SMHI

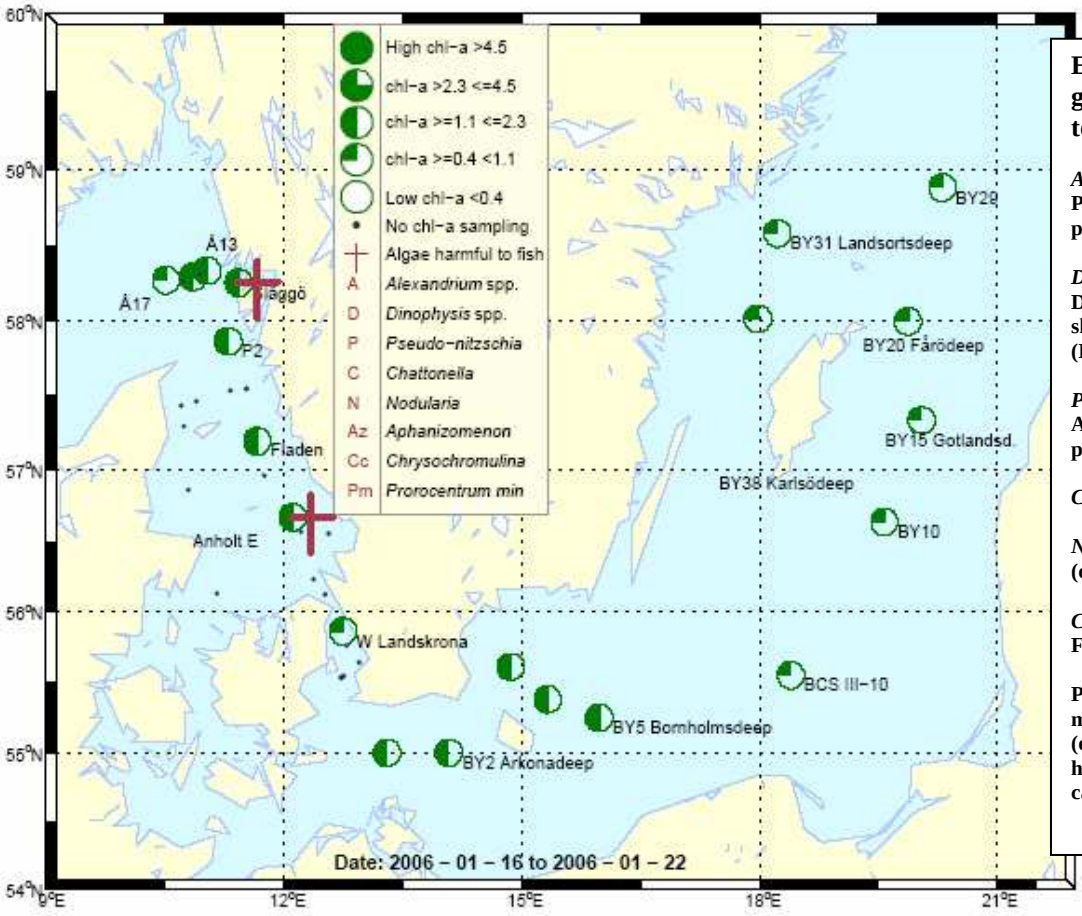
Oceanographic Unit

AlgAware

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.



Eventuell giftighet/Potential toxicity |

***Alexandrium spp.* - Paralytic shellfish poisoning (PSP)**

***Dinophysis spp.* - Diarrhetic shellfish poisoning (DSP)**

***Pseudo-nitzschia spp.* - Amnesic shellfish poisoning (ASP)**

***Chattonella* - fishkills**

***Nodularia* -hepatotoxin (e.g. toxic to the liver)**

***Chrysochromulina* - Fishkills**

Prorocentrum minimum -hepatotoxin (e.g. toxic to the liver) have been reported to cause shellfish poisoning

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 Kattegat-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
Chaetoceros brevis				common
Chaetoceros curvisetus				common
Chaetoceros danicus		present	present	present
Chaetoceros decipiens			present	
Chaetoceros similis		present	present	present
Ditylum brightwellii				present
Guinardia delicatula				present
Guinardia flaccida				present
Leptocylindrus danicus			present	present
Nittzschia longissima		present	present	present
Proboscia alata		present	common	20 000
Pseudo-nitzschia delicatissima-group	1 million cells/liter	present	dominant	40 000
Pseudo-nitzschia seriata-group	1 million cells/liter		very common	8 000
Rhizosolenia hebetata				present
Rhizosolenia setigera				present
Skeletonema costatum			common	100 000
Thalassionema nitzschioides				common
Thalassiosira angulata			present	present
Thalassiosira punctigera				present
Ceratium furca		present	present	present
Ceratium fusus			present	
Ceratium longipes		present	present	
Ceratium tripos			present	present
Dinophysis acuminata	900 cells/liter			present
Dinophysis norvegica	2000 cells/liter			present
Dinophysis rotundata	900 cells/liter			present
Heterocapsa rotundata			present	
Protoperidinium crassipes	no recommendation		present	
Chattonella cf. verruculosa	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
Actinocyclus octonarius	present	present	present	present
Chaetoceros danicus	present	present	present	present
Chaetoceros impressus	present	present	present	present
Coscinodiscus granii	present	present	present	present
Pseudo-nitzschia delicatissima-group	present	present		
Skeletonema costatum	present			
Dinophysis norvegica				present
Heterocapsa rotundata	present	present		
Planktonema lauterbornii				present
Aphanizomenon sp.	present	present		present
Woronichinia spp.	present	present	present	

Lars Edler

Art / Species	Gift / Toxin	Eventuella symptom	Clinical symptoms
Alexandrium spp.	Paralytic shellfish poisoning (PSP)	**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 **Extrema symptom:** Muskelförlamning; 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.	**Mild case:** Within 30 min: tingling sensation ro numbness around lips, gradually spreading to face and neck; prickly sensation in fingertips and toes; headake, dizziness, nausea, vomiting, diarrhoea. **Extreme case** Muscular paralysis; pronounced respiratory difficulty; choking sensation; death trough respiratory paralysis may occur within 2-24 hours after ingestion.
Dinophysis spp.	Diarrehetic shellfish poisoning (DSP)	**Milda symptom:** Efter cirka 30 minuter till några timmar: yrsel, illamående, kräkningar, diarré, magont **Extrema symptom:** Upprepad exponering kan orsaka cancer	**Mild case:** Within 30 min-a few hours: dizziness, nausea, vomiting, diarrhoea, abdominal pain. **Extreme case:** Repeated exposure may cause cancer.
Chattonella spp.	Fish toxin	**Låg celltäthet:** Ingen påverkan. **Hög celltäthet:** Fiskens gälar skadas, fisken dör.	**Low cell numbers:** No effect on fish. **High cell numbers:** Fish death due to gill damage.
Pseudo- niztschia spp.	Amnesic shellfish poisoning (ASP)	**Milda symptom:** Efter 3-5 timmar: yrsel, illamående, kräkningar, diarré, magkramper **Extrema symptom:** Yrsel, hallucinationationer, förvirring, förlust av korttidsminnet, kramper	**Mild case:** Within 3-5 hours: dizziness, nausea, vomiting, diarrhoea, abdominal cramps. **Extreme case:** dizziness, hallucinations, confusion, loss of memory, cramps.

Manual on harmful marine microalgae (2003 - UNESCO Publishing)

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