

Sammanfattning

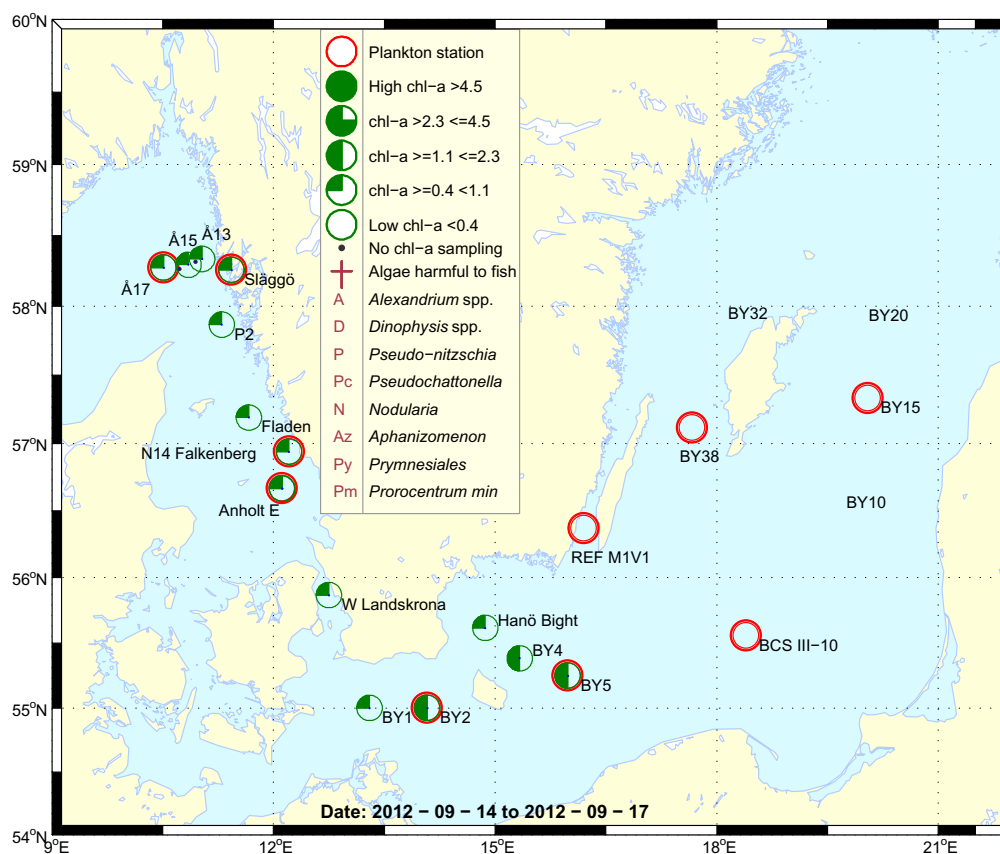
Utsjöexpeditionen var kortare än vanligt denna gång på grund av ändrade förutsättningar i samarbetet med Kustbevakningen. Bara västkusten och delar av södra Östersjön besöktes.

I Skagerraks kustvatten (Släggö) var antalet arter relativt högt, men cellantalerna var i stort sett låga. I yttre Skagerrak (Å17) var både art- och cellantal låga, likaså i Kattegatt.

Vid BY2 i södra Östersjön var det rikligt med kiselalgsarter i låga cellantal. Den filamentösa cyanobakterien *Aphanizomenon flos-aquae* fanns i förhållandevis stor mängd. Vid BY5 var läget ett annat, antalet arter var mycket färre och endast en kiselalgsart observerades.

De integrerade (0-20 m) klorofyll *a* värdena var låga, men normala för månaden i alla provtagningsområden.

Rapporten är en förkortad version på grund av brist på händelser i växtplanktonvärlden.



