

Bringing Up the Past: Underwater Archaeology in Northern Germany

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Slavonic pottery from the Great Eutiner Lake

PREFACE

Germany's underwater cultural heritage is rich and impressive—so much so that it's surprising that the Institute of Prehistoric and Protohistoric Archaeology at the Christian-Albrechts-University of Kiel in Northern Germany is the only institution currently dealing professionally with underwater archaeology in science and apprenticeship.

In 1997, a group of students from this institute got together to found the *Arbeitsgruppe für Maritime und Limnische Archäologie* (AMLA, Working Group for Maritime and Limnic Archaeology). This created the basis for independent archaeological underwater

research in the province of Schleswig-Holstein, an area that is surrounded by the Baltic Sea in the east and by the North Sea in the west.

ABOUT AMLA

The working group currently consists of 20 people; these include archaeologists, persons with a range of degrees, and students of prehistoric archaeology. The bulk of these are experienced scientific divers; the result of a prerequisite for studying science underwater in most parts of Europe, including Germany, that to study science underwater one must first be a skilled scientific



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Drawing a part of a plank

diver. During the last few years, diving members of other oceanic sciences, such as geologists, biologists, and geographers, have also joined AMLA.

To date, the group has undertaken a considerable amount of independent research and has participated regularly in scientific conferences for underwater archaeology all over Germany. Most recently it hosted an annual international conference, “In Poseidon’s Reich XIV” (In Poseidon’s Realm XIV), organized by the German Society for the Promotion of Underwater Archaeology (DEGUWA) in February 2008. It has also worked with the regional authorities of Schleswig-Holstein, the archaeological state museum of Schleswig-Holstein, the Leibniz Institute for oceanic sciences IFM-GEOMAR, and the scientific diving center at the Kiel University in diving related projects.

The maritime and man-made limnic environment of Schleswig-Holstein has 1,190 kilometers of sea coastline at both seas, about 360 lakes, and 21,700 kilometers of river stretches. Its population, over the years, has used these bodies of water to provide themselves with food, transportation routes, and territory borders. However, these waters also posed a source of danger to them.

The study group’s main scientific interest here is the fusion of land and underwater archaeology; the assembly of a maritime or limnic cultural landscape; cultural landscapes as the intersections of natural environments and the various manifestations of human activity. In a maritime, or, rather, limnic, cultural landscape, the waters are the shaping element. Among the questions the study group is interested in addressing are: What role did and do these bodies of water play with respect to human settlement? How were these settlements integrated into economy, trade, and traffic? What were the consequences of these settlements for the

coastal region? Before any new project can begin, the group has to undertake surveys both above and below water to create a complete picture of the area they’re working with.

The purpose of the AMLA is to ensure that their findings are made available to universities and the general public. In May 2007, for the AMLA 10th anniversary, a conference took place at Kiel University. Sport divers were also invited to attend this conference to ensure they were aware of the latest projects in underwater archaeology in Schleswig-Holstein. The following will provide a short overview of what is happening in Northern Germany.

SETTLEMENT ARCHAEOLOGY

In Europe, the term “underwater archaeology” is normally associated with spectacular discoveries, such as wrecks in the Mediterranean and in the North and Baltic seas and the pile-dwellings in the Alpine foothills. But with respect to questions orbiting settlement archaeology, research in inland waters is most important. In past decades, impressive results have been achieved—primarily in the Circum-Baltic area and on the British Isles—through maritime and limnic surveys as well as through excavations in rivers and lakes.

The area of Schleswig-Holstein holds more than 360 lakes, many of which contain islands. Despite the isolation of these islands, they have been regularly visited in the past and have played an important role in the settlement-systems of cultures since the Mesolithic time. The main aim of an ongoing research project in the area, one financed by the German Research Foundation (DFG), is to establish, through a diachronic study, the various reasons for the use of these islands.



U. Kunz

The team gets ready.

This study focuses on an exemplary investigation area measuring approximately 20 x 30 km, situated in the Plön Lakeland, and is designed to provide information about the functions of the islands in historic and protohistoric societies.

In the work area, which contains more than 100 lakes, there exist 15 lakes with more than 60 islands. Half of them were intensively prospected using different archaeological and natural science methods. On the basis of the information gathered, an attempt will be made to establish the period and character of island-usage. These results will then be integrated and compared to the archaeological survey's existing finds and the wider environment of the lakes. Together with data from archaeobotanical and palynological analysis, it will be possible to gain information about the past usage of these locations as well as on the hydrological environment of the lake.

UNDERWATER ARCHAEOLOGY

So far, during more than 200 dives, 21 islands, peninsulas, and sunken islands in seven lakes were examined by scientific divers of AMLA. These underwater archaeological investigations are critical to help understand the use and settlement of the islands. Because of water-level fluctuations over the past centuries, many island-areas where once there was human activity are now flooded and are therefore accessible only through underwater archaeological survey and excavation methods. Thus, special conservation methods underwater play an important role. In these cold, dark, and anaerobic waters, organic materials such as wood or textiles are well preserved and provide invaluable data regarding dates (via dendrochronology) and the function and use of islands.

The islands were systematically circumnavigated by two divers at different water depths between two and 20 meters; findings and features were marked with surface-marker buoys and calibrated with GPS or laser tachymeter; relevant performance data, photos, and video information were also collected. Divers also employed a small GPS-Logger (Navilock NL-456DL) on their signal buoy to trace their exact route around the islands.

Cold water temperatures (3 to 5 degrees Celsius in winter) compounded by poor visibility greatly complicated these dives. As most of the lakes in the working area are eutrophic, divers often had to resort to touch to locate relevant archaeological findings and features.

