

Phylogenetic, taxonomic and biogeographical studies in the Pithophoraceae (Cladophorales, Chlorophyta)

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STELLINGEN

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'Phylogenetic, taxonomic and biogeographical studies in the Pithophoraceae (Cladophorales, Chlorophyta)'

van Christian Bödeker

- 1. The niches of the members of the Pithophoraceae are shaped by competitive exclusion rather than ecological or physiological requirements (this thesis).
- 2. Several taxa of the Pithophoraceae are promising candidates to test the concept of stenoevolution, which had been proposed for several bryophytes (Frey *et al.* 1999), since they have low dispersal capacities and are presumably clonal species with resulting indefinite generation times (this thesis).
- 3. Marine-freshwater transitions within a group of organisms are interesting from both an ecological and evolutionary point of view (this thesis, Mann 1996).
- 4. One problem with determining whether a species is declining is the quantity, quality and accessibility of historical data, which are required as a reference. The majority of available herbarium collections is rather old and does not allow the assessment of current distribution ranges, therefore continuing collecting efforts are generally important (this thesis, Brodie *et al.* 2008).
- 5. Scientists should not confuse the criteria for detecting species with the theoretical understanding of the way species exist (de Queiroz 1998, Hey 2006).
- 6. The Ulvophyceae including the orders Cladophorales, Bryopsidales, Dasycladales, Ulvales and Trentepohliales is a monophyletic group (Cocquyt *et al.* 2010).
- 7. Chloroplast markers are unfortunately missing from all phylogenetic reconstructions of the Cladophorales.
- 8. It is difficult to reconcile taxonomic inflation originating from phenotypic plasticity and the simultaneous discovery of cryptic species with the type method.
- 9. Our ballooning population, our greed, our pollution, and our destruction of habitats will never allow the perpetuation of the myth of 'sustainable harvest' (Paul Watson, 'Seal Wars').
- 10. Theory, my friend, is grey, but green is the eternal tree of life. (Lenin, 'Letters on tactics', quoting Goethe's Faust).