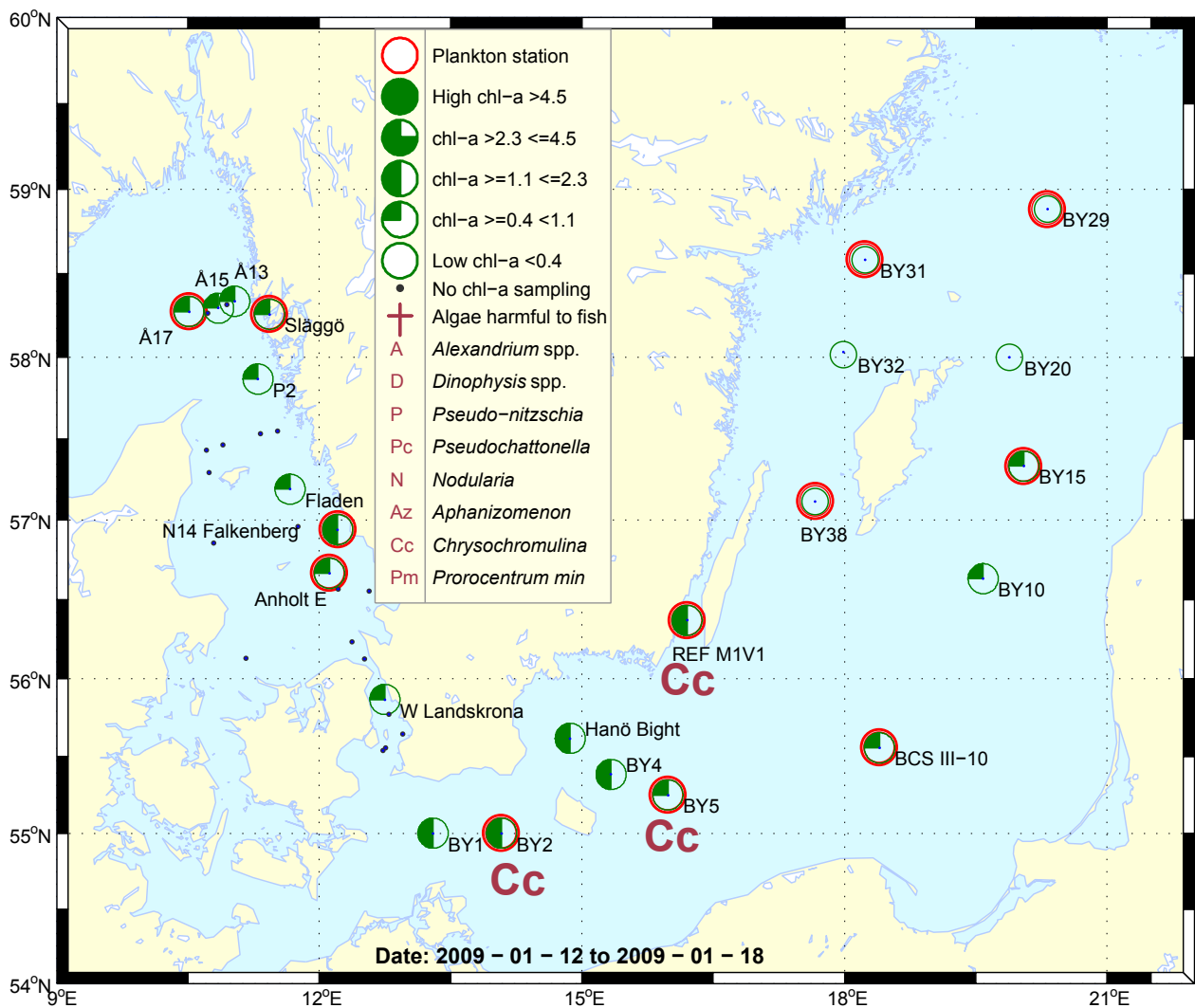


Sammanfattning

Normalt låga vintervärden av klorofyll *a* uppmättes vid samtliga stationer i Västerhavet och i Östersjön. Ingen nämnvärd aktivitet observerades i växtplanktonsamhället i Skagerrak och Kattegatt. I Östersjön återfanns den potentiellt giftiga prymnesiofyten *Chrysochromulina polylepis** vid alla stationer och en mindre blomning av densamma observerades vid de södra stationerna BY2 och BY5 och i Kalmar sund.



Abstract

Low concentrations of chlorophyll *a*, which is normal for this month, were found at all stations at the West coast and in the Baltic Sea. No activity worth mentioning was observed amongst the phytoplankton in the Skagerrak and Kattegat areas. In the Baltic the potentially toxic prymnesiophyte *Chrysochromulina polylepis** was found at all of the stations, and a small bloom of the same species was observed at the Southern stations and in the sound of Kalmar.

