



NEW GEOGRAPHICAL DISTRIBUTION OF *EUGLENARIA CLEPSYDROIDES* (EUGLENOPHYCEAE) FROM INDIA

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ABSTRACT: The presence of the *Euglenaria clepsydroides* B. Zakry is recorded for the first time from India which was earlier reported from Poland. This type species was observed from the Thiruvananthapuram Museum Lake in Kerala.

Keywords: *Euglenaria*, *Euglenophyceae*, India, Museum Lake

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Euglenophytes are free-swimming flagellates found in freshwater and marine environments, cosmopolitan distribution and taxonomy is complex and problematic (Alves-da-Silva et al., 2009). Photosynthetic euglenoids are characterized by a proteinaceous pellicle composed of individual strips lined by microtubules, a β -1,3-glucan storage product known as paramylon, an intra nuclear mitotic spindle with a persistent nucleolus, condensed chromosomes throughout the cell cycle, and paraxial rods associated with flagella (Leedale 1967). They have been identified as the tracers of organic wastes, and have significant role in bio monitoring. Zakry et al. (2013) described photosynthetic euglenoid *Euglenaria clepsydroides* B. Zakry from eutrophic water bodies of Poland. The species are noted by their characteristic (hourglass-like) cell shape for the cells. *Euglena* was first described by Ehrenberg (1830) and their classification was mainly based on morphological features such as chloroplast type and distribution of flagellar length shape and distribution of storage product and cell surface features.

Karnkowska-Ishikawa et al. (2012) has made the taxonomic revisions of the morphological similar species from *Euglena* and *Euglenaria*. The characteristic features of *Euglenaria* are – cells solitary, with one emergent flagellum, club-shaped fusiform or cylindrically fusiform narrowing to the posterior and

tapering into a pointed tail piece. Morphologically uniting features of *Euglenaria* are the parietal lobed chloroplast with diplopyrenoids and absence of mucocysts.

MATERIALS AND METHODS

The specimen in the present study was obtained from the Museum Lake in Govt Botanical Garden and Museum, (08°30' N, 076°57'E). Thiruvananthapuram, Kerala. The expansive lake is inside the zoological garden. It is a perennial and an artificial lake is a 156 year old one and right from its construction in 1859 has never lost its water level even in the scorching summers. The lake is extended in a North-South direction. The South part is covered with macrophytes such as *Pistia* sp. and *Lemna* sp. (Figure: 1). The banks are often covered with the leaf litter from the adjacent trees.

Towards one end of the lake there is an islet and is covered with shrubs and trees and numerous bat populations are hanging all the year round. About 60 species of resident water birds like Pond Herons, Oriental Darter, Cormorants and Asian Openbill Storks are some of them associated with the lake (Anila et al in prep). A good variety of native and exotic tree varieties are associated with the lake. *Lagetroemia speciosa*, *Citharexylum spinosum*, *Samanea saman*, Bamboo varieties like *Bambusa bambos var.gigantea*, *B.multiplex*, *B. ventricosa*, *B. vulgaris*, *Dendrocalamus*