Abstract

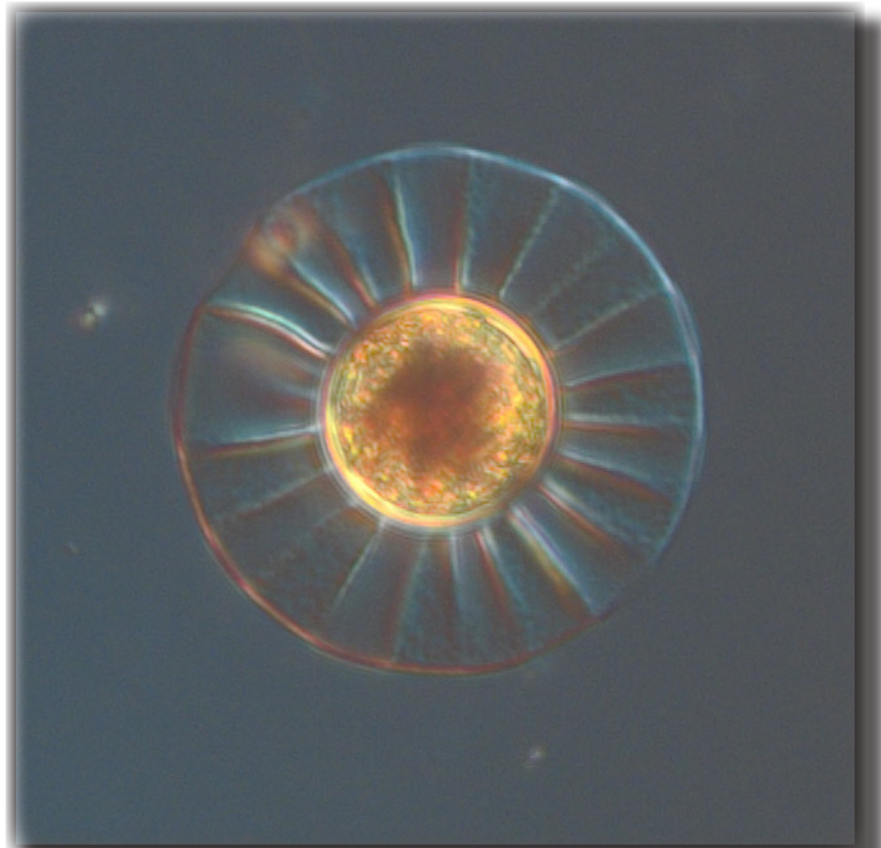
A new agreement with the Swedish Coastguard caused a shorter cruise, consequently only the Swedish west coast and parts of the southern Baltic Proper (Arkona and Bornholm Basins) were visited.

The number of species was quite high in the coastal Skagerrak waters (Släggö), but the cell numbers were mostly low. In the open Skagerrak (Å17) both the number of species and the cell numbers were low, and the same situation was noted in the Kattegat area.

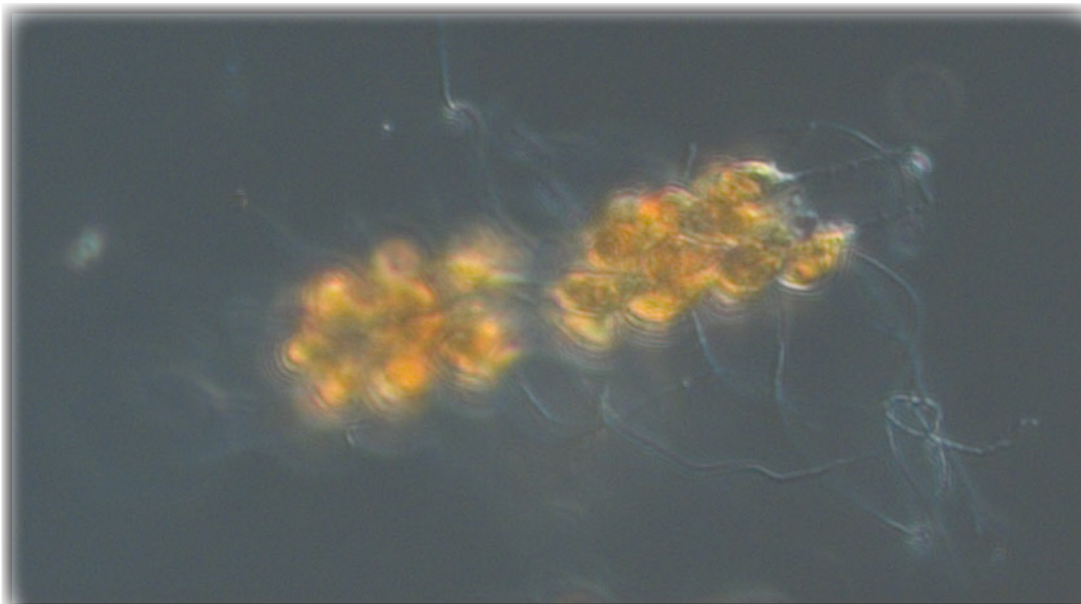
At BY2 in the southern Baltic, diatom species were abundant although the cell counts were low. The filamentous cyanobacterium *Aphanizomenon flos-aquae* was quite common in the sample. At BY5, the setting differed, the number of species was low and merely one diatom species was observed.

The integrated (0-20 m) chlorophyll *a* concentrations were low, but within normal for this month in all sampling areas.

