SMHI
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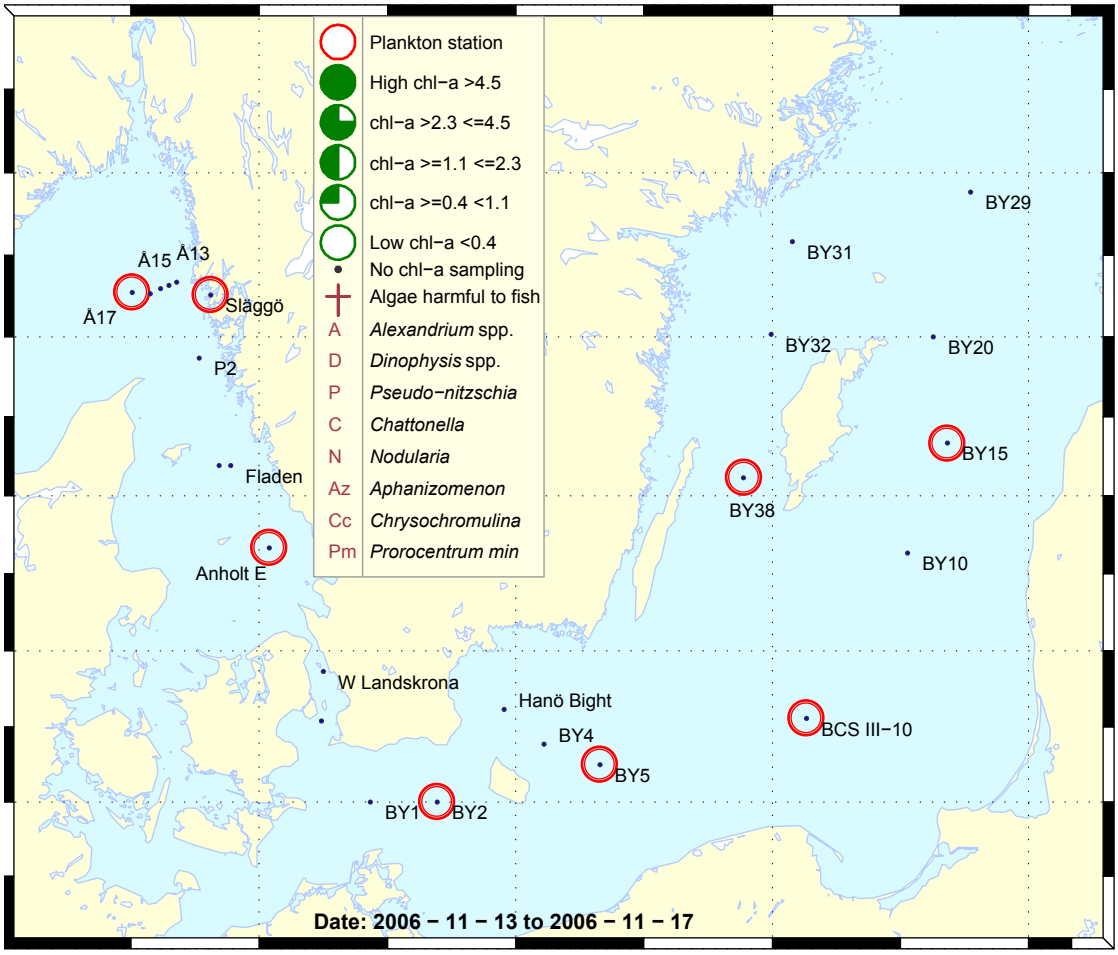
AlgAware
ALGAL SITUATION IN MARINE WATERS SURROUNDING SWEDEN

Sammanfattning

Bara en förenklad version av AlgAware presenteras denna gången eftersom klorofyllproven är kvar på R/V Argos, som är väntad till Göteborgs först om några veckor. Klorofyll är mycket transportkänsligt, då pigmentet bryts ner om det inte hålls nedfryst.

Planktonfloran var fattig både i yttre och kustnära Skagerrak, och cellantalen var låga. I Kattegatt var diversiteten ganska hög med tydlig dominans av kiselalger.

Östersjöproverna innehöll mycket få arter i låga antal.



Abstract

This is a simplified version of the AlgAware just to give a picture of the algae situation. No chlorophyll results are reported as the chlorophyll samples are still on the R/V Argos and will not be available for some weeks.

The plankton flora was poor both in open and coastal Skagerrak, i.e. a few species in low cell numbers. The diversity was rather high in Kattegat, with diatoms as the dominating group.

The samples from the Baltic contained very few species in low cell numbers.

Om AlgAware

SMHI genomför ca en gång per månad expeditioner med U/F Argos i Östersjön och Västerhavet. Resultat baserade på mikroskopanalys av planktonprover samt klorofyllmätningar presenteras kortfattat i denna rapport. Information från SMHI:s satellitövervakning av algblomningar finns på www.smhi.se.

About AlgAware

SMHI carries out monthly cruises with R/V Argos in the Baltic and the Kattegat/Skagerrak. Results from microscopic analysis of phytoplankton samples as well as chlorophyll measurements are presented in brief in this report. Information from SMHI:s satellite monitoring of algal blooms is found on www.smhi.se.

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 or 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.

Översikt av potentiellt skadliga alger och det aktuella giftets effekt. Overview of potentially harmful algae and effects of toxins. Manual on harmful marine microalgae (2003 - UNESCO Publishing).

