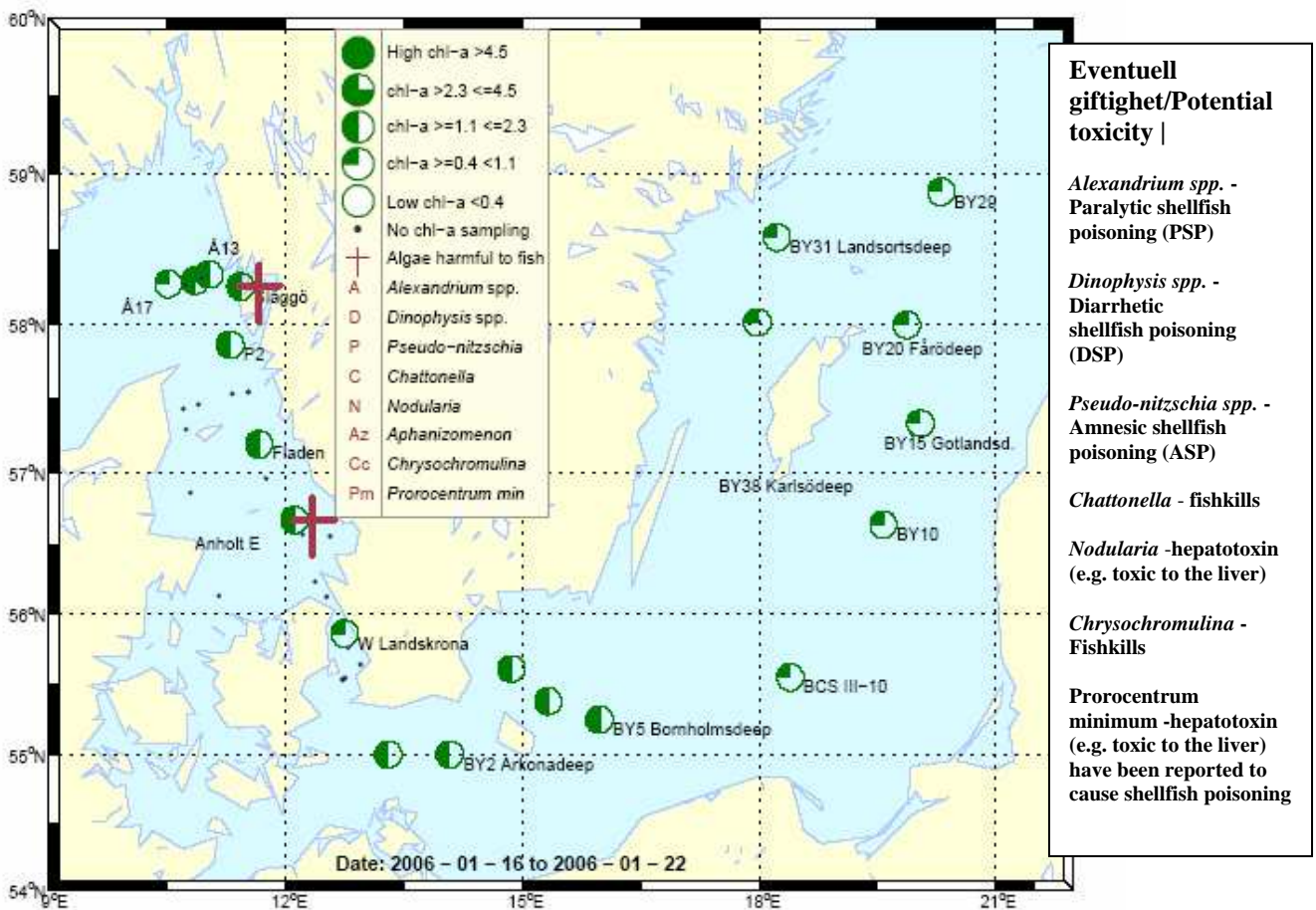


ALGAL SITUATION IN MARINE WATERS SURROUNDING SWEDEN

No 1, 16 – 19 January 2006

Vid kusten i **Skagerrak**-området pågick en vinterblomning med arter som främst hör till höstfloran. Den ”nya” arten *Chattonella* cf. *verruculosa** dominerade tillsammans med släktet *Pseudo-nitzschia**. I öppna Skagerrak fanns lite växtplankton. I **Kattegatt** var vinterblomningen mycket tydlig med mer än 25 olika diatoméarter. Det fanns rikligt av *C. cf. verruculosa**, *Skeletonema costatum* och *Pseudo-nitzschia* spp.*. Planktonfloran var mycket fattig i **södra Östersjön**, med enstaka stora diatoméer, samt några filament av cyanobakterien *Aphanizomenon* sp. Liksom i november påträffades små mängder av arter som hör hemma i Kattegatt-Skagerrak. Även i **centrala Östersjön** var planktonfloran mycket fattig med enstaka stora diatoméer, samt några filament av cyanobakterien *Aphanizomenon* sp.



