



ADDITION TO THE EUGLENOIDS FLORA-I OF MARATHWADA, MAHARASHTRA

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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 two Euglenoids. i.e. Euglena (11) and Lepocinclis (4)

KEYWORDS : Euglenoids, Euglena, Lepocinclis, Marathwada, Maharashtra.

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.

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. 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).

SYSTEMIC ENUMERATION: EUGLENA Ehrenberg, 1838

Euglena acus Ehrenberg:

Cells elongate, spindle shaped, very slightly metabolic, posteriorly produced in a long, fine tapering tail, narrowed and truncate at the anterior end; periplast indistinctly spirally striated; chromatophores numerous, disc like; paramylon bodies 2 to several, long rod shaped; cells 10-12 μ in diameter, 130-141 μ long.

Euglena convoluta korshikov:

Cells elongate-fusiform, spirally twisted or curved or straight, posteriorly gradually attenuated to moderately long tail, anterior end narrowed and truncated; periplast finely spirally striated; chromatophores numerous, discoid to ovoid; paramylon bodies 6-9, large concave, discoid, arranged in two rows on lateral sides; cells 9.5-10.2 μ in diameter, 90-117 μ long.

Euglena deses Ehrenberg:

Cells cylindrical or elongate-fusiform or subcylindrical, posteriorly tapering rather abruptly to a short blunt tail; cells highly metabolic; periplast finely spirally striated;

chromatophores numerous, disc-like; paramylon bodies many, rod shaped of various length; cells 12.5-13.2 μ in diameter, 50-66 μ long.

Euglena ehrenbergii Klebs:

Cells elongate, band like, truncate rounded at both poles, highly metabolic; chromatophores many, small, ovoid discs; paramylon bodies several, cylindrical; cells 15-18 μ in diameter, 120-137 μ long.

Euglena elongata Schewiakoff:

Cells elongate, fusiform cylindrical, slightly metabolic, posteriorly tapering gradually to a blunt tail; periplast smooth; chromatophore single, band like, more or less parallel with the long axis of the cell; paramylon bodies numerous, small, rod shaped; cells 7.5-8.8 μ in diameter, 70-80 μ long.

Euglena gaumei Allorge et Lefevre:

Cells long cylindrical, slightly metabolic, anterior end slightly attenuated, apex with slight depression, posterior end suddenly tapering to a short, straight, acuminate tail; periplast longitudinally striated; chromatophores numerous, discoid; paramylon bodies 2, long, ring like, rod shaped; cells 10-12.2 μ in diameter 60-68 μ long.

Euglena gracilis klebs:

Cells fusiform to ovoid, posteriorly attenuated and somewhat obliquely rounded at the anterior ends; highly metabolic; periplast spirally striated; chromatophores numerous, discoid evenly distributed throughout the cell; paramylon bodies many, small, ovoid to rod shaped; cells 12.5-14 μ in diameter, 45-57.5 μ long.

Euglena klebsii (Lemmermann) Mainx:

Cells long-cylindrical, slender; highly metabolic; periplast smooth; chromatophores numerous, discoid; paramylon bodies 2 to several small, rod shaped; cells 9.2-10 μ in diameter, 60-68.5 μ long.

Euglena polymorpha Dangeard:

Cells ovoid-pyriform to subcylindrical; metabolic; posteriorly narrow gradually to short blunt tail; periplast spirally striated; chromatophores many, discoid with lacinate margins; paramylon bodies numerous, small, oval to rod shaped; cells 12.5-13.5 μ in diameter, 60-68.5 μ long.

Euglena proxima Dangeard:

Cells fusiform, narrowed, posteriorly produced into a blunt tail; cells metabolic; periplast spirally striated; chromatophores numerous, irregularly shaped; paramylon bodies many, small, rod shaped, scattered; cells 14.8-15.2 μ in

diameter, 65-73 μ long.

***Euglena sanguinea* Ehrenberg:**

Cells ovoid pyriform to subcylindric, posteriorly tapering to a short, blunt, tail, periplast, spirally striated; chromatophores numerous, irregularly notched bands or short ribbons; paramylon bodies many, ovoid, to rod shaped; cells 10-12.5 μ in diameter, 45-52 μ long.

***LEPOCINCLIS* Perty, 1849**

***Lepocinclis acuta* Prescott:**

Cells ovoid-pyriform, tapering posteriorly to a long, sharply pointed tail, slightly narrowed anteriorly and rounded at the apex; periplast spirally striated downward; chromatophores many, ovoid discs; paramylon in the form of 2 curved plates, one on either side of the cells; cells 12-13.8 μ in diameter, 30-33 μ long.

***Lepocinclis fusiformis* (Carter) Lemmermann:**

Cells broadly fusiform or pyriform, posteriorly slightly produces a blunt basal point; periplast spirally striated; paramylon bodies 2 to several (generally 4) circular plates; cells 16-18 μ in diameter, 32-35 μ long.

***Lepocinclis glabra* Drezepolski:**

Cells broadly ellipsoid or ovoid; broadly rounded posteriorly but with a short blunt caudus, very slightly narrowed anteriorly with a bipapillate protrusion; periplast smooth; paramylon 2, very large, curved plates, one on either side and in certain positions appearing as 4 plates; cells 17-20 μ in diameter 23-28.5 μ long.

***Lepocinclis ovum* (Ehrenb.) Lemmermann:**

Cells broadly ovate, with a short, blunt caudus, rounded both anteriorly and posteriorly; periplast spirally striated; paramylon in the form of 2 rings, one on either side of the cell; cells 20-22.5 μ in diameter, 27-29.2 μ long.

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