EVOLUTION OF MACROECOLOGICAL NICHES IN THE MARINE MACROALGAE *DICTYOTA* (*DICTYOTALES*, PHAEOPHYCEAE)

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Macroalgae are important contributors to primary production and ecosystem functioning in shallow coastal marine habitats. Their macroecological niche is determined by a combination of biotic and abiotic factors, temperature, nutrients and salinity tolerances playing a very important role. In the absence of a reliable fossil record, comparative phylogenetics may shed light on the diversification, historical biogeography and the evolution of ecological preferences of these organisms.

We focus on the brown algal genus *Dictyota*, which is widely distributed in tropical to temperate regions and investigate how ecological preferences have evolved in this genus since the Cenozoic. To do so we apply niche modeling techniques.

To map the distribution of the respective *Dictyota* species, specimen lists from trusted literature have been geo-referenced and inserted into a database already containing several thousand observations. By correlating these distribution records with a set of macroecological parameters (www.bio-oracle.ugent.be) niche models are created using Maxent. Subsequently, using ancestral state reconstruction, we model the evolution of ecological niches and interpret these findings in relation to the geological and paleoclimatic record.