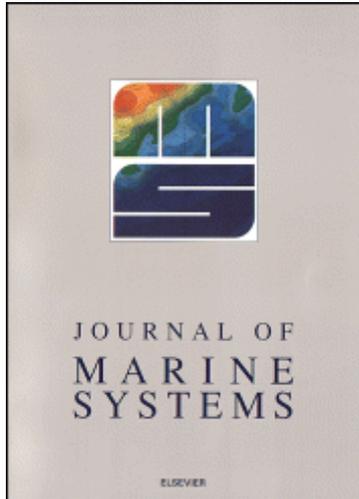


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**EHUX (*Emiliana huxleyi*)**

Green J.C. and R. Harris



The achievements of the MAST II funded EHUX project, an interdisciplinary study of the coccolithophorid *Emiliana huxleyi* are briefly reviewed. A collection of over 300 clones of *E. huxleyi* has been maintained to support research on coccolithophorid morphology, physiology, molecular genetics, and the life cycle. Laboratory cultures have also been used for investigations of calcification and calcification gene identification. The photobiology of *E. huxleyi*, interactions between productivity and the environment, and coccolithophorid growth and production have been studied both in the laboratory and in the Northern North Sea, the latter work being guided by remote sensing. Integrated investigations have been made of the synthesis and degradation of lipid biomarkers produced by *E. huxleyi*, the formation and microbial degradation of aggregates, and zooplankton grazing and mortality. An extensive programme of mesocosm studies has been carried out with special emphasis on the

population dynamics of *E. huxleyi*, the coupling between calcification and nutrient supply, and the role of viruses in population dynamics. Mathematical simulation models of mesocosm bloom dynamics have been developed, first attempts have been made to develop cell biological models of *E. huxleyi*, and a model which predicts the timing and magnitudes of blooms of *E. huxleyi* with particular reference to the seasonal succession in the North Atlantic has been developed.

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