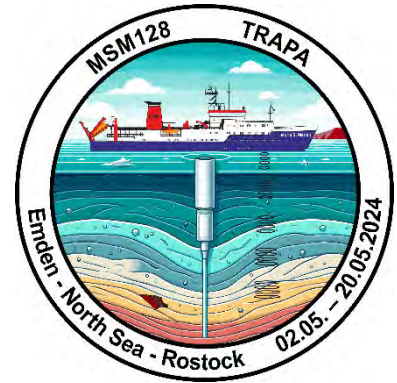


## **FS MARIA S. MERIAN**

### **Cruise MSM128 (GPF 22-1/051)**

**02.05.24 – 20.05.24, Emden – Rostock**

**Weekly Report No. 1, 02.05. – 05.05.2024**



**Tracing the Late Pleistocene - Early Holocene landscape of Late Palaeolithic reindeer hunters off the coast of Heligoland (TRAPA)**

### **Weekly Report No. 1**

The main objective of Research Cruise MSM128 is to reconstruct the Late Pleistocene and Early Holocene landscape in the present day North Sea area north of Heligoland that was once extensively exploited by Late Palaeolithic hunter-gatherer groups. For this early population Heligoland must have been of immense importance as a landmark that could be seen from very far. It was a reference point in a vast landscape and at times perhaps the only solid object in a dynamic landscape. At the same time Heligoland is the source region of unique red flint, which was extracted there and transported over far distance into the present inland already in the Late Palaeolithic. In this regard, our research cruise aims at (1) determining the Late Pleistocene and Early Holocene topographical and hydro-graphical preconditions for hunter-gatherer colonisation, (2) reconstructing the dynamic change of this landscape, i.e. the distribution of land, sea, river and channel systems, and the time-scales of this change and, on the basis of this information, (3) developing models of the palaeolandscape that would allow us to pinpoint suitable locations of hunter-gatherer settlements. In order to achieve these objectives, we plan to map an area northeast of Heligoland with the Parasound system at very high lateral resolution. Ground truthing and dating of land surfaces will be achieved by means of a 6 m Vibrocorer. Fourteen scientists from Kiel University, and one scientist each from the Leibniz Centre for Archaeology, the National Museum of Denmark, and the Universiti Malaysia Terengganu are on board for the work.



*Meeting of the Research Vessels Maria S. Merian and Alkor in the North Sea for data transfer via hard disc. Photo: Mark Petrikowski.*

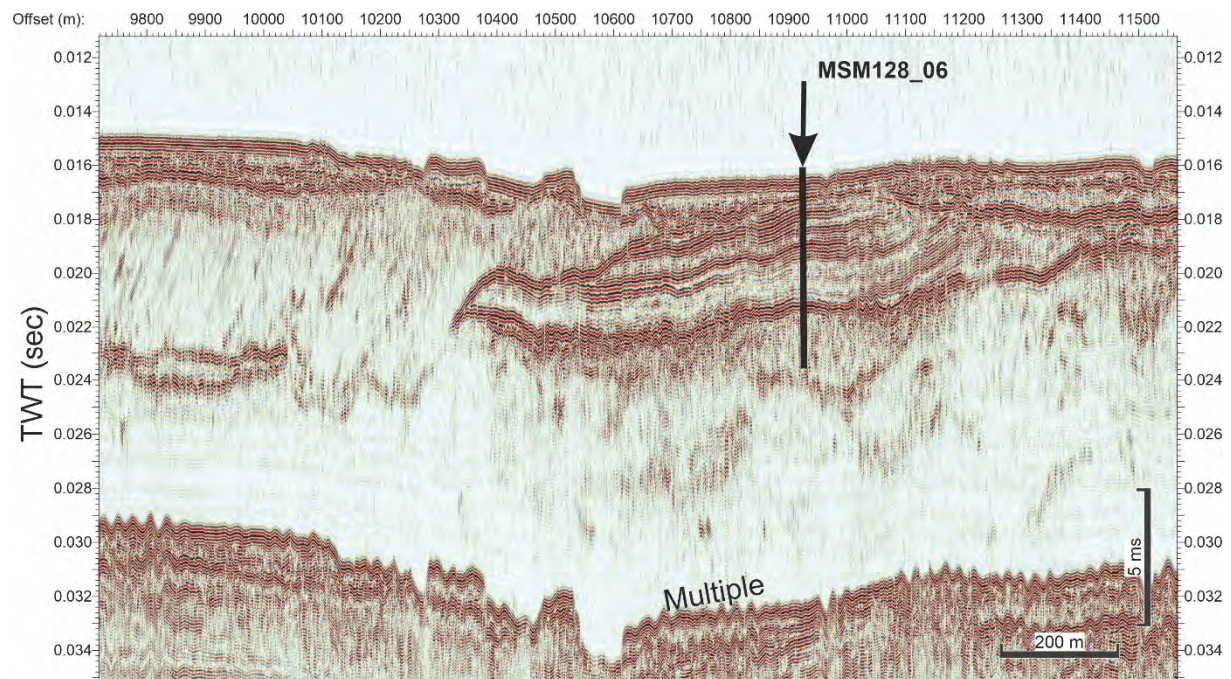
We left our berth in Emden port at 10:00 a.m. on 2 May and, after a few circles to compensate the magnetic compass, passed through the sea lock. We had already reached the working area off Helgoland in the evening and immediately started the hydroacoustic measurements in very good weather conditions. We are using the Parasound system to survey approx. 10 nm-long profiles in a NNW-SSE direction. The first goal is to achieve a profile spacing of 200 metres, which will then be condensed to 100 metres in the second part of the cruise. The first profiles already show the great complexity of the working area and emphasise the necessity of recording a very close-meshed profile network. On the morning of 4 May, we briefly interrupted our measurements to meet up with RV Alkor, which had also been surveying in the working area with colleagues from Kiel University over the past 10 days. Sediment echosounder data were recorded at night; these data are of great importance for our research and will be included in our cruise planning. As the amount of data was too large for transmission by satellite, we received a hard disc with all the data from our colleagues on RV Alkor.

We then collected two vibrocores during the course of the day to get an initial impression of the sediments. The length of the vibrocorer is 6 metres, and the liners were almost completely full during both runs. The cores are currently being opened, documented and analysed sedimentologically and geophysically. We are now (5 May) recording Parasound data again and will continue profiling overnight and in the morning.

Everyone on board is well and looking forward to the remaining two weeks on the Maria S. Merian, where we have been warmly welcomed as always.

With best regards from RV Maria S. Merian

Sebastian Krastel  
(Christian-Albrechts-Universität zu Kiel)



*Parasound profile from the working area with the location of the vibrocorer station MSM128\_06*