). Maharashtra (Borse and Patil, 2006; Patil *et*. *al.* 2011; Nemade *et*. *al.*, 2010, 2016; Wagh *et*. *al.* 2009, 2014), Madhya Pradesh (Chaudhari *et*. *al.* 2016).

Tetracladium setigerum (Grove) Ingold (Plate - 1, Fig.3)

Trans. Br. Mycol. Soc., **25:** 396, 1942.

= *Tridentaria setigera* Grove

Jour. Bot., **50:** 16, 1912.

= *Cerasterias raphidioides* Reinsh var. *incrassate* Reinsh

Notarisia ., **3:** 512, 1888.

Conidia: tetraradiate, hyaline, consisting of four divergent arms, arms 20 - 50 µm long and 3 µm wide with 3 elongated, 2 - 3 septate, 12.5 - 14 µm long and 4 - 5 µm wide finger like processes arising above the point of divergence of arms.

Habitat: Conidia found in foam samples of the Gira river.

Distribution in India: Maharashtra (Thakur, 1977; Patil and Kapadnis, 1980; Borse and Patil, 2006; Nemade *et*. *al.*, 2010, 2016; Patil *et*. *al.* 2011; Wagh *et*. *al.* 2009, 2014).

Western Ghat (Subramanian and Bhat, 1981).

Conclusion:

Conidia of *Isthmotricladia gombakiensis* and *Isthmotricladia laeensis* were observed in most of the foam samples. Conidia of *Tetracladium setigerum* were rarely observed.

Acknowledgements:

The author C. M. Pawara is thankful to Prin. Dr. S. S. Rajput, Principal, SPDM Arts, SBB and SHD Commerce and SMA Science College, Shirpur, Dist. Dhule for Laboratory facilities and encouragement.

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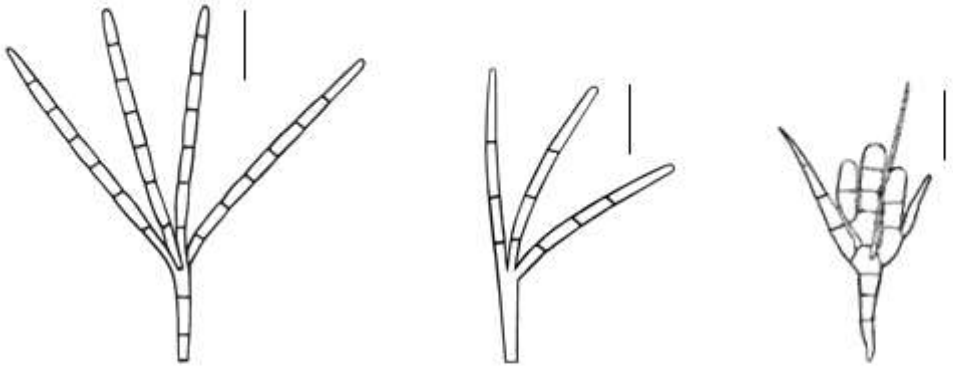
Plate - 1



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Figures:

1) *Isthmotricladia gombakiensis* Nawawi 2) *Isthmotricladia laeensis* Matsushima
3) *Tetracladium setigerum* Ingold

Scale bar: 1 cm = 10 μm