

ANT XXIII/5 Weekly Report No. 2 (Punta Arenas - Cape Town)  
16 April - 23 April 2006

Leaving the Straits of Magellan we passed southward of the Falkland Islands and are now steaming eastwards along latitude 51°30' S. The team of the Department of Marine Zoology at Bremen University was the first to start their scientific programme. Every morning at nine o'clock the vessel stops and we sample zooplankton with a multiple closing net down to 2000 m water depth. The biologists are mainly interested in the ecology and biodiversity of copepods, small crustaceans that are very abundant in the ocean and play an important role in the marine food web, very similar to insects on land. Immediately after the catch the zooplankton samples are analysed in a cooling container on board and material is preserved at -80°C for further studies after the cruise. Based on initial results different species of deep-sea copepods (some of them with tongue-twisting Latin names) inhabit discrete water depths, resulting in a multi-layered distribution pattern.

However, small crustaceans are not the only "biological entertainment" for the cruise participants. We regularly spot different kinds of seabirds and marine mammals. Since Punta Arenas we have been accompanied by albatrosses, majestically soaring over the waves almost without wing flap. East of the Falkland Plateau wandering albatrosses joined us; with a gigantic wingspan of almost three metres they belong to the largest of flying birds. To the north of South Georgia, in the area of the Antarctic Convergence where the sea surface temperature drops abruptly, 'Polarstern' was surrounded by fur seals, which visit this area during their foraging trips from the island 100 miles away. During the daily net hauls king penguins regularly approach the vessel and seem to follow our activities with interest. The zoological highlights so far were several sightings of whales and a group of strikingly black and white marked hourglass dolphins, the only dolphin species that lives so far south in the cold Antarctic waters.

During the last few days the other scientific teams started work by preparing their equipment. At two stations we tested acoustic releasers in order to ensure that they work properly once they are placed on the seafloor in the investigation area. The release mechanism is activated by a sound impulse from the ship. A weight is set free and the moored instruments ascend to the sea surface so that they can be recovered from the ship. The petrologists and geophysicists still have to wait for their turn. Their study programmes will probably start middle of next week.

After strong winds and high seas during the first two days of the cruise (testing the "physiological limits" of some participants) we could enjoy a calm cruise for the rest of the week with – for this region – exceptionally weak winds and a maximum wave height of only 3 m. Now and then, even the sun came out contributing to the positive and friendly atmosphere on board.

Today, Sunday, we spotted the first icebergs. They have a diameter of 300 m and reach 20-30 m height above the water. These ice-giants were "born"

several years ago at the Antarctic coast or shelf ice margin and have been driven by wind and ocean currents to the North. Now they are slowly melt---ing. Unfortunately, bad visibility with deep-hanging fog prevented good photos of the icebergs.

With kind regards on behalf of all cruise participants,

Wilfried Jokat und Holger Auel  
23. April 2006  
Position 51°30'S 012°30'W, +4°C