RV MARIA S. MERIAN – MSM142
26.03.2026 – 11.05.2026
Nuuk (Greenland) – Reykjavik (Iceland)

5th Weekly Report (20.04.2026 – 26.04.2026)

We are now in our fifth week at sea aboard the RV MARIA S. MERIAN as part of Expedition MSM142. Over the past days, we have successfully completed nearly all of our scientific operations, with only one final stationary operation scheduled for Monday, April 27. Reaching this stage reflects the continued motivation and commitment of both the scientific party and the ship's crew. In particular, the intensive mooring operations required sustained focus and coordination. The dedication and excellent collaboration between crew and scientists have remained outstanding throughout, and I am sincerely grateful for this shared effort.

Following the detour to Nuuk for the disembarkation of one person, several planned stationary operations across the Labrador Sea had to be cancelled. Priority was therefore given to the servicing of the remaining moorings of the 53°N Observatory.

Figure 1: Mooring (yellow floatation) in sight after they were released from the anchor on the seafloor (Photo: Eleanor Frajka-Williams)

Between Wednesday, April 22 and Saturday, April 25, we successfully completed a total of six mooring operations, thereby finalizing the servicing of the 53°N Observatory array. Weather conditions were generally favourable, relatively calm, though at times foggy, and allowed these intensive operations to be carried out efficiently. Overall, the operations can be considered highly successful. Of the 95 instruments recovered, we achieved a data return rate of approximately 98%. Only two devices showed signs of flooding for reasons that are currently unknown. These instruments will be inspected in detail on land, with efforts made to recover any remaining data.

Mooring operations were conducted exclusively during daylight hours, while night-time was dedicated to CTD casts. These casts served both to calibrate instruments recovered from the moorings and to ensure accurate calibration prior to redeployment. In addition, the CTD stations provide a high-resolution synoptic view of the boundary current system.

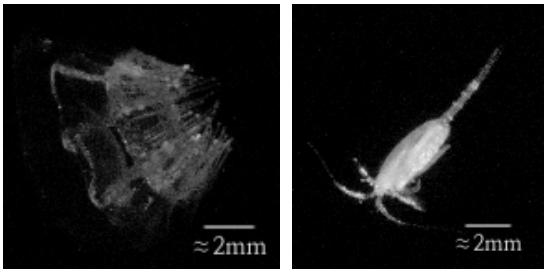

Figure 2: Vignettes of microorganisms, from the UVP, photographed at 2000m (Source: UVP; Sieun Chun)

One of the special sensors mounted on the CTD is the Underwater Vision Profiler (UVP), which enables the investigation of fine-scale vertical distributions of particles and key planktonic groups, by taking photographs of these throughout the descent of the CTD. An example of microorganisms observed at approximately 2000 m depth is shown in Figure 2.

Weather conditions began to deteriorate on Sunday, April 26, with winds forecast to reach Beaufort force 10 and wave heights of up to 7 meters. The bridge and chief scientist agreed to suspend operations for the day. The final CTD cast, planned for calibration purposes, is scheduled for Monday, April 27.

Following this, the MERIAN will proceed towards St. John's, with an expected arrival around noon on Wednesday, April 29. The stop will allow for bunkering operations as well as a partial exchange of crew and scientific personnel. Departure from St. John's is planned for Thursday, April 30, heading towards the Denmark Strait for the final phase of the cruise, the MIXSED-1 project (Mixing and Sediment Dynamics), led by the University of Hamburg.

On behalf of all participants of RV MARIA S. MERIAN, best regards.

Fehmi Dilmahamod
Chief-scientist MSM142
GEOMAR Helmholtz Centre for Ocean Research Kiel