

CRUISE REPORT FROM R/V ARGOS

Survey period: 20000925-20000928

Survey area: The Skagerrak, the Kattegat and the Sound.

Principal: SMHI

SUMMARY

The expedition was performed within SMHI's regular marine monitoring programme and covered the Skagerrak, the Kattegat and the Sound. Oxygen concentrations in the bottom water of Kattegat and the Sound were mapped.

Low oxygen concentrations were found in the Laholm Bay 0.16 ml/l, in Skälderviken, 0.64 ml/l and in the Sound, just around 1 ml/l. In the rest of Kattegat, bottom water oxygen concentrations varied between 2 and 4.5 ml/l, highest in the northern part.

PRELIMINARY RESULTS

The expedition, which was a part of the SMHI ordinary monitoring programme, began in Göteborg on the 25th of September and ended in the same port on the 28th. The weather during the cruise was dominated by weak winds of varying directions.

The Skagerrak

Surface temperatures varied around 13°C in the whole area. The thermocline was found at a depth of 40 to 50 metres, while the halocline was located at 15 to 20 metres depth. Surface salinity was somewhat lower than normal, about 20 psu. All nutrients, except silicate, showed for the season normal values. Silicate concentrations were higher than normal, which can be explained by the low salinity.

The lowest oxygen concentration in the bottom water was measured at the station, Släggö, in the mouth of the fiord Gullmarn, 3.10 ml/l corresponding to a saturation of 48%.

The Kattegat and the Sound

Surface water temperatures varied between 13 and 14°C, and the thermocline was located at a depth of 15 to 40 metres. The halocline was found a 15 to 30 metres except in the Sound, where it was located as shallow as 5 to 10 metres. Nutrient conditions were the same as in the Skagerrak.

The lowest oxygen concentration in the bottom water was measured at the station Laholm-1, in the inner part of the Laholm Bay, 0.16 ml/l. Concentrations below 1 ml/l were also measured in Skälderviken. At all stations in the Sound, the bottom water concentrations were just above 1 ml/l, while they varied between 2 and 4.5 ml/l in the main part of the Kattegat.

PARTICIPANTS

| Name | From |
|---------------------------------|---------------------------|
| Lars Andersson, chief scientist | SMHI Oceanographical lab. |
| Tuulikki Jaako | - " - |
| Nils Kajrup | - " - |
| Jorge Valderrama | - " - |
| Bengt Yhlen | - " - |

APPENDICES

- Track chart
- Table over stations, parameters and sampling depths
- Map showing bottom oxygen concentrations
- Monthly average plots for selected stations
- Profiles for selected stations