

PHYLOGENY OF THE CLADOPHOROPHYCEAE (CHLOROPHYTA) INFERRED FROM PARTIAL LSU RRNA GENE SEQUENCES: IS THE RECOGNITION OF A SEPARATE ORDER SIPHONOCLODALES JUSTIFIED?

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Phylogenetic relationships within the class Cladophorophyceae were investigated. For 36 species, representing 17 genera, the sequences of the 5'-end of the large subunit rRNA were aligned and analysed. *Ulva fasciata* and *Acrosiphonia spinescens* were used as outgroup taxa. The final alignment consisted of 644 positions containing 208 parsimony informative sites. The analysis showed three lineages within the Cladophorophyceae: *Cladophora horii* diverging first, followed by two main lineages. A first lineage includes *Cladophora* species and genera with a reduced thallus architecture. The second lineage comprises siphonocladalean taxa (excluding part of *Cladophoropsis* and including some *Cladophora* species). From this perspective the Siphonocladales form a monophyletic group, the Cladophorales remaining paraphyletic.