Om AlgAware

SMHI genomför ca en gång per månad expeditioner med U/F Argos i Östersjön och Västerhavet. Resultat baserade på semikvantitativ mikroskopanalys av planktonprover samt klorofyllmätningar presenteras kortfattat i denna rapport. Information från SMHI:s satellitövervakning av algbloomingar 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 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>Chattonella</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.
<i>Pseudo-nitzschia</i> spp.	Amnesic shellfish poisoning (ASP)	Milda symptom: Efter 3-5 timmar: yrsel, illamående, kräkningar, diarré, magkramper 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.

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).

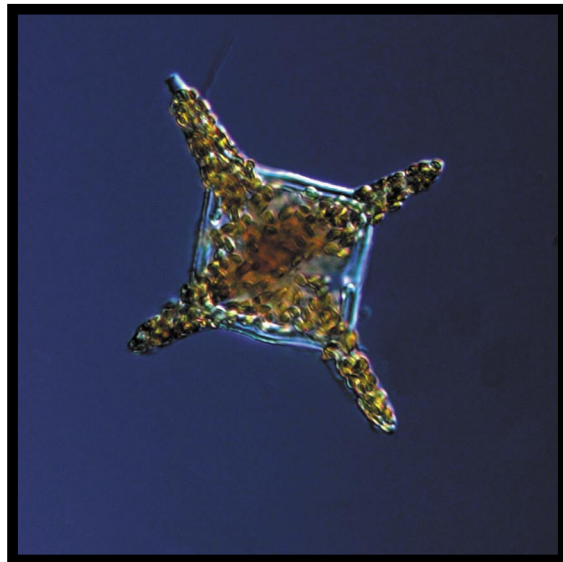
Kartan på framsidan visar viktat medelvärde för klorofyll *a*, µg/l (0-20 m) vid de olika stationerna. Förekomst av skadliga alger vid stationer där arter analyseras markeras med symbol. Då cirkeln är tom innebär detta att stationen inte provtagits.

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. An empty circle indicates that there has been no sampling at that station.

More detailed information on species composition and abundance

No further information is considered necessary this month, because of the low phytoplankton activity. The issues of interest should be covered by the abstract, the species lists and the chlorophyll diagrams.

