SMHI

Oceanographic Unit

Lars Edler

# AlgAware

## ALGAL SITUATION IN SWEDISH MARINE WATERS

**No 11, 5 – 15 December 2005**


### Sammanfattning

I Skagerrak var artrikedomen stor av speciellt diatoméer, men endast *Pseudo-nitzschia* spp* nådde höga celltal. Även i **Kattegatt** var artrikedomen stor. Här blommade *Pseudo-nitzschia* spp* med cellkoncentrationer över den rekommenderade gränsen. Dinoflagellater var också vanliga.

I **Östersjön** fanns bara små mängder växtplankton. Stora diatoméer dominerade. Cyanobakterier av släktena *Aphanizomenon* och *Nodularia** hade så gott som försvunnit.

### Summary

In the Skagerrak the species diversity was large, especially among diatoms. But only *Pseudo-nitzschia* spp* reached high cell densities. In the **Kattegat** *Pseudo-nitzschia* spp* bloomed with cell densities above the recommended limit. Dinoflagellates were also common.

In **Baltic** there were only small amounts of phytoplankton. Large diatoms dominated. Cyanobacteria of the genera *Aphanizomenon* and *Nodularia** had disappeared almost completely.

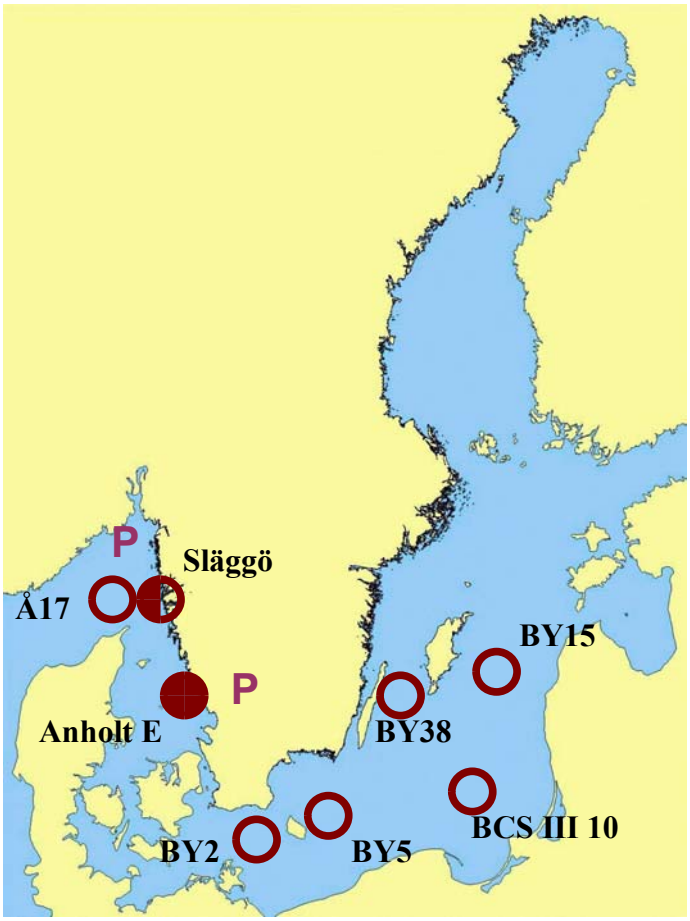

- Large amounts of algae
- Moderate amounts
- Small amounts
- Fish killing species

A Alexandrium spp., PSP

D Dinophysis spp., DSP

P Pseudo-nitzschia spp. ASP

C Toxic cyanobacteria



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## DETAILS

Based on quantitative samples 0-10 m depth and net samples *POTENTIALLY HARMFUL SPECIES

### SKAGERRAK

#### Å17 15 December

The diversity of both diatoms and dinoflagellates was relatively large, but cell densities were generally low. Among the diatoms *Pseudo-nitzschia* spp.* dominated, followed by *Proboscia alata*.

