



## THE SIGNIFICANCE OF UNDERWATER CULTURAL HERITAGE – GEOFF BAILEY, UNIVERSITY OF YORK

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The underwater cultural heritage is typically associated with the study of shipwrecks and what they can tell us about the history of ship building and maritime trade over the past five millennia. During the past decade an interest in this underwater world has been extended much further back in time, and not simply to earlier examples of underwater finds but to whole landscapes that have been drowned by sea level rise at the end of the last glacial period. In fact, for 90% of human existence on this planet, sea levels have been lower than the present, typically by about 40 m, and for shorter periods by as much as 130 m, in response to the growth and decay of the continental ice sheets. The period of high sea level that we presently enjoy was only established about 6000 years ago.

The submergence of large areas of the continental shelf by sea-level rise has long been recognised as a major factor in changing the palaeogeography of the world's coastlines. However, it is only within the past decade that there has been a clear recognition of how important is the missing data on the submerged shelf. Growing numbers of prehistoric underwater archaeological sites, ranging in age from over 300,000 years to 6,000 years ago, have been recovered, and at depths ranging from less than 10m to more than 40m, often with unusual and spectacular conditions of preservation of organic materials such as wood and fibres. There is clear evidence that substantial traces of submerged prehistoric landscapes and archaeology are preserved on the continental shelf and can be recovered. These are the areas that offered the most attractive and important landscapes and coastlines for human settlement during long periods of the Pleistocene. They are also the areas that are likely to provide the earliest and most important evidence for some of the key transformations in human social evolution,

including the early dispersal of ancient humans from Africa, the extinction of our close cousins such as the Neanderthals, the earliest development of seafaring and fishing, the early dispersal of agricultural economies, and the roots of many ancient civilizations. These are developments that took place when sea level was lower than present, and the most important evidence is likely to lie on the now-submerged landscape.

Moreover, collaborative research between archaeologists and marine geoscientists on the continental shelf is likely to provide new and more precisely dated evidence of submerged palaeoshorelines, of importance in refining models of sea level change, in showing how past societies have responded to the challenge of rising and falling sea levels, and in providing insights into the challenges that face our own society and civilization in the coming centuries.