

Maria S. Merian Expedition MSM70: BATHYCHEM - Bathymetrists Seamounts



5. Weekly Report

Atlantic 13°10' N/ 20°44' W, 28th January 2018

The 5th week of our MSM70 Expedition was also the last week of our working program. Therefore, we aimed this week to finish the central and northern working areas as well as to sample some volcanoes that were, earlier in the expedition, difficult to sample. We mapped the three seamounts Marchant, Sorensen and Flanagan and two unnamed seamounts of the western central working area and the central Carron Seamount. The seamounts were subsequently sampled by nine dredge hauls that recovered basalts and volcanoclastic material from four of these seamounts. After four days we pointed our attention to our last, so far unmapped, area: the McGowan Seamount group in the middle of the northern working area. After mapping, we sampled the seamounts with three dredges and also here we could recover volcanic rock samples. The two remaining working days we used to re-sample the Seamounts Carter and Annan with a total of 3 dredge tows. Sampling of these mounts, at the beginning of the expedition, had not been totally satisfying as we had recovered mostly manganese crusts and carbonate rocks. But with the new detailed knowledge of the structure of the volcanoes that we gained over the last 4 weeks, we could now also collect sufficient volcanic samples. The last working day we used to map areas of the Kane Gap fracture zone, north of the Bathymetrists seamounts to better understand their structural relationship.



A dredge brings many volcanic samples from Carter seamount on deck.

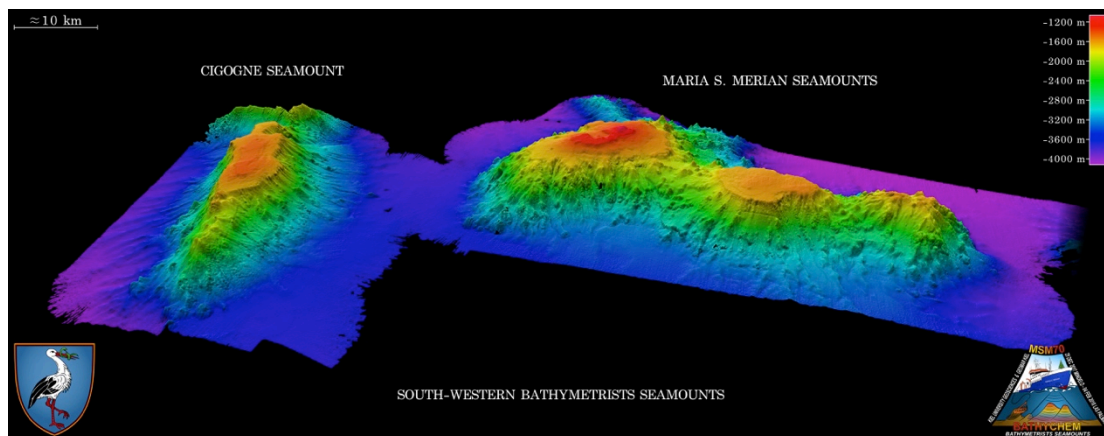
Yesterday at 16:00 o'clock we ended the scientific working program and started our travel to Las Palmas, Gran Canaria. During the transit we pack again our equipment and of course the samples and the labs will be cleaned. Further we work on the cruise report of the MSM70 expedition and on analysing our new data. The transit will take about four days after which we plan to arrive Thursday morning, the 1st of February in the port of Las Palmas. The scientific team will leave the *Maria S. Merian* there to make space for participants of a short technical test-cruise.

After 5 weeks we can look back satisfied to a good and successful expedition. We mapped a total of 67,580 km², an area the size of the Benelux states Belgium, The Netherlands and Luxembourg together. From 65 dredges, over 60% recovered volcanic rocks and we produced the first high-resolution maps of many named and unnamed volcanoes of the Bathymetrists Seamounts. In honour of the ship that mapped this seamounts, we named a group of three seamounts the “Maria S. Merian Seamounts” and its neighbour volcano “Cigogne Seamount” (French for stork) after the heraldic animal in the coat-of-arms of the *Merian*. Our Bathymetrists will also apply to have these names officially recorded by the „GEBCO Sub-Committee for Underwater Feature Names“ (SCUFN).

At this opportunity we, the scientific participants of MSM70, like to thank Captain Schmidt and the crew of R/V *Maria S. Merian* for their enthusiastic support of our science. Due to a good cooperation and their full commitment we could bring our scientific program to a good end with many promising first results. The atmosphere on board was always good and we had a nice time on board the *Maria S. Merian* that we will remember with pleasure.

In name of all expedition participants, best greetings from Maria S. Merian,

Froukje van der Zwan



3D-view of the bathymetric data of Cigogne and Maria S. Merian Seamounts.