

Coccolithophore seasonality in the NW Mediterranean Sea

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Coccolithophores, one of the primary groups of calcifying organisms on Earth today, show an outstanding diversity in the Mediterranean Sea. Here, we present a study of the coccolithophore community in the open waters of the NW Mediterranean Sea during three different seasonal periods of contrasting oceanographic conditions (March, May, and September of 2009).

The coccolithophore diversity and the HOLP index (the ratio between the number of holococcolithophores (HOL) and the total number of coccolithophores with HOL-HET

life cycles) increased from the bloom (March) to post-bloom (May) to stratification (September) periods. In March, coccolithophore abundance was high but with low diversity (76.13% of the specimens consisted of *Syracosphaera marginiporata* and *Emiliana huxleyi*), and there was a low HOLP index (2.26 on average for samples from 0–20m depth), indicating that there were few specimens of the holococcolithophore phase. The highest values of both taxon richness (88) and HOLP index (45.93 on average for samples from 0–20m depth) occurred during the stratification period in September.