Phytoplankton analysis and text by:
Ann-Turi Skjevik

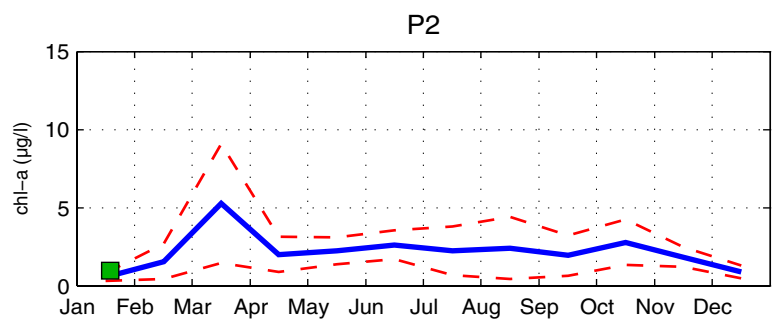
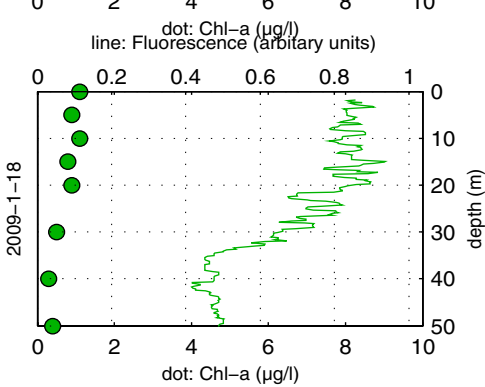
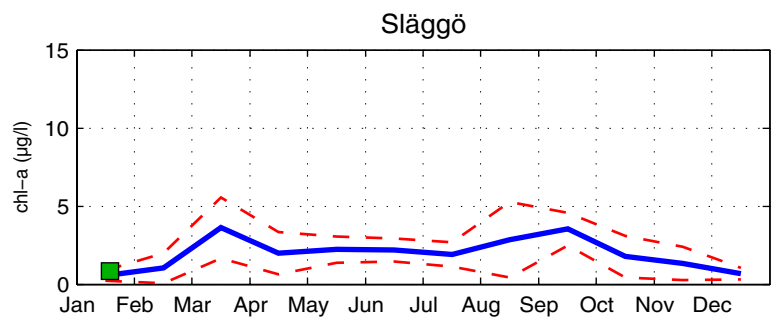
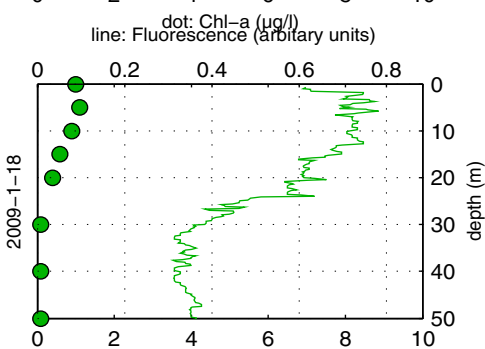
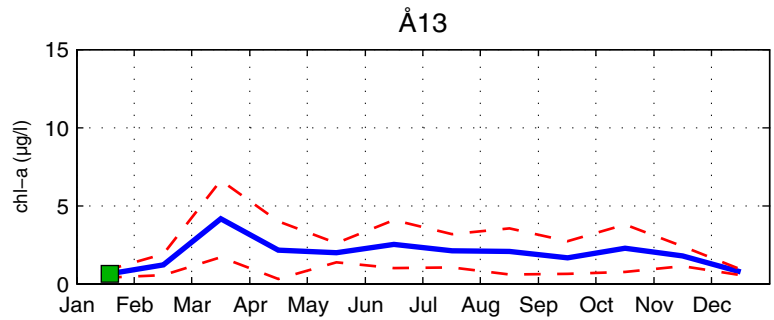
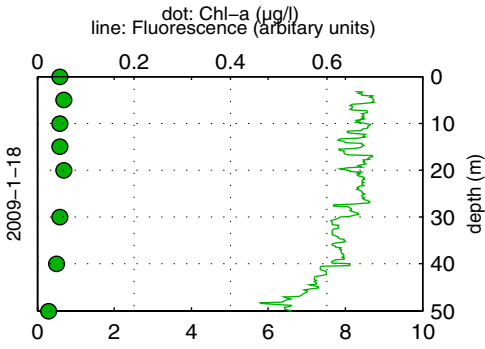
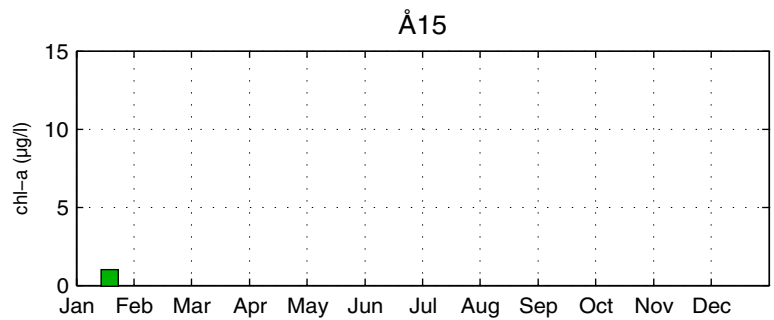
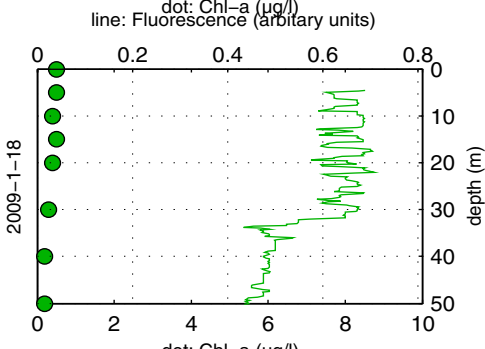
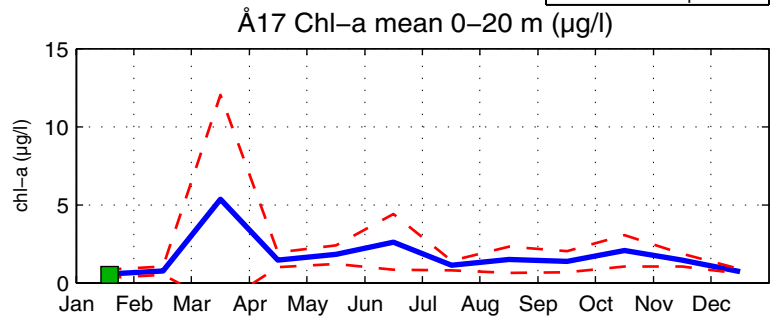
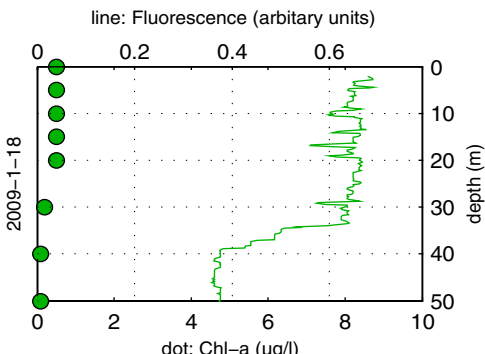
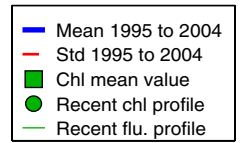


