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Organic walled dinoflagellate cysts record from Rookery Bay (South Florida, USA)

Here we report the first results of organic-walled dinoflagellate cyst assemblages derived from the upper 150 cm of a core collected in Rookery Bay, a subtropical estuarine system located on the west coast of Florida. At present the area is subjected to a salinity change between 20 and 35 ppt and a temperature variability between 20 and 30°C during the year. 14 dinoflagellate cyst genera with 20 species were identified. The most abundant dinoflagellate cyst taxa in the surface sample include *Brigantedinium* spp. (8%), *Lingulodinium machaerophorum* (11%), *Polysphaeridium zoharyi* (18%), *Spiniferites bentorii* (34%) and *Spiniferites ramosus* (8%). Dinocyst concentrations is quite high (1300-8500 cysts/gram), with the highest value reached in the lowermost sample. Here *Polysphaeridium zoharyi* represents the 73% of the assemblage with 6500 cysts/gram. This study has revealed the occurrence of two different morphotypes of *Polysphaeridium zoharyi*, which is the cyst of both the Harmful Algal Bloom generating species *Pyrodinium bahamense* var. *compressum* and the potentially toxic species *Pyrodinium bahamense* var. *bahamense*.