



SO268/2

8th Weekly Report

19 – 27 May 2019



Today, on Sunday 26th May, after 10 days of transit from the German exploration contract area, we have reached the entrance of the Juan de Fuca Strait south of Vancouver Island. Rough sea and wind speeds of up to 8 Beaufort of northern to north-easterly direction accompanied us on the way. Transit time was used to pack equipment back into boxes, write packing lists for the return shipping of freight and containers, clean the laboratories for the colleagues of the following cruise, and work on the cruise report. In addition, at our daily meetings first results were presented and discussed. Tomorrow morning, we expect to fasten alongside Lynnterm terminal in Vancouver, unload the five ROV containers from the ship and then load nine containers with our large gear and equipment on the pier. With this the three and a half month long research expedition SO268, where we accomplished 210 stations of work, will come to an end.

Despite the difficulties that we have encountered, particularly during leg 1, the expedition turned out to be quite successful. We managed to conduct a comprehensive baseline study in the German and Belgian contract area, which lays the necessary foundation for the postponed nodule collector trial. In particular, our in situ studies and experiments will allow for a more detailed assessment of the environmental impacts caused by deep-sea mining and will help to develop environmental standards and threshold values for international regulations, such as the mining code of the International Seabed Authority. Our small-scale sediment suspension experiment will provide important new insights into sediment plume behaviour and the monitoring strategy applied during the collector trial. In addition, a recolonization experiment with hard substrates was started that will serve the scientific community in the upcoming decades with unique information on the evolution of manganese nodule habitats.

This expedition brought many challenges for the work on deck due to the handling of a multitude of large gear, i.e. ROV, AUV, Molab and its two satellite landers, BoBo lander, two ROV elevator landers, and four moorings. The largely successful deployments of the equipment were only made possible by the excellent and professional service as well as collaborative spirit of captain Lutz Mallon and his fantastic crew. We deeply appreciate their hospitality and are looking forward to return for the next cruise. A very hearty THANK YOU to the master and crew of RV SONNE!

On behalf of all SO268 participants,

Matthias Haeckel