A revision of silicoflagellate species composition in the western Mediterranean inferred from sediment traps

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In this study, variations in the composition and abundance of silicoflagellate sinking assemblages were reanalysed from materials collected from a set of sediment traps deployed in three distinct regions of the western Mediterranean – the Gulf of Lions, the Catalan margin and the Alboran Sea. These samples were previously studied by Rigual-Hernández et al. (2010), who identified three silicoflagellates species across the study transect – *Dictyocha fibula*, *D. speculum* and *Octatis octonaria*. Here, we examined the species taxonomy of the genus *Dictyocha* in order to determine whether those specimens classified as *D. fibula* were one, or possibly more, species. A detailed taxonomic analysis allowed us to subdivide *D. fibula* into two species – *D. stapedia* and *D. aculeata*. *Dictyocha stapedia* provided the largest contribution to the silicoflagellate assemblage in the northern sites (up to 80%), suggesting an affinity with areas of high nutrient availability. Species such as *Stephanocha speculum* and *O. octonaria* were also observed. *Stephanocha speculum* was most abundant in the northern locations, highlighting the affinity of this taxon for cold water-masses. *Octatis octonaria* was restricted to the Alboran Sea sediment traps, where temperatures reached their highest values and nutrients were scarcer. Other species, such as *Dictyocha crux, D. pentagona* and *Corbisema* sp., were observed to have double skeletons and aberrant skeletons.

References

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