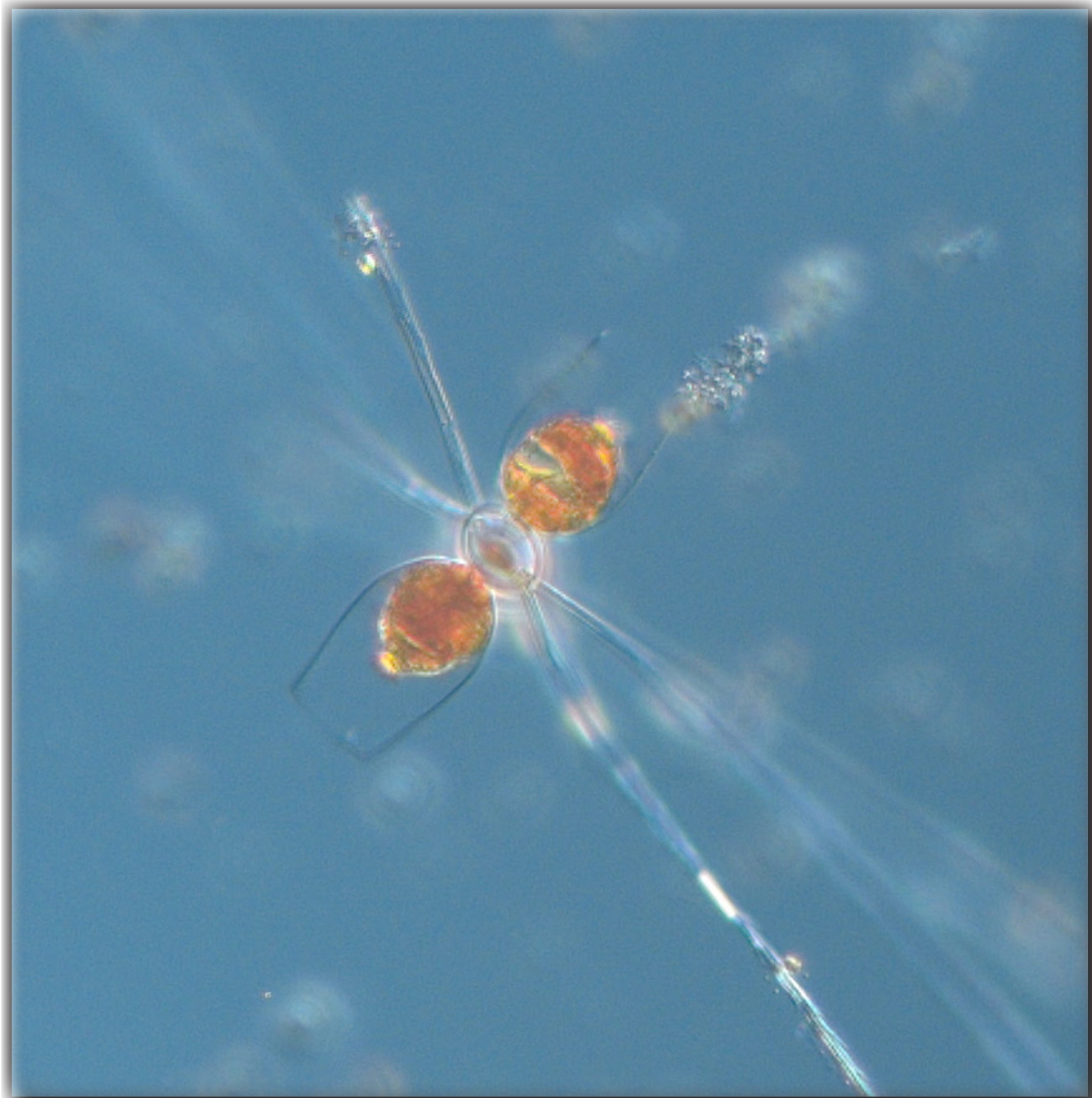
This report is a shortened version because of lack of events in the phytoplankton world.



The diatom *Planktoniella sol* was observed at the Skagerrak station Å17.



The flagellate *Rhizomonas setigera* is an epiphyte on *Leptocylindrus mediterranea* and was quite abundant at Å17.