Dictyocha fibula

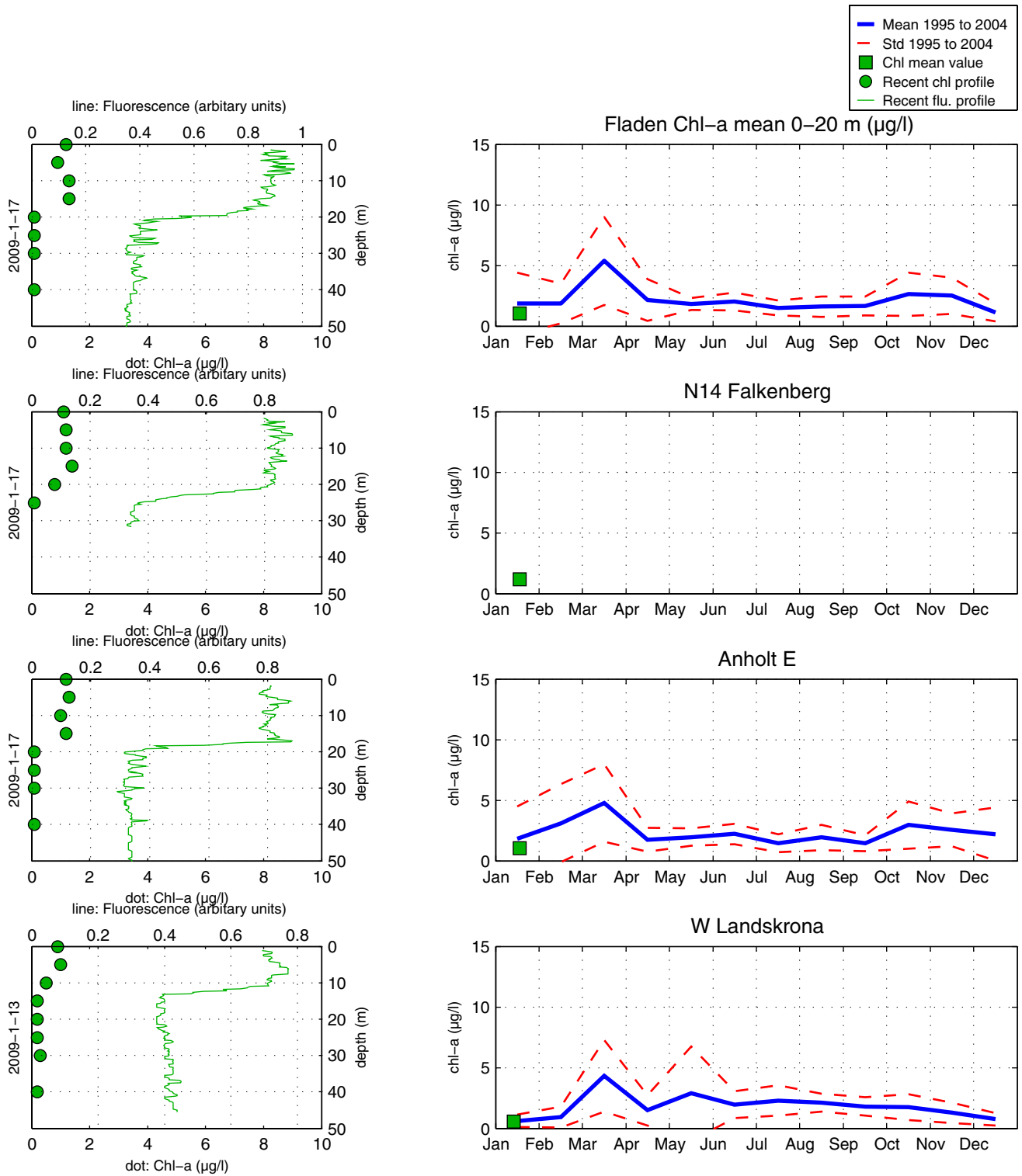
Selection of observed species	Å17	Släggö	N14	Anholt E
Red=potentially toxic species	2009-01-18	2009-01-18	2009-01-17	2009-01-17
	cells/l	cells/l	cells/l	cells/l
<i>Cerataulina pelagica</i>			present	present
<i>Chaetoceros similis</i>			present	present
<i>Coscinodiscus</i> spp.		present	present	present
<i>Cylindrotheca closterium</i>			present	present
<i>Porosira glacialis</i>	present		present	present
<i>Proboscia alata</i>		present	present	present
<i>Pseudo-nitzschia delicatissima</i> -group	present	present	19 000	22 000
<i>Pseudo-nitzschia seriata</i> -group			present	present
<i>Skeletonema costatum</i> complex		common	35 000	present
<i>Thalassiosira anguste-lineata</i>		present	present	
<i>Thalassiosira nordenskiöldii</i>				present
<i>Thalassiosira rotula</i>				present
<i>Ceratium lineatum</i>	present	present	present	present
<i>Ceratium tripos</i>		present	present	
<i>Dinophysis acuminata</i>		present		present
<i>Dinophysis norvegica</i>		present		
<i>Gymnodinium verruculosum</i>	present	present	present	present
<i>Gyrodinium spirale</i>	present	present	present	
<i>Heterocapsa rotundata</i>	present	present	present	present
<i>Heterocapsa</i> spp.			present	
<i>Lessardia elongatum</i>	present			
<i>Peridiniella danica</i>			present	present
<i>Prorocentrum minimum</i>			present	present
<i>Proto-peridinium</i> spp.		present		
<i>Torodinium robustum</i>	present			
<i>Chrysochromulina</i> spp.	present		present	present
<i>Heterosigma akashiwo</i>			present	present
Cryptomonadales spp.	92 000	92 000	121 000	98 000
<i>Eutreptiella</i> spp.		present		
<i>Pyramimonas</i> spp.	common	common	present	present
<i>Dictyocha speculum</i>	present	present	present	present
<i>Pseudopedinella</i> spp.			present	present
<i>Synura</i> spp.			present	present
<i>Calliacantha longicaudata</i>	present		present	present
<i>Leucocryptos marina</i>	present	present	present	present

