

CRUISE REPORT FROM R/V ARGOS

Survey period: 980622-980627

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

Principal: SMHI

SUMMARY

The expedition was performed within SMHI's regular marine monitoring programme. Surface water temperatures as well as nutrient concentrations were typical for the season. Oxygen concentrations below 2 ml/l were found at depths greater than 80 m in the Western, Eastern and Northern Gotland Basins and from 70 m and downward in the Bornholm Basin and the Hanö Bight. Hydrogen sulphide was present near the bottom in the Eastern Gotland Basin, the Bornholm Basin as well as in the Hanö Bight.

A detailed algal situation report is available on <http://www.smhi.se/sgn0102/nodc/reports/> for the survey period.

PRELIMINARY RESULTS

The expedition, which was a part of the SMHI's ordinary monitoring programme, began in Göteborg on the 22nd of June and ended in the same port on the 27th of June. The first day the winds were weak to moderate from west, while the rest of the week was dominated by weak winds with varying directions.

A detailed algal situation report is available on <http://www.smhi.se/sgn0102/nodc/reports/>.

The Skagerrak

Surface water temperatures varied between 12°C and 14.5°C, highest in the southeast. The thermocline was found at a depth of 50 meters along the coasts, while it was located much more shallow in the central parts, 5-10 meters.

Nutrient concentrations in the surface water were low, typical for the season.

The Kattegat and the Sound

Surface water temperatures increased from 14°C in the north to 15.5°C in the south (the Sound). Surface salinity decreased from 28 psu in the north to 14 psu in the southern Kattegat and further to about 10 psu in the central part of the Sound.

The halocline was located at a depth of 5 meters in the north and 15 meters in the south.

In the Kattegat, all nutrients showed low concentrations in the surface water. In the Sound the surface pool of nitrogen was emptied while there still was some phosphate left and relatively high concentrations of silicate.

The lowest oxygen concentration in the deep water was measured at Kullen in southern Kattegat, 4.31 ml/l, corresponding to a saturation of 63%.

The Baltic Sea

Surface water temperatures were highest in the south, just above 13°C and lowest in the Eastern Gotland Basin, just below 10°C. The thermocline was found at 15-20 meters depth in the whole Baltic Proper. Nitrate concentrations in the surface water were below detection limit (0.05 µmol/l), while there still was some phosphate left (0.15-0.20 µmol/l). Silicate concentrations varied between 5 and 8 µmol/l.

Oxygen concentrations below 2 ml/l were measured at depths greater than 80 meters in the Western, Eastern and Northern Gotland Basins, as well as at depths greater than 70 meters in the Bornholm Basin and the Hanö Bight. Hydrogen-sulphide was measured close to the bottom in the whole Eastern Gotland Basin, in the Bornholm Basin and in the Hanö Bight.

PARTICIPANTS

Name	From
Lars Andersson, chief scientist	SMHI Oceanographical lab.
Tuulikki Jaako	- " -
Nils Kajrup	- " -
Mats Ohlson	- " -
Bodil Thorstensson	- " -
Åsa Nilsson	- " -

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