

CRUISE REPORT FROM R/V ARGOS

Survey period: 000117-000123

Survey area: The Baltic Proper, the Sound, and the Kattegat.

Principal: SMHI

SUMMARY

The expedition was performed within SMHI's regular marine monitoring program and covered the Gulf of Bothnia, the Baltic Proper, the Sound, the Kattegat.

The weather was windy, from 3 m/s to 22 m/s.

The surface water temperatures were between 3 and 4.5°C in the Baltic proper, 2.5 and 4.5°C in the Sound and the Kattegatt.

Oxygen concentrations below 2 ml/l were found at 140 m and deeper in both the eastern and the western Gotland basins.

A detailed algal report is soon available on <http://www.smhi.se/nodc/reports/> for the survey period.

PRELIMINARY RESULTS

The expedition, which was part of SMHI's regular marine monitoring programme, started in Göteborg the 17th of January and ended in Göteborg the 23rd of December. The weather conditions during the cruise were windy. During the cruise period several low pressures past over the Baltic Sea area.

The Baltic proper

The water surface temperatures varied between 3 to 4.5°C. The colder values are from the eastern respectively the western Gotland basin.

The surface layer was well mixed down to 60 meter. Hydrogen sulphide was present from BY10 toward BY32 in the bottom water below 140 meters depth. Oxygen concentrations below 2 ml/l were found in the bottom water below 70 meters in the Bornholm basin and below 80 meters in the eastern and western Gotland basins. In the surface layer the nutrients concentrations varied between; 0.5 - 0.8 µmol/l for phosphate, 3 - 5 µmol/l for nitrate, 0.02 - 0.14 µmol/l for nitrite, 0.1 - 0.3 µmol/l for ammonium and 10 - 16 µmol/l for silicate.

The Sound and Kattegatt

The water surface temperature was a little bit more than 2.5°C in the Sound, around 3.5 in the most southern two stations in Kattegat and 4.5 in the rest of Kattegat.

The whole water column was well mixed, with a weak marked Baltic surface stream. The oxygen concentrations were good in the whole area with 6.0 ml/l as the lowest value, which corresponds to 87%.

In the surface layer, in the Kattegat, the nutrients concentrations varied between; 0.5 - 0.65 µmol/l for phosphate, 6 - 10 µmol/l for nitrate, 0.2 - 0.8 µmol/l for nitrite, 0.3 - 2.6 µmol/l for ammonium and 8 - 14 µmol/l for silicate.

In the surface layer, in the Sound, the nutrients concentrations varied between; 0.5 - 0.6 µmol/l for phosphate, 7 - 12 µmol/l for nitrate, 0.2 - 0.7 µmol/l for nitrite, 0.2 - 0.8 µmol/l for ammonium and 10 - 17 µmol/l for silicate.

PARTICIPANTS

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APPENDICES

- Cruise track
- Table over stations, parameters and sampling depths
- Map showing bottom water oxygen concentrations
- Monthly average plots for selected stations