

## MH1422 Cruise Report

For my PhD project at Uni Research AS in Bergen (Norway) I investigate the late Holocene marine climate variability of North Atlantic Water masses around the Faroe Islands flowing to the Arctic regions. The climatic and environmental conditions will be reconstructed by applying molluscan sclerochronological techniques. This newly-emerging and supra-disciplinary field investigates the growth increment variability of molluscan shells. For my PhD project I work on the bivalve species *Arctica islandica*, which is widely distributed in the North Atlantic. Apart from that it shows a high longevity and annually resolved growth increments. By counting and measuring the single growth increments of the shells and by cross-matching several life-collected and dead specimens, it is possible to build an annually resolved master chronology. This chronology will be at least 300 years long and will be the first shell-based chronology from the surroundings of the Faroe Islands. Further, it will exceed instrumental observations and will provide a deeper insight into the annual North Atlantic climate variability.

To collect appropriate sample material, I joined the cruise MH1422 on the research vessel R/V Magnus Heinason. The samples were collected by dredging in different locations on the Western and Eastern site of the Faroe Islands. The dredging was scheduled and conducted on the last day of the cruise. We ran the dredge 12 times in 4 different locations and almost every time the dredge was full and contained a lot of excellent sample material. Beside approximately 2000 sub-fossil shells we also sampled life-collected specimens from almost every location. For shipping reasons I cleaned and prepared the shells after the cruise in the laboratory of the Faroe Marine Research Institute. For the purpose of my PhD project the cruise was a complete success and even exceeded my expectations. Thus, I really want to thank Karin Margretha Larsen, Una Matras, HAVSTOVAN and the Magnus Heinason crew for helping me during and after the cruise and for providing me with laboratory facilities and preparation equipment.

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