

1st. weekly report (24.01.17 – 29.01.17

SO-254 „PoriBacNewZ“ 26.01.2017 (Auckland, Neuseeland) – 27.02.2017 (Auckland, Neuseeland)

Until January 23rd all participants of expedition SO254 „PoriBacNewZ“ arrived safely and with all luggage in Auckland, New Zealand, and went on board research vessel (RV) “Sonne”. Most of the freight, shipped in eight containers by ships and air cargo, was already on board and cooling and frozen goods arrived on board on January 24th as scheduled such that all logistic preparations for the cruise went as planned. The chief scientist and the ROV team had been already on board since January 22nd for briefings with the master and for setting up the ROV (Remotely Operated Vehicle) and preparing it for its operation. ROV-6000 from GEOMAR in Kiel is the crucial basis during the expedition for the investigation of sponge communities living at the sea floor. The reason for coming

on board already on January 24th was that there was an open ship day on the 25th which was planned already for a longtime in advance by the German embassy in New Zealand. It was a highlight in the framework of the 40 years jubilee of the agreement on scientific cooperation between Germany and New Zealand. Therefore, the ship was relocated from the freeport to a pier directly in



photo: M. Simon

front of the Hilton Hotel at a very central location close to the city center in the wonderful harbor of Auckland. The laboratories were already set up for this day to a great extent, to give an insight into scientific work on board to the public. In a large tent on the pier the German embassy, the Alexander von Humboldt Foundation, the German academic exchange service (DAAD), MARUM, GEOMAR, ICBM, NIWA from New Zealand and the Environmental Research Institute of the University of Waikato were present with booths. In the morning the chief scientist was interviewed live about the upcoming cruise by the New Zealand breakfast TV. In total more than 1600 visitors came and the German ambassador, Gerhard Thiedemann, was present all day and was informed by master Lutz Mallon and the chief scientist about the ship and the research aims of the upcoming expedition. At the end he invited all people involved to a reception and thanked them for the great organization of this felicitous and successful day. On January 23rd, the New Zealand minister for science and innovation, Hon Paul Goldsmith, had already come for a visit on board and was informed by master

Lutz Mallon, Dr. Cornel de Ronde of GNS Science, New Zealand, and the chief scientist on the technical and scientific capabilities and research activities of the ship and cooperation with marine scientists from New Zealand. The minister was impressed and greatly interested in what he learned and gave an interview to the New Zealand TV channel One. This TV channel was on board all the time and interviewed also Dr. de Ronde and the chief scientist. Hence “Sonne” was well present in New Zealand TV for this week.



The German ambassador in New Zealand, Gerhard Thiedemann, on board RVS Sonne photo: M. Simon



The New Zealand minister for science and innovation, Hon Paul Goldsmith, and master Lutz Mallon on RV Sonne photo: M. Simon

In the late evening after the open ship day, however, bad news for everybody on board arose. After tests with the engine it turned out that the control valve of the cooling water system for two of the four Diesel engines was broken and needed to be replaced. It turned out quickly that the spare part could only be obtained from its producer in the UK. Hence a courier was sent by the shipping company to pick up the spare part in the UK and bring it to Auckland by airplane. On January 28th in the early afternoon it arrived and was built in and successfully tested. Hence the 40 scientists from eight research institutions and six countries left the harbor of

Auckland with a delay of two days and seven hours but nevertheless in a good mood, full of expectations and headed for the first station at 30°S and 174°E at which they arrived in the morning of January 30th. The investigations will be carried out first in the subtropical Pacific at around 30°S between 174° and 179°E and then continued on a transect at 179°E from 30° to 60°S. The cruise ends on February 27th again in Auckland.

The research aims are structured into two large topics: On the one hand extensive investigations of the sponge communities at the seafloor will be carried out. The biogeography, classical and molecular taxonomy, the symbiotic bacteria of the sponge holobiont and their potential to produce secondary metabolites will be studied comprehensively. Prerequisite for these investigations is the ROV-6000, with which the seafloor down to 6000 m can be explored and sampled. In the context of the other topic the hydrography, water masses (by means of rare earth elements), optical properties of the near-surface waters and the composition and biodiversity of the bacterial communities and their dissolved organic nutrients and the geomicrobiome will be investigated along the transect. This work is a continuation of respective investigations in the Pacific during cruise SO248 around 180°E between 30°S and 60°N carried out last year.

Setting up of the laboratories is meanwhile completed. Planning of the work for the first stations with master Lutz Mallon and his crew has been already done. He and his crew are most cooperative and helpful, such that we are very confident to be supported excellently during the cruise in any way and regarding all affairs on board.

Meinhard Simon on behalf of the scientific party and crew on board.