



## Scientists set to use 'free DNA' to assess marine biodiversity

The traces of free DNA left by organisms in the environment can now be detected and identified, providing scientists with new and powerful tools for assessing biodiversity.

The Marine Biological Association (MBA) is part of two different £1.2m Natural Environment Research Council (NERC) projects to find out how effective the tools developed around environmental DNA (eDNA) will be at telling us what organisms – from plankton to whales – are present in an area, and how ecosystems work.

The tools will be developed and tested by a partnership of institutions (MBA, Sir Alister Hardy Foundation for Ocean Science, Plymouth Marine Laboratory, National Oceanography Centre, and the University of Exeter), with a wide range of expertise. Scientists will use seawater samples from a site in the English Channel off Plymouth where oceanographic, chemical and biological sampling will provide the historical and background information necessary to understand the potential for use of eDNA in models of ecosystem functioning.

Professor Colin Brownlee (MBA Director) said “Building on the expertise of research scientists at the MBA, who have pioneered the use of DNA-based tools to assess marine biodiversity, the team will make an unprecedented inventory of the marine life in the study area ranging from the smallest microbes to the biggest marine mammals”.

This research will help with wider application of this tool to fisheries assessments, fish pathogen detection, conservation biology, environmental risk management (e.g. toxic algae blooms, human pathogens, ballast water regulations), with the broader aim of supporting biodiversity and nature's services through NERC's strategic pillar of "Managing environmental change".

The Natural Environment Research Council is the UK's largest funder of independent environmental science, training and innovation, delivered through universities and research centres.

<http://www.nerc.ac.uk/latest/news/nerc/highlight-topic/>

### Ends

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**About the Marine Biological Association (MBA)** is a professional body for marine scientists with some 1,400 members world-wide. Since 1884 the MBA has established itself as a leading marine



biological research organization contributing to the work of several Nobel Laureates and over 170 Fellows of the Royal Society. In 2013, the MBA was awarded a Royal Charter in recognition of its long and eminent history and its status within the field of marine biology. The award strengthens the Association's role in promoting marine biology as a discipline and in representing the interests of the marine biological community.

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