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The weather in Cape Town was showing itself at its very best with clear blue skies, gentle breezes and a temperature of 32°C as the cruise participants came on board Polarstern during the afternoon of the 19th November. For those joining the ship for the first time it was an exciting and moving moment, while for those more frequent travellers who had been on board before it was the opportunity for a joyful reunion with old friends among the crew and scientists.

Departure was however delayed from the planned time of 18:00 until 01:00 on the following day, principally due to bunkering by means of tanker lorries. Even for a cruise with a duration of 8 weeks a delay of 7 hours is not negligible. Nevertheless there was one beneficiary from the delay, namely one of the scientists whose luggage missed the group flight and which had to be delivered later and so he could not be blamed for the delay.

Before sailing the newly embarked scientists were welcomed by the captain and received some initial hints about safety on board. Under a starry sky we then left Cape Town harbour in South Africa. For along while we could see the city lights, however they gradually dwindled and vanished behind the horizon.

Thus the second leg of Polarstern's twenty-third Antarctic expedition had begun. During this leg she will serve as the basis for carrying out a comprehensive marine research programme and also for the logistic exercise of helping to supply Neumayer Station and expeditions on the Antarctic continent. The cruise leg will end on 12th January 2006 in Punta Arenas in Chile, South America. The 55 scientists aboard are drawn from 10 nations on 4 continents.

The first day at sea was spent allocating laboratory space to the various scientific groups, and – as on the following days – with filling the laboratories with the most varied equipment and instruments, which had been unloaded from their containers by the crew in Cape Town. So far nothing has been missed. Everything required is accessible and all major pieces of equipment such as winches and container laboratories are in the places agreed before the cruise. In view of the volume of freight on board, not least because of re-supplying Neumayer, it is an impressive performance displaying well-practiced collaboration between the AWI Logistics Department, F. Laeisz Shipping Line and not least the ship's complement.

To be able to support Neumayer Station and the expeditions ashore as soon as possible in the Antarctic summer season the ship is sailing directly to Neumayer with Bouvet Island as intermediate way point. On the way to Neumayer only such research work is being conducted which can be done without stopping or at points to which the ship will not return after Neumayer.

The marine acoustics group prepared their streamer for detecting sound

underwater in harbour so that they were able to begin their measurements within sight of the Cape of Good Hope the next morning at 04:00. The streamer contains fifteen hydrophones (underwater microphones) integrated into a 600 m long cable which is towed behind the ship; the data are recorded and analysed on board and later ashore. Already on the second day a sperm whale was detected and identified from the clicks it emits for echolocation. The following day two so far unidentified click sequences were heard before the streamer had to be brought on board as the weather deteriorated. In the mean time visual and infrared cameras have been in----stalled in the crow's nest to detect whales blowing ahead of the ship. The semi-stabilised support for these cameras was constructed by the AWI workshop shortly before the cruise and air-freighted to Cape Town. The first results from these are not expected until colder conditions which allow the warm air breathed out by the whales to be distinguished from the cold background.

Once the weather had calmed again a little the Continuous Plankton Recorder (CPR) was deployed instead of the acoustic streamer. This device can also be towed by a steaming ship and within it the plankton are filtered by silk bands and collected on them as they are advanced by a screw mechanism driven by an impellor. Since the Recorder is simple to operate and costs no extra ship time it is hoped in the long term to collect a dataset which will show both regional variability in the zooplankton population and any possible developments due climate change.

Continuous measurements are also being made with a range of instruments which are permanently installed in the ship. These include the ther--mos-----alinograph, for measuring the temperature and salinity of the surface waters, and acoustic Doppler current profiler (ADCP), for measuring currents in the upper 300 m of the water, and also instruments for the major meteorological parameters. These latter are supplied by the me-te-o----rol-ogists on board to the global data network and thus they ultimate-ly contribute to improving the weather forecast in our area of operation.

After passing the Polar Front the first station work of our cruise was carried out at about 51°S; a Rectangular Mid-Water Trawl (RMT) net was paid out to just above the bottom and then recovered to collect deep-sea plank--ton. The catch contained a large variety of zooplankton species. Whether or not new, as yet undescribed, species were found will only be known after detailed studies in the laboratory back home. Another deep RMT station was made south of Bouvet Island.

Work at Bouvet Island as such was focused at research on fish. Fish traps were deployed in shallow water near the Island. The traps working on the lobster-pot principle should allow catching of live fish without damage so that experiments can be conducted using them, in particular their adap----ta---tion to different temperatures. Fish caught earlier in such traps have lived happily for many years in aquaria. Live fish and a variety of other

bottom-dwelling creatures were also caught near Bouvet using a so-called Agassiz-Trawl during the deployment period of the traps. The catches will be subject to a variety of investigations ranging from the isotopic composition of their organic substances to their role in the food web. Thanks to the navigational skills of the bridge, the traps were suc--cess----ful-ly recovered despite difficult seas. Unfortunately, the traps were empty. On departure from Bouvet, visibility improved and even a few rays of sunlight fell upon this desolate island of volcanic origin, edged with steep rocky cliffs with glaciers on top. An impressive sight.

After a few cases of seasickness at the beginning of the cruise all are well again and looking forward to their various activities. After passing through the Roaring Forties and Furious Fifties, which each sent us a storm to prove they earned their names, we hope soon to have left these latitudes behind us and await our entry into the ice-covered area with joyful an-----tic-i-pation. Then the tiresome rolling and pitching will be over. Plates of sweets and biscuits together with decorations of fir which stewardesses and steward placed in the saloons this morning have given the ship a Christmas atmosphere.

On behalf of all with Best Wishes, Volker Strass.