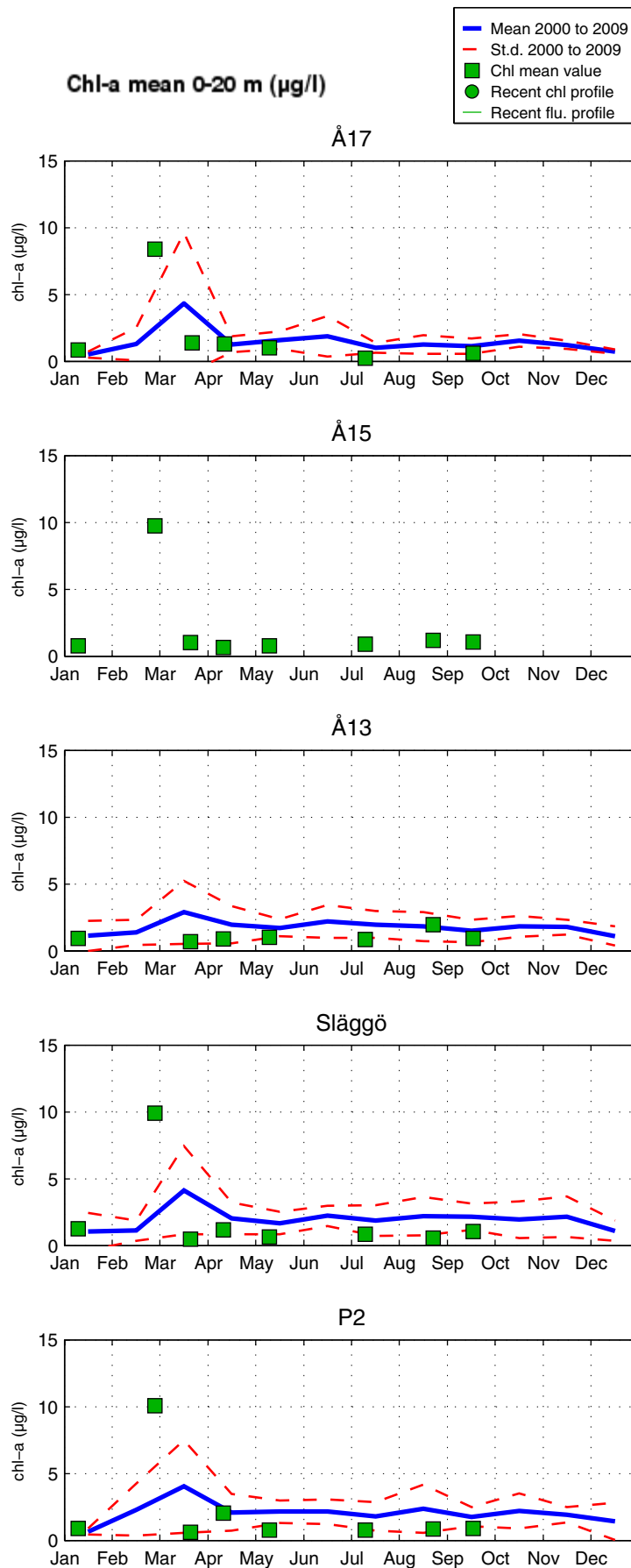
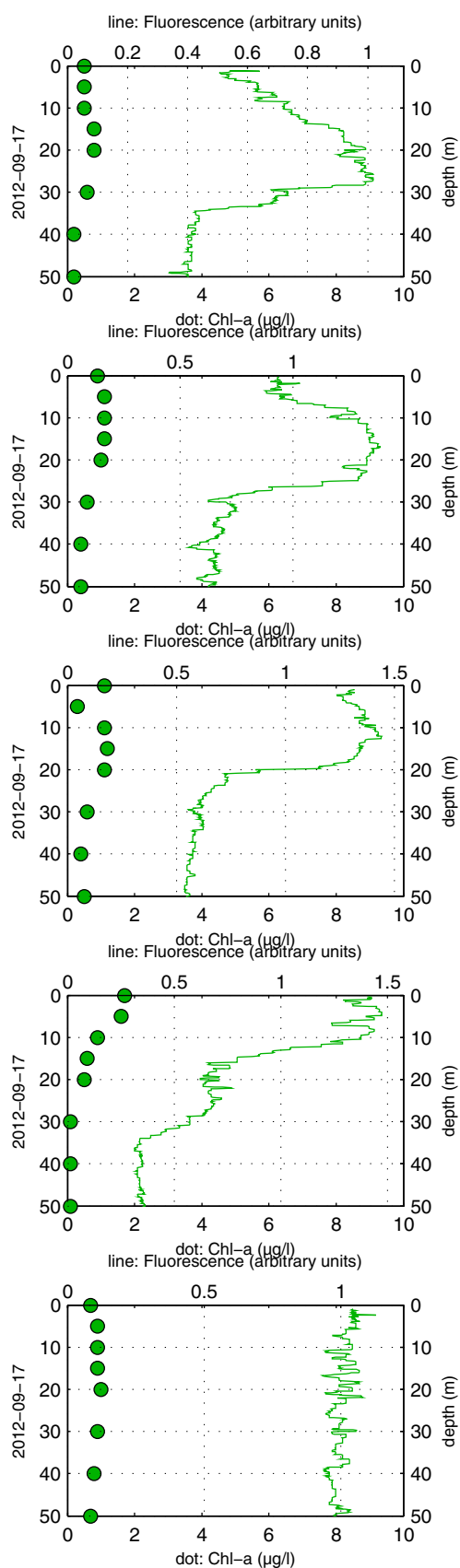


One cell of the diatom *Chaetoceros impressus* surrounded by two zooflagellates of the genus *Bicosoeca* sp. found at BY2 in the southern Baltic.

