Additions of Tetraedron (Kuetzing, 1845) to the Marathwada Region of Maharashtra

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ABSTRACT

During extensive studies on algal taxonomy of Ahmadpur tehsil in the Latur district inthe Marathwada region of Maharashtra, the author came across several interesting members of Chlorococcales .The present paper deals with the systematic account of 15 species of genus Tetraedron (Kuetzing, 1845).

Key words: Additions, Tetraedron, Chlorococcales, Marathwada

1 INTRODUCTION:

The pioneer work on chlorococcales was done by Philipose, M.T. (1967).He gave a systematic account of Indian chlorococcales.Chaddha(1977),Ashtekar(1979),Jawale(2005) gave a systematic account of chlorococcales, but from the Marathwada region of Maharashtra very few reports Kamat(1974),Talekar (2009) very rare attention has been paid towards chlorococcales although the climatic conditions are most suitable to grow algae luxuriantly and in diverse form, therefore to fulfil this lacuna present work was carried out.

MATERIALS AND METHODS:

The algal samples were collected for the period of three years from January 2016 to December 2017. The algal collections were made regularly from various habitats of Ahmadpur tehsil. 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. Smith (1951, 1955), Prescott (1951), Randhawa (1959), Tiffany and Britton (1952), Scott and Prescott (1961), Philipose (1967).

SYSTEMATIC ENUMERATION: *TETRAEDRON* Kuetzing, 1845

Tetraedron bifurcatum* (Wille) Lagerheim f. *submammillata

Cells pyramidal, with the sides somewhat concave or convex or straight ends, rounded, with a short, often curved spines from each angle of the cell end, spines being submammillate, cell membrane is punctate; cells 27-32.5µ in diameter, without spines, spines 1.5-2µ long.

***Tetraedron caudatum* (Corda) Hansgirg**

Cells small, flat, five sided, with four sides concave, fifth in the form of a notch of varying depth, angles rounded and produced into a short, straight spines; cells 6.5-9.5µ in diameter; spines upto 2.5µ in diameter.

***Tetraedron hemisphaericum* Skuja**

Cells triangular in vertical view, concave and depressed in the form of a hemisphere in lateral view; angles broadly rounded and without spines; cell wall hyaline, densely punctate; chloroplast parietal, with a pyrenoid; cells 9-16µ in diameter.

Tetraedron limneticum Borge v. gracile Prescott

Cells tetragonal, with the angles produced into processes, having one to two dichotomous brachings, processes narrower, which almost adjoin at the base, there being scarcely any cell body; cells 30-32µ in diameter, base of processes 3.5-5µ in diameter.

***Tetraedron minimum* (Braun) Hansgirg**

Cells small, flat, tetragonal, angles rounded without spines or processes, lobes sometimes cruciately arranged; margins of the cells concave, with one frequently incised; cells 7.5-11µ in diameter.

***Tetraedronmuticum* (A. Braun) Hansgirg**

Cells small, flat, triangular, sides slightly concave, angles broadly rounded; cell wall smooth; cells 10-12.5µ in diameter.

***Tetraedron pentaedricum* West et. West**

Cells irregularly 5 lobed, with one lobe extended in a different plane from the others; angles sharply rounded, the apex of the each lobe furnished with a sharp spines; cells 17.5-30µ in diameter, with spines; spines upto 4.5µ long.

***Tetraedron proteiforme* (Turner) Brunnthaler**

Cells 3-cornered, angles drown out and ending in a long spines; sides, wavy; three angled; cells 32.5-35µ in diameter without spines, 7.5-10µ long.

***Tetraedron quadratum* (Reinsch) Hansgirg**

Cells quadrangular in front view, the lateral margins straight or slightly convex; each angle with a short spine, memebrane two layered; cells 22.5-28µ in diameter.

***Tetraedronregulare*Kuetzing**

Cells tetragonal, pyramidal, with the sides concave, straight or slightly convex; angles with a blunt, stout spines, cells 8.5-12.5µ in diameter without spines, spines 2.5-5µ long.

***Tetraedron regulare* Kuetzing v. *granulata*Prescott.**

Cells tetragonal, with convex or slightly concave sides, angles broadly rounded, with stout spines; cell wall granular; cells 30-40µ in diameter without spines, spines 15-18µ long.

***Tetraedronregulare*Kuetzing var. *torsum* (Turner) Brunnthaler**

Cells tetragonal, with two halves twisted in a cruciate manner, sides of arms slightly convex, angles with a short spines; cells 14.5-18µ in diameter, spines upto 2.5µ long.

***Tetraedrontrigonum* (Naegeli) Hansgirg.**

Cells flat, three angled, the angles tapering to sharply rounded, spines, stipped apices; margins convex; sides of the cells concave or straight; cells 20-23µ in diameter with the spines; spines 3-5µ long.

***Tetraedrontrigonum* (Naeg.)Hansgirg v. *tetragonum* (Naegeli) Rabenh.**

Cells small, flat, four sided; sides concave with a prominent depression; angles with a spine;cells 12-14.5µ in diameter, without spines; spines 2.5-3µ long.

. ***Tetraedrontumidulum* (Reinsch) Hansgirg**

Cells pyramidal, the margins straight, concave or convex; the angles bluntly rounded or sometimes with knob like projections; cells 12-15µ in diameter.

CONCLUSION:

A total of 15species of genusTetraedron has been reported during present investigation and as far as seasonal variation concern the species of Tetraedron were found dominantly in the winter season and followed by summer, the results are agreed with Ashtekar (1979), Hegde (1983) and Talekar (2009), Yadav (2010).

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