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Species Diversity of Genus Trachelomonas Ehrenberg, (1835)

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ABSTRACT

While working on algal taxonomy of Latur district during January 2017 to December 2018, the author came across some interesting members of Euglenoids i.e. Euglena, Lepocinclis, Phacus and Trachelomonas. A total of 60 taxa under 4 genera of Euglenoids have been encountered from the various habitats like pools, ponds, streamlets, streams, polluted water passages (gutter) and puddles. Euglenoids were most dominant in polluted water passages, followed by pools, streams, ponds, puddles, and streamlets. As far as seasonal variation, the members of Euglenoids were recorded in all seasons; maximum numbers of species were found in summer season followed by winter and monsoon.The present paper deals with the systemic enumeration of one Euglenoids. i.e.Trachelomonas (23)

Keywords: Euglenoids, Trachelomonas, Marathwada, Maharashtra.

1 INTRODUCTION

Review of literature reveals that, studies on algal taxonomy in abroad and in India have been done extensively by many research workers. India has a very rich and diversified algal flora. In Maharashtra tremendous work has been done on algal taxonomy by various workers. In Marathwada region of Maharashtra except few reports (Ashtekar 1979a, Andhale 2008, Talekar 2009) very rare attention has been paid towards algal taxonomy, although the climatic conditions of Marathwada region are most suitable to grow algae luxuriantly and in diverse form, therefore to fulfil this lacuna, it has been decided to work on algal taxonomy of Latur district in Marathwada region of Maharashtra.

2 MATERIALS AND METHODS

The present investigation was carried out by visiting various selected habitats like pools, ponds, streamlets, streams, polluted water passages (gutter) and puddles. The algal samples were collected during January 2017 to December 2018 in Ahmadpur tehsil in the Marathwada region of Maharashtra. The algal collections were made regularly from selected sampling stations. Acid washed collection bottles were used for the collection of algal samples. On return to the laboratory from field, the collections were carefully observed under the microscope and important points were noted. All collections were preserved in 4% commercial formalin added with 5% glycerine. Identification of algal taxa was performed by referring to the standard literature on algae. Collins (1928), Philipose (1967), Prescott (1951), Smith (1951, Tiffany and Britton (1952), Scott and Prescott(1961).

3 SYSTEMIC ENUMERATION: TRACHELOMONAS Ehrenberg, 1835

***Trachelomonas abrupta* (Swir.) Deflandre**

Test oval to subcylindric truncate at the anterior end; flagellum aperture without collar; wall, coarsely punctuate; test 15.5-16.2 µ in diameter, 22.8-23.5µ long.

***Trachelomonasacanthostoma* (Stokes) Deflandre**

Test subglobose to ovoid; wall densely punctate, minute spines towards flagellum aperture; flagellum aperture with low collar; test 17-17.8µ in diameter, 22.2-22.8µ long.

***Trachelomonasallia*Drez.**

Test cylindric-ellipsoid, sides parallel; wall beset with dense, short spines, yellow brown; flagellum aperture without a collar; test 15.5-17µ in diameter 22-23.2µ long.

***Trachelomonas curta* Da Cunha at Defl.**

Test globose to subglobose, wall smooth, yellow, brown; flagellum aperture with a ring like thickening; test 25-25.8µ in diameter, 21.22.5µ long.

***Trachelomonascylindrica* Ehrenberg**

Test oblong-cylindric; sides parallel; posterior end broadly rounded; anteriorly flattened; wall smooth, yellowish brown; flagellum aperture surrounded by a short collar; test 8-9.2µ in diameter 20.8-21.5µ long.

***Trachelomonasdubia* (Swir.) Deflandre**

Test cylindric; broadly rounded posteriorly; anterior end truncate, abruptly narrowed to form short, cylindrical neck; wall smooth; thickended at the base of collar; yellow brown; test 11-11.8µ in diameter, 25-25.8µ long.

***Trachelomonasdybowskii*Drez.**

Test broadly ellipsoidal to ovoid; wall smooth; yellowish brown; flagellum aperture without a collar, with inner thickening; test 15.5-16.2µ in diameter, 20.2-21µ long.