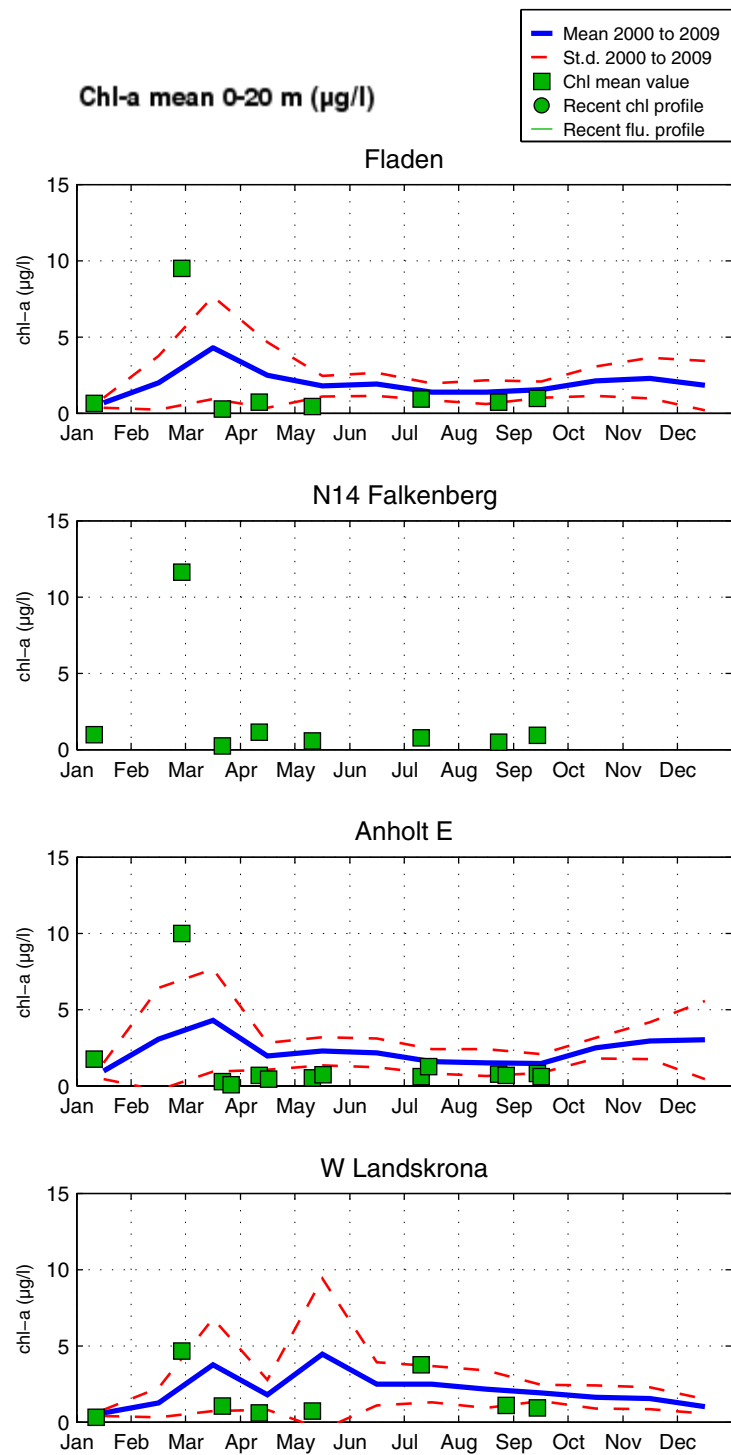
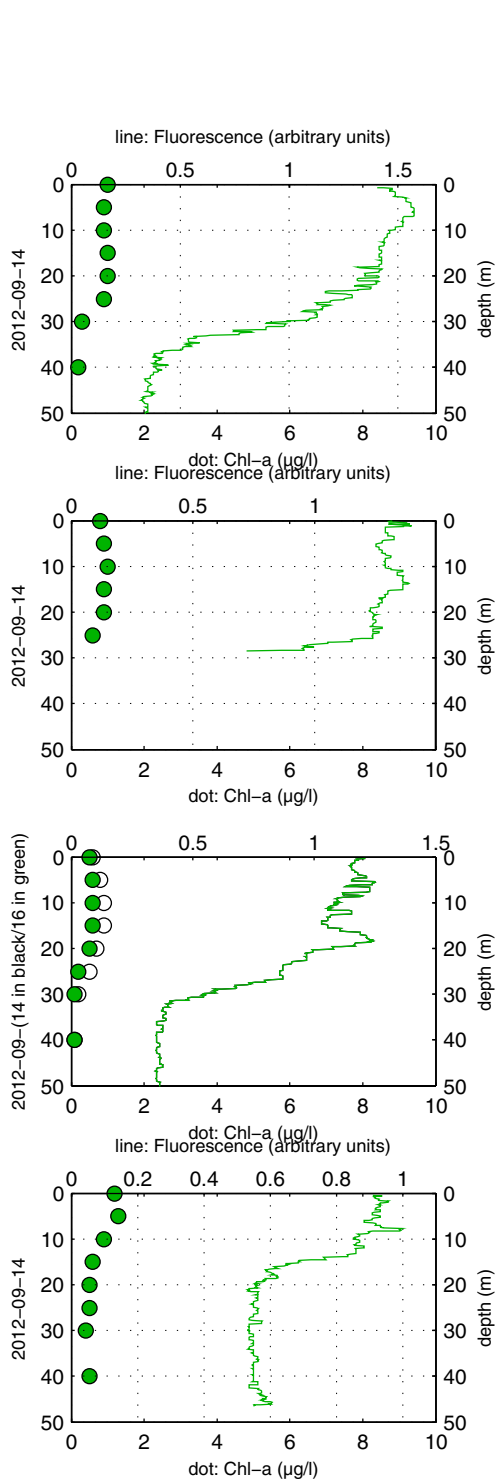
Selection of observed species	Å17	Släggö	N14	Anholt E	Anholt E
Red=potentially toxic species	17/9	17/9	14/9	14/9	16/9
Hose 0-10 m	cells/l	cells/l	cells/l	cells/l	cells/l
<i>Cylindrotheca closterium</i>		present		present	present
<i>Nitzschia longissima</i>			present	present	
<i>Pseudo-nitzschia</i> spp	present			present	
<i>Dactylosolen fragilissimus</i>	present	present	present		
<i>Guinardia delicatula</i>		present	present	present	
<i>Leptocylindrus danicus</i>	present				
<i>Leptocylindrus minimus</i>		present			
<i>Bacteriastrum hyalinum</i>		present			
<i>Cerataulina pelagica</i>	present	present			
<i>Chaetoceros affinis</i>		present			
<i>Chaetoceros contortus</i>		common			
<i>Chaetoceros socialis</i>		common			
<i>Chaetoceros subtilis</i>		present			
<i>Chaetoceros thronsenii</i>		present			
<i>Lennoxia faveolata</i>	present				
<i>Planktoniella sol</i>	present				
<i>Pseudo-nitzschia</i> spp		present			
<i>Skeletonema marinoi</i>	present	present			
<i>Ceratium furca</i>		present			
<i>Ceratium fusus</i>		present	present	present	present
<i>Ceratium lineatum</i>		present			
<i>Ceratium macroceros</i>			present		
<i>Ceratium tripos</i>		common	present	present	present
<i>Dinophysis acuminata</i>				present	