In the coastal area of **Skagerrak** a winter bloom composed by species belonging to the autumn was going on. The “new” species *Chattonella* cf. *verruculosa** dominated together with *Pseudo-nitzschia* spp.*. In the open Skagerrak there were small amounts of phytoplankton. In the **Kattegat** the winter bloom with mainly autumn species was considerable. More than 25 diatom species dominated the plankton. There were large amounts of *C. cf. verruculosa**, *Skeletonema costatum* and *Pseudo-nitzschia* spp.*. The plankton flora in the **Southern Baltic** was very poor, with some few large diatoms and a few filaments of the cyanobacterium *Aphanizomenon* sp. As in November last year there were small amounts of diatoms belonging to the Kattegatt-Skagerrak area. Also in the **Central Baltic**, the plankton flora was very poor, with some few large diatoms and a few filaments of the cyanobacterium *Aphanizomenon* sp.

DETAILS

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

SKAGERRAK

Å17 16 January

Phytoplankton were sparse at this station. A few *Pseudo-nitzschia delicatissima*-group* and *Cylindrotheca closterium* were present. Some *Chattonella* cf. *verruculosa** were also seen.

Släggö 16 January

A winter bloom was going on in this part of the coastal Skagerrak. About 15 species of diatoms were present with about 50 000 cells/L. The potentially toxic genus *Pseudo-nitzschia** dominated. About 15 species of dinoflagellates were also found. The “new” species *Chattonella* cf. *verruculosa** reached about 65 000 cells/L.

KATTEGAT

Anholt E 17 January

A considerable winter bloom was going on at this station. Among the 25 diatom species *Skeletonema costatum* dominated with 100 000 cells/L, followed by *Pseudo-nitzschia** with 45 000 Cells/L. The presence of *Ditylum brightwellii* indicated that this bloom was rather remains from the autumn, instead of a developing spring bloom. Dinoflagellates were few and only a few cells of *Dinophysis acuminata** and *D. norvegica** were present. The “new” species *Chattonella* cf. *verruculosa** reached about 40 000 cells/L.

Selection of observed species

| | Recommended limit | Å17 2006-01-16 cells/L | Släggö 2006-01-16 cells/L | Anholt E 2006-01-17 cells/L |
|--|-----------------------|------------------------------|---------------------------------|-----------------------------------|
| <i>Chaetoceros brevis</i> | | | | common |
| <i>Chaetoceros curvisetus</i> | | | | common |
| <i>Chaetoceros danicus</i> | | present | present | present |
| <i>Chaetoceros decipiens</i> | | | present | |
| <i>Chaetoceros similis</i> | | present | present | present |
| <i>Ditylum brightwellii</i> | | | | present |
| <i>Guinardia delicatula</i> | | | | present |
| <i>Guinardia flaccida</i> | | | | present |
| <i>Leptocylindrus danicus</i> | | | present | present |
| <i>Nitzschia longissima</i> | | present | present | present |
| <i>Proboscia alata</i> | | present | common | 20 000 |
| <i>Pseudo-nitzschia delicatissima</i> -group | 1 million cells/liter | present | dominant | 40 000 |
| <i>Pseudo-nitzschia seriata</i> -group | 1 million cells/liter | | very common | 8 000 |
| <i>Rhizosolenia hebetata</i> | | | | present |
| <i>Rhizosolenia setigera</i> | | | | present |
| <i>Skeletonema costatum</i> | | | common | 100 000 |
| <i>Thalassionema nitzschioides</i> | | | | common |
| <i>Thalassiosira angulata</i> | | | present | present |
| <i>Thalassiosira punctigera</i> | | | | present |
| <i>Ceratium furca</i> | | present | present | present |
| <i>Ceratium fusus</i> | | | present | |
| <i>Ceratium longipes</i> | | present | present | |
| <i>Ceratium tripos</i> | | | present | present |
| <i>Dinophysis acuminata</i> | 900 cells/liter | | | present |
| <i>Dinophysis norvegica</i> | 2000 cells/liter | | | present |
| <i>Dinophysis rotundata</i> | 900 cells/liter | | | present |
| <i>Heterocapsa rotundata</i> | | | present | |
| <i>Protoperidinium crassipes</i> | no recommendation | | present | |
| <i>Chattonella</i> cf. <i>verruculosa</i> | no recommendation | present | 65 000 | 40 000 |

BALTIC SEA

Arkona basin BY2 18 January

The flora was poor with a few large diatoms, *Actinocyclus octonarius* and *Chaetoceros impressus*. As in November last year some *Pseudo-nitzschia delicatissima*-group* were seen, which is strange as they belong to the more saline water of the Kattegat and Skagerrak. Among cyanobacteria *Aphanizomenon* sp and *Woronichinia* sp. were present in very small amounts.