***Trachelomonashexangulata*Swirenko**

Test hexagonal-cylindric; lateral walls nearly parallel; posteriorly narrowed with slightly concave margins, rounded at base; anteriorly narrowed, extended into a long neck; flagellum aperture with annular thickening; wall smooth; dark brown; test 13-14.8µ in diameter 28.8-30µ long.

***Trachelomonashexangulata*Swirenkovar. *ependa* Prescott**

Test hexangonal-cylindric; lateral walls more convex anteriorly; posterior lateral walls more concave to form a blunt apiculation; anteriorly narrowed, extended into a long neck; wall smooth; dark brown; test 10-12µ in diameter 30-32.5µ long.

***Trachelomonas hispida* (Perty) Stein**

Test ovate; anterior part narrowed; broadly rounded posteriorly; flagellum aperture slightly raised; wall uniformly beset with minute, sharp-pointed spines; test 20-22.5µ in diameter 27-28.5µ long.

***Trachelomonasintermedia*Dangeard**

Test subspherical to oval, slightly narrowed anteriorly; wall finely punctuate, brown, flagellum aperture with a thickening but without a distinct collar; test 14.8-15.2µ in diameter 20-21.2µ long.

***Trachelomonas oblonga*Lemmermann**

Test ellipsoid oblong; wall smooth, yellow brown; flagellum aperture surrounded by a thickening of the collar, long, inside the test; test 12.2-12.8µ in diameter 14-15µ long.

***Trachelomonasplayfairii*Deflandre**

Test broadly ellipsoid or ovate; anteriorly and posteriorly rounded; lateral walls slightly convex; flagellum aperture in a short, curved collar; wall smooth; yellow, test 17.5-18µ in diameter, 24-25.2µ long.

***Trachelomonaspulcherrima*Playfair var. *minor*Playfair**

Test elliptic; flagellum aperture without a collar; wall brown, smooth; Test 7.5-8µ in diameter, 12-13.2µ long.

***Trachelomonas robusta*Swirenko et Defl.**

Test ellipsoid or ovoid; wall evenly beset with short, sharp spines, dark brown; flagellum aperture without a collar but with a thickened ring; Test 16-17.8µ in diameter, 19.2-20.2µ long.

***Trachelomonasscabra* var. *longicollis*Playfair**

Test ovoid; posteriorly broadly rounded; slightly narrowed anteriorly; lateral margins more or less convex; dark yellow-brown; flagellum aperture in a short, twisted collar; wall irregularly and rather coarsely roughened; Tested 16.2-17.5µ in diameter 24-25.2µ long.

***Trachelomonasteres*Maskell**

Test elongate, ellipsoid; wall smooth, dark brown; flagellum aperture wide without a collar; test, 26-27.8µ in diameter 32.5-35µ long.

***Trachelomonastriangularis*Deflandre**

Test subtraingular, posteriorly broadly convex, lateral walls sharply convex from the broad base, converging to a truncate apex; flagellum

aperture occupying the entire diameter of the apex; wall light brown; test 15-16.2µ in diameter 16-17µ long.

***Trachelomonasvarians* (Lemmermann) Defl.**

Test globose to subglobose; wall smooth, dark radish brown; flagellum aperture surrounded by a low, flat ring from which a cylindrical canal extends inwardly to the test cavity; test 20-21.5µ in diameter 22.2-23µ long.

***Trachelomonasvolvocina*Ehrenberg**

Test globose; wall smooth, yellow brown; flagellum aperture without a collar; test 24.8-25.2µ in diameter.

***Trachelomonasvolvocina*Ehrenbergvar. *compressa*Drez.**

Test depressed-globose; wall smooth, dark yellow; flagellum aperture surrounded by a thickening of the wall; test 17.5-18.2µ in diameter 15-16.5µ long. In a small polluted water (gutter) (9), Raimoha (04-12-07), In a polluted water passage (9.5), Kada (08-05-08).

***Trachelomonasvolvocina*Ehrenberg v. *papillata*Lemmermann**

Test globose; wall smooth, dark brown; flagellum aperture surrounded by a circle of papillae; test 27.2-28.8µ diameter.

***Trachelomonasvolvocina*Ehrenbergvar. *punctata*Playfair**

Test globose; wall distinectly punctuate; yellow brown; flagellum aperture surrounded by a ring like thickening; test 11-12.2µ in diameter.

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