<i>Dinophysis norvegica</i>		present			
<i>Gymnodinium verruculosum</i>			present		
<i>Gyrodinium flagellare</i>	present	present	present	present	present
<i>Gyrodinium spirale</i>	present				
<i>Heterocapsa</i> spp	present	present	present	present	present
<i>Heterocapsa rotundata</i>	present	present			
<i>Katodinium glaucum</i>	present		present		present
<i>Lingulodinium polyedrum</i>		present	present		
<i>Micracanthodinium claytonii</i>	present				
<i>Pronoctiluca pelagica</i>	present				
<i>Prorocentrum micans</i>		present	present	present	present
<i>Prorocentrum redfieldii</i>		present			
<i>Dinobryon balticum</i>	present		present		
<i>Prymnesiales</i>	present	present	common	common	present
<i>Chlorodendrales</i> spp		present	present		
<i>Pyramimonas</i> spp	present	present	present	present	
<i>Leucocryptos marina</i>	present	present	present	present	present
<i>Cryptomonadales</i>	common	very common	very common	present	present
<i>Dictyocha fibula</i>		present			
<i>Dictyocha speculum</i>		present			
<i>Aphanothece paralleliformis</i>	present				
<i>Craspedophyceae</i>	present		present		present
<i>Ebria tripartita</i>		present			present
<i>Rhizomonas setigera</i>	present				
<i>Laboea strobila</i>	present				
<i>Mesodinium rubrum</i>			present	present	present
<i>Ciliophora</i>	present	present	present	present	present