#### Släggö 15 December

The diversity of both diatoms and dinoflagellates was large, but cell densities low. *Pseudo-nitzschia* spp.* were common together with *Skeletonema costatum*. *Proboscia alata* was also common. *Ceratium* and *Dinophysis* * species were present in low numbers.

### KATTEGAT

**Anholt E 14 December** As in the Skagerrak the phytoplankton diversity was large, but the cell densities in general low. *Pseudo-nitzschia* spp.* bloomed with more than 1 million cells/l. *Proboscia alata* was also common. *Dinophysis** species were present, but in densities below recommended limits.

| Selection of observed species | Recommended limit | Å17 2005-12-15 cells/L | Släggö 2005-12-15 cells/L | Anholt E 2005-12-14 cells/L |
|---|---|---|---|---|
| Chaetoceros brevis | | | present | common |
| Chaetoceros danicus | | present | present | present |
| Chaetoceros diadema | | present | | present |
| Chaetoceros similis | | present | | present |
| Coscinodiscus concinnus | | | | present |
| Coscinodiscus radiatus | | | present | present |
| Ditylum brightwellii | | present | present | present |
| Guinardia flaccida | | present | present | present |
| Lauderia annulata | | | | present |
| Proboscia alata | | common | 25 000 | 70 000 |
| Pseudo-nitzschia delicatissima-group | 1 million cells/liter | 150 000 | 100 000 | 1 030 000 |
| Pseudo-nitzschia seriata-group | 1 million cells/liter | 100 000 | 60 000 | 200 000 |
| Rhizosolenia setigera | | present | present | present |
| Skeletonema costatum | | | 100 000 | present |
| Thalassiosira angulata | | | present | present |
| Thalassiosira punctigera | | present | | present |
| Ceratium furca | | present | present | present |
| Ceratium fusus | | | present | present |
| Ceratium horridum | | present | present | |
| Ceratium lineatum | | present | present | present |
| Ceratium macroceros | | | present | |
| Ceratium tripos | | present | present | present |
| Dinophysis acuminata | 900 cells/liter | present | present | 200 |
| Dinophysis acuta | 300 cells/liter | | present | 100 |
| Dinophysis norvegica | 2000 cells/liter | | present | 200 |
| Dinophysis rotundata | 900 cells/liter | | | present |
| Lingulodinium polyedrum | | present | | |
| Polykrikos schwarzii | | present | | present |
| Prorocentrum micans | | | present | present |
| Dictyocha speculum | | present | common | common |

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### BALTIC SEA

**Arkona basin BY2 13 December** The flora was very poor with a few large species and some remaining filaments of *Aphanizomenon* sp. Some colonies of the cyanobacterium *Woronichinia* sp. was present.

**Bornholm basin BY5 13 December** The flora was very poor with a few large species. Also here some colonies of the cyanobacterium *Woronichinia* sp. was present.

**South East Baltic BCS III 10 13 December** There were no remains of the saline species, which were found at this station in November. The flora was very poor, with the exception of 3 500 *Coscinodiscus granii*/L.

**Eastern Gotland basin BY15 12 December** The flora was poor with a few large species. Some colonies of the cyanobacterium *Woronichinia* sp. was present.

**Western Gotland basin BY38 5 December** The plankton flora was poor also here. A few cells of *Dinophysis norvegica** and filaments of *Nodularia spumigena** were present.

| Selection of observed species | BY2 2005-12-13 cells/L | BY5 2005-12-13 cells/L | BCS III 10 2005-12-13 cells/L | BY15 2005-12-12 cells/L | BY38 2005-12-05 cells/L |
|---|---|---|---|---|---|
| Actinocyclus octonarius | present | present | present | present | present |
| Chaetoceros danicus | present | | | present | present |
| Chaetoceros impressus | present | present | present | present | present |
| Coscinodiscus granii | | present | 3 500 | present | present |
| Ceratium tripos | present | | | | |
| Dinophysis norvegica | | | | | present |
| Planktonema lauterbornii | | | | present | |
| Aphanizomenon sp. | present | | | | present |
| Nodularia spumigena | | | | | present |
| Woronichinia spp. | present | present | | present | present |