Bornholm basin BY5 18 January

The plankton situation at this station was very similar to BY2, with a few cells of *Actinocyclus octonarius*, *Aphanizomenon* sp. and *Woronichinia* sp. Also at this station *Pseudo-nitzschia delicatissima*-group* was seen.

South East Baltic BCS III 10 18 January

Actinocyclus octonarius and *Coscinodiscus* sp. were present in very low numbers, together with some *Woronichinia* sp.

Eastern Gotland basin BY15 19 January

Although the amount of phytoplankton was very low, there were more species at this station than at the other in the Baltic. *Actinocyclus octonarius*, *Coscinodiscus granii*., *Chaetoceros danicus*, *C. impressus*, *Planctonema lauterbornii* and *Aphanizomenon* sp. were all present, but except for *A. octonarius* they were only seen in the net sample.

| Selection of observed species | BY2 2006-01-18 cells/L | BY5 2006-01-18 cells/L | BCS III 10 2006-01-19 cells/L | BY15 2006-01-19 cells/L |
|--|------------------------------|------------------------------|-------------------------------------|-------------------------------|
| <i>Actinocyclus octonarius</i> | present | present | present | present |
| <i>Chaetoceros danicus</i> | present | present | present | present |
| <i>Chaetoceros impressus</i> | present | present | present | present |
| <i>Coscinodiscus granii</i> | present | present | present | present |
| <i>Pseudo-nitzschia delicatissima</i> -group | present | present | | |
| <i>Skeletonema costatum</i> | present | | | |
| <i>Dinophysis norvegica</i> | | | | present |
| <i>Heterocapsa rotundata</i> | present | present | | |
| <i>Planctonema lauterbornii</i> | | | | present |
| <i>Aphanizomenon</i> sp. | present | present | | present |
| <i>Woronichinia</i> spp. | present | present | present | |

Lars Edler

| Art / Species | Gift / Toxin | Eventuella symptom | Clinical symptoms |
|------------------------------|--------------------------------------|--|---|
| <i>Alexandrium</i> spp. | Paralytic shellfish poisoning (PSP) | <p>Milda symptom: Inom 30 min.: Stickningar eller en känsla av bedövning runt läpparna, som sprids gradvis till ansiktet och nacken; stickningar i fingertoppar och tår; Huvudvärk; yrsel, illamående, kräkningar, diarré</p> <p>Extrema symptom: Muskel förlamning; andningssvårigheter; känsla av att kvävas; Man kan vara död inom 2-24 timmar efter att ha fått i sig giftet, på grund av att andningsmuskulaturen förlamas.</p> | <p>Mild case: Within 30 min: tingling sensation or numbness around lips, gradually spreading to face and neck; prickly sensation in fingertips and toes; headache, dizziness, nausea, vomiting, diarrhoea.</p> <p>Extreme case Muscular paralysis; pronounced respiratory difficulty; choking sensation; death through respiratory paralysis may occur within 2-24 hours after ingestion.</p> |
| <i>Dinophysis</i> spp. | Diarrhetic shellfish poisoning (DSP) | <p>Milda symptom: Efter cirka 30 minuter till några timmar: yrsel, illamående, kräkningar, diarré, magont</p> <p>Extrema symptom: Upprepad exponering kan orsaka cancer</p> | <p>Mild case: Within 30 min-a few hours: dizziness, nausea, vomiting, diarrhoea, abdominal pain.</p> <p>Extreme case: Repeated exposure may cause cancer.</p> |
| <i>Chattonella</i> spp. | Fish toxin | <p>Låg celltäthet: Ingen påverkan.</p> <p>Hög celltäthet: Fiskens gälar skadas, fisken dör.</p> | <p>Low cell numbers: No effect on fish.</p> <p>High cell numbers: Fish death due to gill damage.</p> |
| <i>Pseudo-nitzschia</i> spp. | Amnesic shellfish poisoning (ASP) | <p>Milda symptom: Efter 3-5 timmar: yrsel, illamående, kräkningar, diarré, magkramper</p> <p>Extrema symptom: Yrsel, hallucinationer, förvirring, förlust av korttidsminnet, kramper</p> | <p>Mild case: Within 3-5 hours: dizziness, nausea, vomiting, diarrhoea, abdominal cramps.</p> <p>Extreme case: dizziness, hallucinations, confusion, loss of memory, cramps.</p> |

Manual on harmful marine microalgae (2003 - UNESCO Publishing)