

ABSTRACT

A MULTIGENE PHYLOGENETIC RECONSTRUCTION OF THE GREEN ALGAL CLASS ULVOPHYCEAE (CHLOROPHYTA)

This study tested hypotheses regarding the phylogenetic relationships of algae assigned to the Class Ulvophyceae using sequence data from four loci, SSU rDNA, *atpB*, *rbcL*, and *nad5*. Many of the relationships within the Ulvophyceae are as yet unresolved or have not been tested in broadly sampled analyses in which the major lineages within the Ulvophyceae were included. The advance of model-based analytical methods have demonstrated great promise in providing accurate, well resolved phylogenies from DNA nucleotide sequence data. Although many of the clades were not fully resolved in this study, many insights into the relationship of green algae to land plants, the phylogeny of the Chlorophyta, and the phylogeny of the Ulvophyceae were revealed. Numerous hypotheses regarding the phylogenetic relationships among green plants were supported and novel findings were obtained could provide insights into early divergence events within the green plant lineage.

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