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## CRUISE REPORT FROM R/V ARGOS

**Survey period:** 2001-04-25 - 2001-04-28

**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 and covered the Skagerrak, the Kattegat, the Sound, and the Baltic Proper. The temperature and nutrient concentrations in the surface layer, were normal for the season in all areas. The spring bloom of phytoplankton had terminated in most of the areas covered. Only in the east part of the Baltic proper it was still going on. Hydrogen sulphide was present at depths greater than 125 metres in the eastern and western Gotland Basins. Oxygen concentrations below 2 ml/l was found at depths greater than 80 metres in the whole Baltic Prop*

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## **PRELIMINARY RESULTS**

The cruise as part of the SMHI ordinary monitoring programme, started in Göteborg on the 23<sup>th</sup> of April and ended in the same port on the 28<sup>th</sup>. The weather was dominated by weak to moderate winds of varying direction and very little rain, but a lot of fog.

### **The Skagerrak**

Surface water temperatures varied between 5 and 6°C. The thermocline and halocline were both located at a depth of 5-10 meters. Nutrient concentrations were normal for the season, Nitrite and nitrate were between 0.5 and 3-5 µmol/l, whereas phosphate was around 0.10 µmol/l and silicate 0.6-8 µmol/l, with the highest values in the low saline surface layer near the coast.

High oxygen saturation was measured at all stations and chlorophyll concentrations varied between 1 and 10 µg/l, with highest values in the Gullmarn.

### **The Kattegat and the Sound**

Surface water temperatures varied around 4°C, which is normal for the end of April. In the northern Kattegat the thermocline and halocline were both located at a depth of 10 metres, while they were lower in the southern part, about 20 metres. In the Sound, two distinct water packages were present, separated by a very sharp halocline at a depth of 10 metres.

Also in the Kattegat and the Sound, nutrient concentrations were normal, nitrite and nitrate close to detection limits, phosphate, 0.1-0.4 and silicate 0.6-9.5.

### **The Baltic Sea**

Surface water temperatures varied between 4 and 6 °C. In the Arkona basin the thermocline was located at a depth of 30-40 meters. The Bornholm- and Gotland basins both had a thermocline at 15-20 meters depth and a halocline at about 60 meters depth.

Nitrate + nitrit was below 0.1 µmol/l. Some phosphate was still there and silicate was 6-8 µmol/l, with highest values in the Hanö Bight.

In the Arkona basin oxygen concentrations were OK. In the Bornholm basin they were around 1 ml/l at a depth of 80-90 meters.

Hydrogen sulphide was present in the eastern, northern and western Gotland Basins at depths greater than 125 metres. Oxygen

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concentration below 2 ml/l was found at depths greater than 80 metres in the whole Baltic Proper.

## **PARTICIPANTS**

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## **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
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