Selection of observed species	BY2 Arkona	BY5 Bornholmsdj
Red=potentially toxic species	15/9	15/9
Hose 0-10 m	Cells/l	Cells/l
<i>Cylindrotheca closterium</i>	present	
<i>Chaetoceros impressus</i>	present	present
<i>Coscinodiscus</i> spp	present	
<i>Coscinodiscus granii</i>	present	
<i>Cyclotella</i> spp	present	
<i>Dactyliosolen fragilissimus</i>	present	
<i>Attheya septentrionalis</i>	present	
<i>Cerataulina pelagica</i>	present	
<i>Chaetoceros danicus</i>	present	
<i>Chaetoceros thronsenii</i>	present	
<i>Chaetoceros cf. convolutus</i>	present	
<i>Micracanthodinium claytonii</i>		present
<i>Gymnodinium simplex</i>		present
<i>Heterocapsa rotundata</i>	present	present
<i>Gymnodinium verruculosum</i>	present	present
<i>Heterocapsa</i> spp	present	present
<i>Ceratium furca</i>	present	
<i>Ceratium fusus</i>	present	
<i>Ceratium tripos</i>	present	
<i>Prorocentrum micans</i>	present	
<i>Prorocentrum minimum</i>	present	
<i>Dinobryon faculiferum</i>	present	
<i>Chrysochromulina</i> spp	present	present
<i>Pyramimonas</i> spp	common	present
<i>Pyramimonas virginica</i>	present	
<i>Leucocryptos marina</i>	present	present
Cryptomonadales	very common	very common
<i>Pseudopedinella pyriforme</i>	present	
<i>Eutreptiella gymnastica</i>		present
<i>Eutreptiella</i> spp	present	
<i>Aphanizomenon flos-aquae</i>	common	present
<i>Nodularia spumigena</i>	present	
Craspedophyceae	present	present
<i>Calliacantha natans</i>		present
<i>Ebria tripartita</i>	present	present
<i>Katablepharis remigera</i>	present	present
<i>Helicostomella subulata</i>	present	present
<i>Mesodinium rubrum</i>	present	present
Ciliophora	common	present