To establish an accurate chronology, dendrochronological, pollen, and radiocarbon analyses were conducted mainly by recovering spiles of mostly oak and taking samples of peat.

Up to now, the remains of two wooden bridges and a shoreline stabilization project from the Slavic period (11th century), a pile dwelling from 1181 A.D., two beautiful axes from the Bronze Age, and several stone axes and chisels have been found. Besides these, many single finds such as ceramics, bones, net sinkers, clay pipes, Stone Age tools, axes, blades, and flakes have been found by divers.

It is now safe to say that 97 percent of the islands in the work area were used and/or settled by humans from 5000 B.C. until modern times.

BALTIC SEA RESEARCH

Another focus of AMLA is wreck archaeology. The Baltic Sea is laden with wrecks; in fact, it is one of the richest wreck areas in the



world. Two important factors contribute to this: first, it has been intensively used by humans since the Stone Age; and second, it is marked by very cold water and low salinity, which together contribute to preserve archaeological traces.

Wooden ships and boats are certainly among the most marvelous structures ever built by humankind. It is impossible to imagine world history without ships and mariners. Whole continents were discovered and rediscovered, colonized, supplied, attacked, and defended by ships, their captains, and their crew. Already 40,000 years ago, people in simple boats reached Australia and settled.

Although many of the discovered shipwrecks are barely preserved and/or partly destroyed, there is still enough surviving information in these remains to increase our knowledge of human culture, ships, and shipbuilding tradition. But to extract that information, wrecks must be analyzed as accurately and extensively as possible by experts.

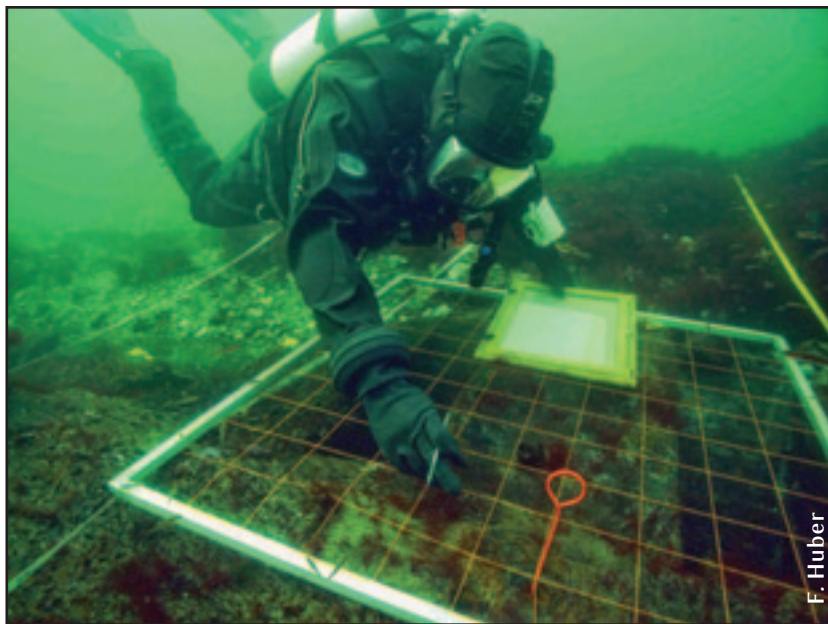
Right now, members of AMLA are exploring several wrecks in the Kiel Fjord and the Kiel Bight. One is the *Highlight*, a Swedish warship that was run ashore and destroyed in April 1715, after being attacked by Danish troops in the Great Northern War (1700-1721). The remains of this ship were located at a depth of only six meters. It was more than 40 meters long, carried 80 guns, and had a crew of 400 to 500 men. So far, its bow and stern have been found and documented and several fascinating artifacts unearthed; e.g., wooden candlesticks, cannonballs, and the hilt of a sword. The project will continue in autumn.

ARCHAEOLOGY COURSES FOR SKIN DIVERS

As we have seen, shipwrecks are not only fascinating dive locations, but also important sources for archaeological research. They are part of the rich underwater cultural heritage preserved in our rivers, lakes, and coastal waters. In order to open the door for divers to exciting journeys into our past, and in order to insure that the sites remain preserved, it is essential to encourage responsible wreck diving.

Therefore, in cooperation with German underwater archaeologists, the Federation of German Sport Divers (VDST) has produced a special brevet called “Denkmalgerechtes Tauchen” (monument-suitable diving). It furnishes the necessary knowledge to sport divers enabling them to undertake dives to cultural monuments without inflicting damage. In the event divers come across objects of possible historical significance, they are taught to produce a qualified-finds report. After completing the training, when faced with an untouched site, divers should be able to comprehend and appreciate what they see and act responsibly, thereby preserving a piece of our cultural heritage underwater as well as the integrity of the site.

Those who develop a deeper interest in underwater archaeology are encouraged to carry on with NAS (Nautical Archaeology



Documenting the bow of a Swedish warship in the Kiel Bight

Society) training. The special brevet “Denkmalgerechtes Tauchen” is the official equivalent to the NAS introduction course and since 2008 has been offered in Schleswig-Holstein successfully by members of AMLA at Kiel University.

CONCLUSION

With their survey, mapping, and excavation activities, the University of Kiel’s AMLA has contributed positively to numerous successful projects in marine archaeology in Northern Germany for the past 12 years. The AMLA also pursues good public relations, which it achieves through public lectures and conferences, an informative and comprehensive homepage (www.aml-kiel.de), and archaeological courses for divers.

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