



Weekly report

05 December 2007

Heading towards Antarctica in stormy weather

After sailing from Capetown on 28 November, *Polarstern* navigated heavy seas to reach the first sampling position on 2 December. The Continuous Plankton Recorder was the first gear over the side. Its task is to capture zooplankton between two rolls of silk while the ship is underway. This time-honoured device, used since 1920, provides a long time-series of samples and global coverage of zooplankton abundance by species. It may provide the first hints of the ocean biosphere's response to our changing climate.

On 5 December we start the initial long station with a variety of sampling gears, some more compatible than others. Crustacean traps require at least 20 hours underwater to attract scavengers. Trawls need a standard bottom time with additional wire time for deployment and hauling at depth. Some samplers require clean conditions, others gather up to three tonnes of mud! Cooperative thought and discussion has produced a schedule that will accommodate all users.

Allocation of laboratory space on the ship is also a challenge. Formalin fixation of specimens requires good ventilation for the safety of the operators and also to safeguard the nearby molecular biology project that could be contaminated by a whiff of this chemical. We take the minimum sample of animals for our research, to understand the biodiversity that we study and value. Microscopes are lashed to benches, cameras to seafloor sledges, binoculars to seabird observers; everywhere lenses provide a different view of the marine environment. On board the physical, chemical and geological laboratories are festooned with equipment to investigate various aspects of the productivity and movement of the ocean.

Each evening the 53 scientists gather for a lecture; each takes a turn to tell about their project, sampling gear and anticipated results. This collegial group discusses the strategy for sampling and sharing data. Our different scientific disciplines, ages, eleven nationalities and eight languages provide a lively background. After only a week at sea, we have developed a community spirit and a lively sense of adventure as we approach Antarctica.

This is the first of nine reports at weekly intervals during the *Polarstern* voyage ANT-XXIV/2. The following reports will focus on different aspects of the marine life in Antarctica and how the organisms are collected for studies of biodiversity.