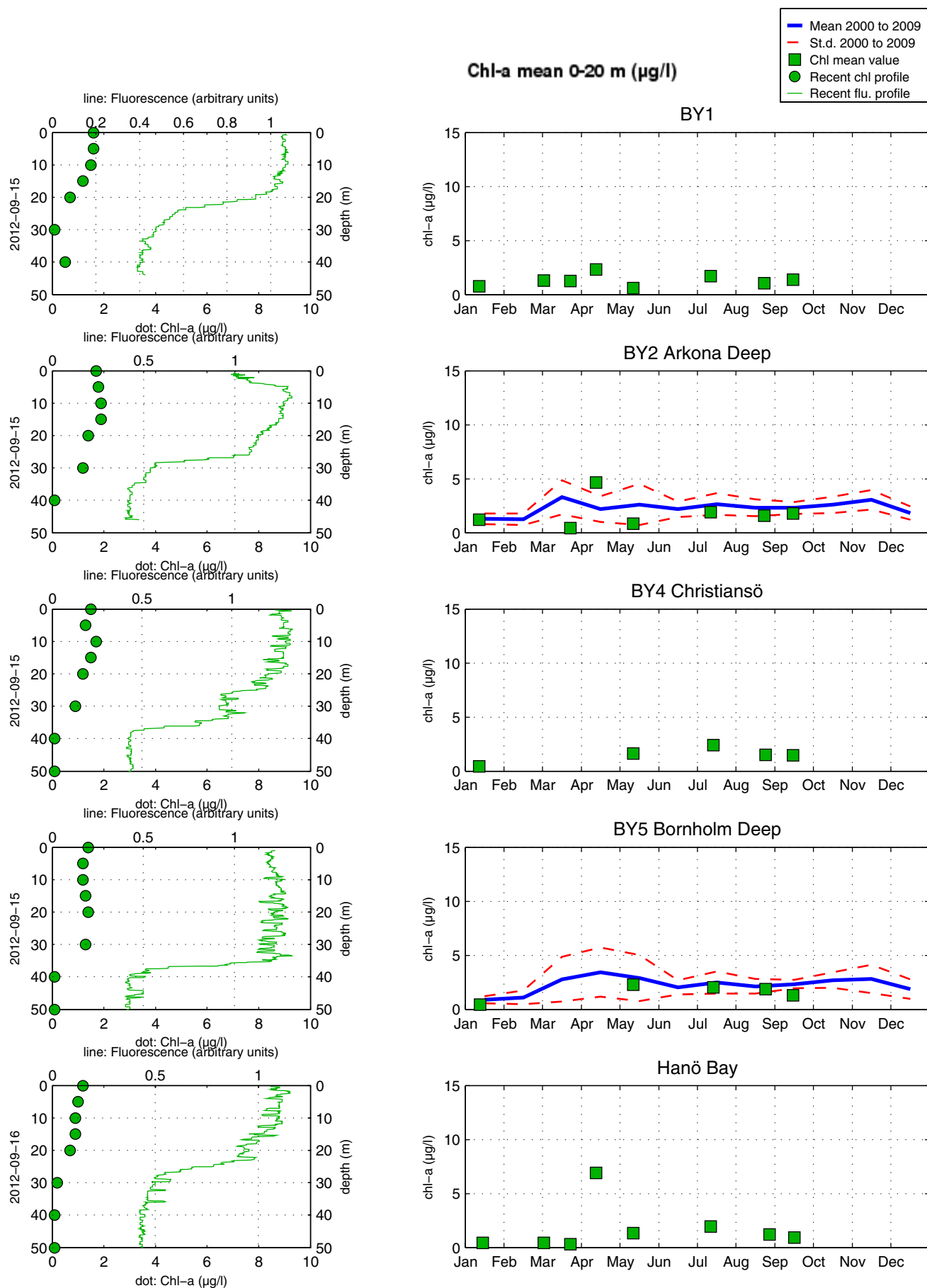
The Skagerrak



The Kattegat and the Sound



The Southern Baltic

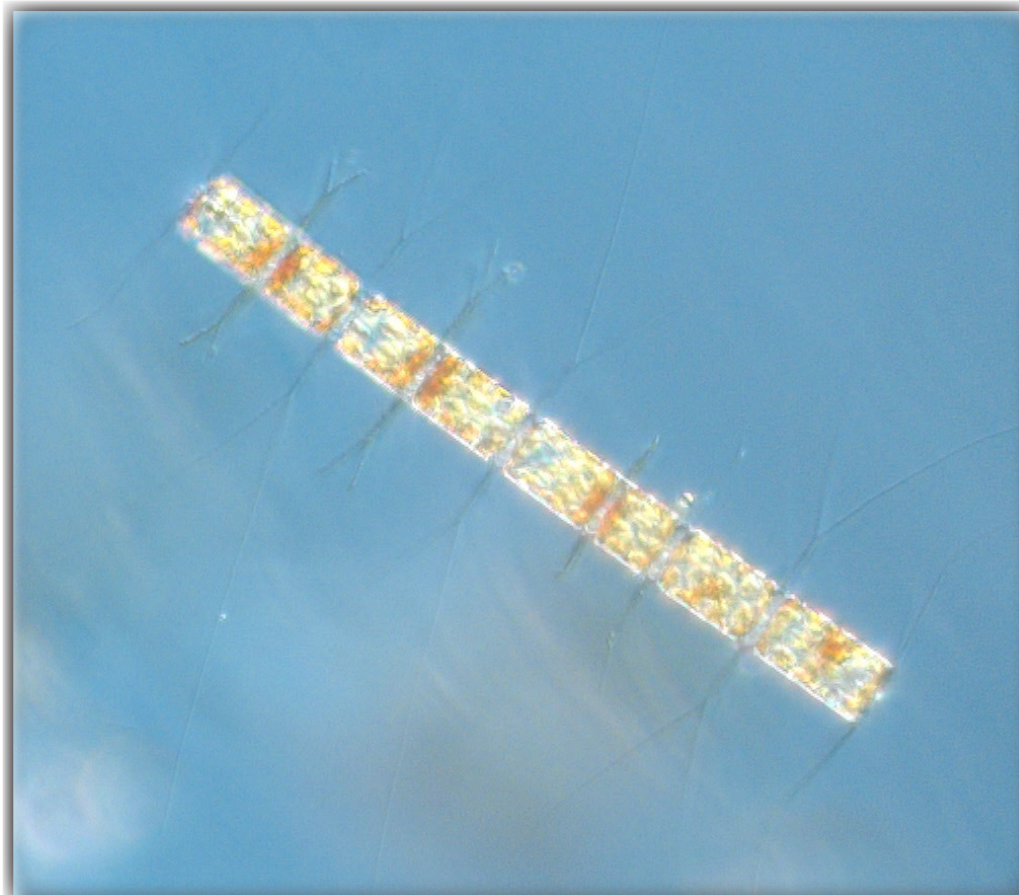


Om klorofylldiagrammen

Klorofyll *a* är ett mått på mängden växtplankton. Prover tas från ett antal djup. Data presenteras både från de fasta djupen och som medelvärden 0-20 m. Utöver resultaten från laboratorieanalyserna av vattenprover mäts klorofyll *a* som fluorescens från ett automatiskt instrument som sänks ned från fartyget. På så sätt kan djupt liggande, ibland, tunna lager av växtplankton observeras.

About the chlorophyll graphs

Chlorophyll *a* is sampled from several depths. Data is presented both from the discrete depths and as an average 0-20 m. In addition to the laboratory analysis from the water samples chlorophyll fluorescence is measured in continuous depth profiles from the ship. This is a way to observe thin layers of phytoplankton occurring below the surface.



The diatom *Bacteriastrum hyalinum*, captured in the phytoplankton sample from Släggö (Skagerrak coast).

Om AlgAware

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

About AlgAware

The SMHI carries out monthly cruises in the Baltic and the Kattegat/Skagerrak. Results from semi quantitative 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
<i>Alexandrium</i> 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; headache, dizziness, nausea, vomiting, diarrhoea. Extreme case Muscular paralysis; pronounced respiratory difficulty; choking sensation; death through respiratory paralysis may occur within 2-24 hours after ingestion.
<i>Dinophysis</i> spp.	Diarrhetic 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.
<i>Pseudo-nitzschia</i> spp.	Amnesic shellfish poisoning (ASP)	Milda symptom: Efter 3-5 timmar: yrsel, illamående, kräkningar, diarré, magkramp Extrema symptom: Yrsel, hallucinationer, 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.
<i>Chaetoceros concavicornis</i> / <i>C. convolutus</i>	Mechanical damage through hooks on setae	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.
<i>Pseudochattonella</i> 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.

Översikt över några 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.

