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Catching krill for research can be very demanding! To be able to reliably identify the organisms caught they should preferably be uninjured and for use in experiments on board still alive. Huge catches would therefore not necessarily be a good thing, so for research nets are used which are smaller than those used for commercial catches and they are towed for a shorter time as well. Now krill is not evenly distributed in the ocean but occurs rather patchily – whether this depends on the distribution of water masses and currents will become apparent from our data analysis – and also tends to occur in swarms. Consequently the size of the catch varies considerably. Sometimes it is quite large, but we have sometimes had several days together when the number caught of individuals of the Antarctic krill species, *Euphausia superba*, was very small. In the meantime however all the tanks and aquaria for experiments on living organisms are fully occupied. To estimate the standing stock of krill the patchiness requires that a sufficient number of trawls be completed in order to be able to make a statistically significant statement for any particular area. The 84 trawls in our plan are therefore, if anything, the minimum needed.

Although the sea ice cover around Maud Rise in the NE Weddell and Lazarev Seas continues to decline, from Monday to Tuesday we met the most difficult ice conditions of the whole cruise so far. We were off the so-called Trolltunga, an extension of the Fimbulisen-Glacier, which reaches about 40 km out to sea beyond the average position of the edge of the ice shelf. Apparently the sea ice drifting in the coastal current had accumulated in front of this barrier and formed innumerable pressure ridges, so that Polarstern could only make headway using full power. To gain an overview of the pack ice situation and find the best route through the ship's helicopter was deployed.

Towards evening there appeared within sight of the Polarstern the ice-strengthened South African research and supply vessel, Agulhas, whose presence in the area was already known to us. To see another ship in this region is something special. Immediately radio contact was made and mutual visits by helicopter arranged. The Polarstern's delegation included senior members of the crew and a South African biologist, who is on board. From the Agulhas there came the chief engineer and three other members of their technical team. The purpose of the Agulhas' cruise here was to deliver supplies for the South African Station Sanae, which lies inland, by unloading them at the ice shelf edge near Neumayer Station. As transpired aboard the Agulhas they had been unable to do this because of the ice conditions and were on their way to an alternative landing place. This was another indication of the unpredictability which has to be reckoned with in polar regions. So with our smooth unloading a good three weeks earlier we obviously had a necessary portion of good luck.

We experienced Christmas as it should be, a moment of reflection and contemplation as well as a happy celebration together. After a traditional evening meal of sausages and potato salad we assembled for the more serious part of Christmas Eve in the ship's seasonally decorated Blue Saloon complete with Christmas tree. Interspersed with the singing of Christmas carols the Christmas story was read alternately in English and German. The captain gave his Christmas address, in which he with simultaneous humour and dignity reminded those present of the current relevance of Christ's birth, in German. The Chief Scientist speaking in English made his theme Christmas at sea and illustrated this with an entry for 24th December from a report from an expedition in southern polar waters from 1902. The expert musical accompaniment to the ceremony was provided on the recorder and keyboard by three German students and a young Italian scientist, who had all been industriously practising together during advent. The Christmas celebration was continued in the festively decorated equipment store. This less formal part of the evening began with an alternative "Nativity Play". Afterwards there was lively talking and dancing. All in all a successful celebration.

On Christmas Day we were totally spoilt by the ship's galley staff. At midday there was a four-course meal with an excellent soup, an entrée, a main course of roast goose with red cabbage, kale, potatoes and dumplings followed by a massive ice. To accompany this there was red and white wine on the tables festively decorated by the stewardesses. In the evening we were surprised by an opulent buffet offering a choice of the finest foods. Many thanks to the company HeliTransair, which sponsored the delicious four course meal at lunch time.

We have also been very pleased to receive many friendly Christmas greetings on board; those from more official places are displayed in the stairwell for all to see.

The station work northward along the 3°W meridian, the third of our in total four planned sections was interrupted for Christmas Night. This time was used to improve the calibration of the ship's ADCP, the device mounted on the underside of the ship's hull to measure profiles of the currents, by steaming a pattern of mutually crossing courses.

This is the last Weekly Report in this year, so it is time to wish all the readers a Happy New Year.

On behalf of all cruise participants,

Volker Strass