A RE-ASSESSMENT OF THE INFRA-GENERIC CLASSIFICATION OF THE GENUS *CAULERPA* (CAULERPACEAE, CHLOROPHYTA) INFERRED FROM A TIME-CALIBRATED MOLECULAR PHYLOGENY

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The siphonous green algal family Caulerpaceae includes the monotypic genus *Caulerpella* and the species-rich genus *Caulerpa*. A molecular phylogeny was inferred from chloroplast *tufA* and *rbcL* DNA sequences analyzed together with a five marker dataset of non-caulerpacean siphonous green algae. Six Caulerpaceae lineages were revealed, but relationships between them remained largely unresolved. A *Caulerpella* clade representing multiple cryptic species was nested within the genus *Caulerpa*. Therefore, that genus is subsumed and *Caulerpa ambigu*a Okamura is reinstated. *Caulerpa* subgenus status is proposed for the six lineages substantiated by morphological characters, viz., three monotypic subgenera *Cliftonii*, *Hedleyi*, and *Caulerpella*, subgenus *Araucarioideae* exhibiting stolons covered with scale-like appendages, subgenus *Charoideae* characterized by a verticillate branching mode, and subgenus *Caulerpa* for a clade regarded as the *Caulerpa* core clade. The latter subgenus is subdivided in two sections, i.e., *Sedoideae* for species with pyrenoids and a species-rich section *Caulerpa*. A single section with the same name is proposed for each of the other five subgenera. In addition, species status is proposed for *Caulerpa filicoides* var. *andamanensis* (W.R. Taylor). All *Caulerpa* species without sequence data were examined (or data were taken from species descriptions) and classified in the new classification scheme. A temporal framework of *Caulerpa* diversification is provided by calibrating the phylogeny in geological time. The chronogram suggests that *Caulerpa* diversified into subgenera and sections after the Triassic-Jurassic mass extinction and that infra-section species radiation happened after the Cretaceous-Tertiary mass extinction.

Key index words: *Caulerpa andamanensis* stat. nov.; *Caulerpa denticulata*; *Caulerpa* chronogram; group IIA intron; molecular phylogeny; pyrenoid; *rbcL*; relaxed molecular clock; *tufA*

Abbreviations: AIC, Akaike information criterion; AICc, corrected AIC; *atpB*, beta subunit of the ATP synthase gene; BI, Bayesian Inference; BIC, Bayesian information criterion; BP, Bootstrap Percentage;