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BOOK OF ABSTRACTS



BIODIVERSITY OF THE NEMASTOMATALES (RHODOPHYTA): NEW INSIGHTS AND FUTURE PERSPECTIVES

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The Nemastomatales comprises two families of predominantly gelatinous representatives with heteromorphic life histories, the Nemastomataceae and Schizymeniaceae. Obscure and ephemeral events in the sexual cycle delimit genera in this order, but such phylogenetically informative features have not been confirmed for most species. Newly generated morphological data coupled with DNA sequence analysis inferred from chloroplast-encoded *rbcL* and nuclear LSU rDNA sequences of gelatinous red algae worldwide reveal that the external habit within select species is remarkably variable and cannot be used to distinguish species. Species reported as having a wide distribution range instead have a restricted distribution. For example, *Platoma cyclocolpum* (Mont.) Schmitz may be confined to the Macaronesian islands; the taxon going under this name from the Indian Ocean (Madagascar) is instead *P. chrysymenioides* Gavio et al., a species found throughout the Gulf of Mexico. *Schizymenia dubyi* (Chauvin ex Duby) J. Ag. described from Atlantic France is also present in Japan, but records of this taxon from the Azores, Namibia and Japan, should be referred to as *S. apoda* (J. Ag.) J. Ag., a species described from the Cape Province, South Africa. Recent deepwater collections of *Predaea* and *Titanophora* throughout the Gulf of Mexico coupled with unreported samples of Nemastomatales from the Azores and Japan are greatly expanding species diversity of the order. A firm biogeographic link between species from the Azores and the Gulf of Mexico and from Australia and the Indian Ocean is here firmly established and will be elaborated upon.