

## Logbook 5 (04/11/19)

"Coming back from the coasts of Antarctica we found that the goals of what our expedition should achieve or should have achieved had changed. Our aim was to contribute to science as much as we could. It was not adventure and reaching high latitudes." These words were written by *Erich von Drygalski* almost exactly 100 years ago - and obviously there is a tone of bitterness in it. "The Continent of the Icy South" (the title of *Drygalski's* logbook, first published 1904) gives a vivid interface of this expedition.

The results were extraordinary - according to what one could expect and considering the quality of instruments and basic knowledge that were available in those days. It was *Drygalski* who proved the existence of "polar water", derived from the Antarctic continental shelf and finding its way far north of the equator. It is this basic phenomenon that determines many investigations *Polarstern* will carry out during its current ISPOL 2004/2005 - expedition. But in *Drygalski's* days polar water was no matter of interest. Heroism counted. The prestigious race to the pole was about to start. But *Drygalski's* men did not even think of reaching the South Pole or putting Germany's flag on a deserted piece of rock surrounded by stranded icebergs. The Kaiser (emperor) was not amused and he let *Drygalski* know.

What about today's expectations? Will ISPOL be a success or just a "piece of work done at the far edge of the world"? Will it be more than a "page-18-note" if the "under ice-plankton zoo" will be enriched by two or three new species' names? Will the press cover it, if some new details concerning the distribution of CFCs in deep water will be detected? And is the drift of icebergs something worth mentioning unless there is a Titanic to provide a bigger story?

Thank goodness the expectations in Europe are no longer nationalistic these days. But they do exist. The public will ask questions like: Are there at least some confirmation about global warming, *Polarstern* could find in the ice? And even the ozone hole is still good enough for a page-3-headline. But what if there are important results that do not fit into schemes like that? The leaders of the scientific groups on board of *Polarstern* will continue to do what one of their great forefathers did: Put the emphasis on accuracy and make sure that their analyses are strictly state of the art - guided by W-questions, such as: What, which number, where?

While this text is saved on one of *Polarstern's* PCs on the lower deck, a so-called Rosette goes down to the Weddell Sea bottom. It provides the scientists with information about Conductivity (salinity), Temperature and Depth (CTD-data) from various water depths while it is lowered towards the abyss, some 5000 meters down from the surface. It is an everyday job. But good old *Drygalski* would have shed tears of joy if he could see how - 100 years after his pioneer days - 268 liters of ocean water are lifted in about 150 minutes. Without the constant threat of breaking the steel wire.

**Quotation of the day:** *Marcel Nicolaus*, a young scientist, watches *Polarstern's* chief oceanographer *Mike Schröder*, coming back with a very heavy load of over-loaded plate of meat and pasta from the buffet: "Good gracious, Mike.! Do you intend to pull up the CTD by hand?"