

MOLECULAR PHYLOGENY OF THE AMPHOROID DIATOMS, WITH COMMENTS ON MONOPHYLY OF THE GROUP AND THEIR SYSTEMATIC POSITION WITHIN RAPID DIATOMS

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Amphoroid diatoms comprise a large (>700 named species) and diverse group both morphologically and environmentally with many representatives in freshwater, estuarine and marine environments. With this variety in form and ecology have come a range of taxonomic and systematic problems and the classification of the group as a whole is largely based on nine subgenera proposed by Cleve (1895). Since that time more detailed morphological analyses have led to the transfer of many taxa into new or existing genera such as *Seminavis*, *Eunophora*, and *Undatella*. Recently analyzed morphological and molecular data from taxa included in the subgenera *Amphora* and *Halamphora* have supported the non-monophyletic nature of *Amphora sensu lato* and have led to the elevation of the subgenus *Halamphora* to the generic level. Past molecular analyses have included only a few taxa and their position in the larger diatom tree has remained variable. We present here a newly developed multi-gene molecular phylogeny for the group *Amphora sensu lato*, representing the greatest taxon sampling to date, including members from marine subgenera not previously included. We will discuss monophyly of *Amphora sensu lato* and its position within raphid diatoms, as well as implications with regards to cell wall morphology and the distribution of taxa across a salinity spectrum.

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