Kartan på framsidan visar viktat medelvärde för klorofyll *a,* µg/l (0-20 m) vid de olika stationerna. Förekomst av skadliga alger vid stationer där arter analyseras markeras med symbol.

The map on the front page shows weighted mean of chlorophyll *a*, µg/l (0-20 m) at sampling stations. Presence of harmful algae at stations where species analysis is performed is shown with a symbol.

More detailed information on species composition and abundance. * = potentially toxic.

The Skagerrak

Å17 13th of November

The plankton flora was very poor, with only a few species present at low cell numbers. The diatom genera *Chaetoceros* spp. and *Pseudo-nitzschia* spp.* were observed.

Släggö 13th of November

The plankton flora was somewhat richer in number of species as compared to Å17, but the cell numbers were still low.

The Kattegat

Anholt E 14th of November

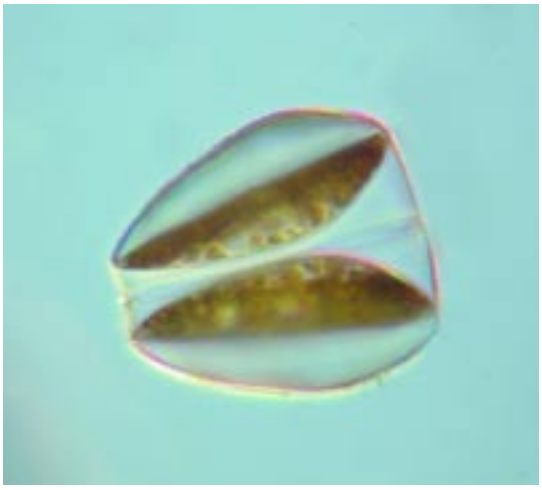
Chrysochromulina sp.

The most species rich station of this cruise, although the cell numbers were low. The diatoms dominated, and very few dinoflagellates were present, *Dinophysis acuminata** being one of them. The fish toxin producer *Chrysochromulina* spp.* was present and the most abundant diatom was the *Pseudo-nitzschia delicatissima*-group*. The diatom *Skeletonema costatum* was the second most abundant with 17000 cells/L.

The Baltic Sea

14th - 17th of November

In the Baltic the situation was similar at all stations. The plankton flora was very poor, with one or a few species of the diatom genera *Chaetoceros* and *Coscinodiscus* observed and one or a few dinoflagellate species; *Katodinium glaucum* and *Heterocapsa rotundata* being two of them. Small flagellated species were the most abundant, and at BCS III-10 and BY29 colonies of small (1-2µm) cyanobacteria were observed.



Coscinodiscus granii

Ann-Turi Skjevik

Selection of observed species Red=potentially toxic species	**Å17** **2006-11-13** **cells/L**	**Släggö** **2006-11-13** **cells/L**	**Anholt E** **2006-11-14** **cells/L**
Apedinella radians	present	present	present
Cerataulina pelagica			present
Chaetoceros danicus			present
Chaetoceros similis	present		present
Chaetoceros socialis		present	present
Chaetoceros spp.	present		present
Cylindrotheca closterium		present	present
Dactyliosolen fragilissimus			7 500
Ditylum brightwellii			present
Eucampia zodiacus		present	
Leptocylindrus danicus			9 000
Leptocylindrus minimus			present
Proboscia alata			present
Pseudo-nitzschia delicatissima-group	present	present	50 000
Pseudo-nitzschia seriata-group			9 900
Skeletonema costatum			17 000
Thalassiosira cf. *angulata*			present
Thalassiothrix lonigssima		present	
Ceratium tripos			present
Dinophysis acuminata			225
Heterocapsa cf. *minima*	5100		present
Heterocapsa rotundata		present	
Katodinium glaucum		present	present
Dictyocha speculum		present	present
Chrysochromulina spp.		present	present
Cryptomonadales spp.	37700	52000	30000
Plagioselmis prolonga	24000	28000	23000
Pyramimonas spp.		5100	5300
Strombidium spp.		present	present

Selection of observed species Red=potentially toxic species [1] quantified in m/L	**BY2** **2006-11-14** **cells/L**	**BY5** **2006-11-15** **cells/L**	**BCS III 10** **2006-11-15** **cells/L**	**BY15** **2006-11-16** **cells/L**	**BY29** **2006-11-16** **cells/L**	**BY38** **2006-11-17** **cells/L**
Chaetoceros danicus	present	present				
Chaetoceros impressus		present	present	present		present
Coscinodiscus spp.	present	present	2 600	present	present	2 900
Thallassiosira spp.		present				
Ceratium tripos	present					
Dinophysis acuminata					230	
Dinophysis rotundata					230	
Heterocapsa rotundata	12 400	12 000		present	present	
Katodinium glaucum			present		present	present
Chrysochromulina spp	present			present	present	present
Cryptomonadales spp	85 000	69300	24000	35500	51 500	38 900
Plagioselmis prolonga	26 700		15500	28400	37 300	17 700
Teleulax amphioxeia	present				present	present
Pyramimonas spp	44400	16000	10300	14000	3500	7000
Aphanizomenon sp.[1]				present	present	
Cyanobacteria spp_colony			860000		62000	
Mesodinium rubrum	present	present	present	present	present	present
Strombidium spp.	present	present	present	present	present	present
Choanoflagellates spp.	present	present	present	present	25000	28300