

Dinoflagellate resting cysts from Recent German coastal sediments

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Abstract

Fifty dinoflagellate resting cyst types were found in Recent sediment samples from two sites in German coastal waters: German Bight (North Sea) and Kiel Bight (Baltic Sea). Eight of the dinoflagellate species have not previously been recorded as motile cells in German waters. Cyst-species diversity (30 cyst types) was lower in the low salinity waters of the Kiel Bight than in the marine German Bight (43 cyst types). Comparison between the species composition of planktonic dinoflagellates in German waters and the resting cysts in Recent German sediments reveals that for the area of the German Bight about 25% and for the area of Kiel Bight about 15% of the locally occurring dinoflagellate species have developed resting cyst formation in their life cycle and used it actively. It is suggested that the cyst type known under the paleontological name *Brigantedinium majusculum* is the brackish cyst variant of *Protoperidinium pentagonum*. The cysts of *Gonyaulax polyedra*, *Peridinium dalei* and *Protoceratium reticulatum* from the brackish western Baltic Sea exhibited a reduced length of processes compared to individuals from marine North Sea habitats. These variations in length of processes are probably due to an influence of salinity on cyst morphology.

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