

Rättelse:

I expeditionsrapporten från U/F Argos 1998-07-25 har det blivit fel beträffande utbredningen av svavelväte och låga syrgashalter. Figureerna är dock riktiga.
En ny version av expeditionsrapporten bifogas.

Vi ber om ursäkt för det inträffade.

Correction:

In the cruise report from R/V Argos 1998-07-25, there are errors in the text concerning the extension of hydrogen sulphide and low oxygen concentrations. However, all figures are correct.

A new version of the text is attached.

We apologise for the mistake.

CRUISE REPORT FROM R/V ARGOS

Survey period: 980719-980725

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

Principal: SMHI

SUMMARY

The expedition was the 8th in SMHI's regular marine monitoring programme for 1998.

The surface water temperatures, as well as the nutrient concentrations were typical for the season.

Oxygen concentrations below 2 ml/l were found at depths greater than 70m in the southern Baltic, 80m in the eastern and 60m in the northern Gotland Basins and from 70m in the Bornholm Basin and the Hanö Bight. Hydrogen sulphide was present near the bottom in the eastern Gotland Basin, the Bornholm Basin and in the Hanö Bight.

Blooms of bluegreen algae were visible in the south-east Baltic.

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

PRELIMINARY RESULTS

The expedition, the 8th of the SMHI regular marine monitoring programme for 1998, started in Kungshamn on the 19th and ended in Göteborg on the 25th of July. The first day, in the Skagerrak, the wind was brisk from west. It slowly decreased and in the Kattegat, the Sound and the Baltic it was weak from east-southeast. Later it turned to southwest and increased. The last day, In Kattegat, the wind was again brisk from west.

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

The Skagerrak

Surface water temperature was 14-16°C, with the highest values in the southeastern part. The thermocline was found at a depth of 30-50m along the Swedish coast, whereas in the central parts it was much more shallow, 5-10m. Along the Danish coast a weak thermocline was located at 15m depth.

Surface salinity was low, about 22 psu, in the southeastern Skagerrak. In the other parts it was 31-32 psu. The halocline was located at 5-10m depth in the central and southeastern parts. Outside the central part of Bohuslän it was found at 20m depth and along the Danish coast at 15m depth.

The oxygen concentrations in the deep water were >5 ml/L.

Nutrient concentrations in the surface water were low and typical of the season; phosphate 0.02-0.09 µmol/L, nitrate and silicate close to the detection limit.

The Kattegat and the Sound

Surface water temperatures were 15-16°C in the Kattegat and somewhat lower in the Sound. The thermocline was weak in the western part of the Kattegat. In the eastern part there was a continuous decrease in temperature from 10m depth to the bottom. In the central part of the Sound the thermocline was located at 15-25m depth.

Surface salinity in the Kattegat was 31-32 psu and in the Sound about 10 psu. The halocline was located at 5-20m depth in the northwest and at 10-30m depth in the eastern area. In the Sound it was found at 10-25m depth.

The oxygen concentrations in the deep water were >3 ml/L at all stations. At station W Landskrona in the Sound 3.95 ml/L, corresponding to a saturation of 41%, was measured.

The phosphate concentration in the surface was 0.05-0.1 µmol/L and the nitrate concentration at the detection limit. Silicate was almost exhausted in the Kattegat surface water, whereas values of about 10 µmol/L were measured in the surface water of the Sound.

The Baltic Sea

The surface water temperature was lowest south of the Sound with about 14°C. In the other parts of the Baltic it fluctuated around 15°C. The thermocline was found at 15-40m depth west of Bornholm and at 20-50m depth in the rest of the Baltic.

The halocline in the Arkona Basin was located at 30-40m depth, in the Bornholm Basin at 50-70m depth and in the other areas at about 80m depth. At the Bornholm Deep the salinity was 11 psu at 90m depth. Further into the Baltic 8 psu was found at 180m depth at most stations.

Oxygen concentrations below 2 ml/L were found at depths >70m in the southern Baltic, at depths >80m in the eastern, at depths >60m in the northern Gotland Basins and at depths >70m in the Bornholm Basin and the Hanö Bight. Hydrogen-sulphide was measured in the bottom water in the entire eastern Gotland Basin (BY10, BY15, BY20) and in the Bornholm Basin and the Hanö Bight at depths >75m.

The phosphate concentrations in the surface were in general about 0.1 µmol/L and only at a few stations values of 0.15-0.17 µmol/L were found. The nitrate concentration at the surface was below the detection limit in the whole Baltic and the silicate concentrations varied between 5.5-9 µmol/L.

Bluegreen algae were observed in the entire Baltic. In the southeast part *Nodularia spumigena* accumulations were visible on the surface.

PARTICIPANTS

Jan Szaron, chief scientist	SMHI Oceanographic Service.
Lars Edler	- " -
Tuulikki Jaako	- " -
Eva Nyberg	- " -
Jorge Valderrama	- " -

APPENDICES

- Track chart
- Table of visited stations, meteorological conditions and sampled parameters during the expedition
- Map showing bottom oxygen concentrations
- Depth profiles from selected stations
- Monthly average and current observed values from selected stations