Selection of observed species	BY2 2009-01-13 cells/l	BY5 2009-01-14 cells/l	BCS III-10 2009-01-14 cells/l	BY15 2009-09-15 cells/l	BY29 2009-01-15 cells/l	BY31 2009-01-15 cells/l	BY38 2009-09-16 cells/l	Ref. M1-V1 2009-01-16 cells/l
Red-potentially toxic species 1 quantified in ml	present					present		
<i>Chaetoceros danicus</i>						present		
<i>Cyclotella choctawhatcheana</i>						present	present	present
<i>Skeletonema costatum</i>	present					present		present
<i>Gymnodinium verruculosum</i>								
<i>Heterocapsa rotundata</i>	present	present		present		present		present
<i>Heterocapsa</i> spp.						present		present
<i>Katodinium glaucum</i>	present							
<i>Chrysochromulina polylepis</i>	120 000	59 000	12 000	present	present	present	present	178 000
<i>Chrysochromulina</i> spp.		present	present			present	present	present
Cryptomonadales spp.	53 000	37 000	15 000	14 000	13 000	11 000	11 000	145 000
<i>Eutreptiella</i> spp.	present							
<i>Pyramimonas</i> spp.	present	present				present		common
<i>Aphanizomenon</i> spp.		common		present			common	
<i>Calliakantha longicaudata</i>	present		present		present	present	present	present
<i>Calliakantha natans</i>	present	present	present	present	present	present	present	
<i>Leucocryptos marina</i>	present	present	present	present	present	present	present	
<i>Mesodinium rubrum</i>	common	common	common	present	present	common	present	common

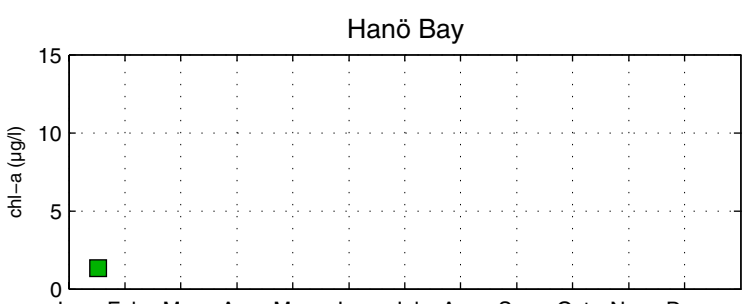
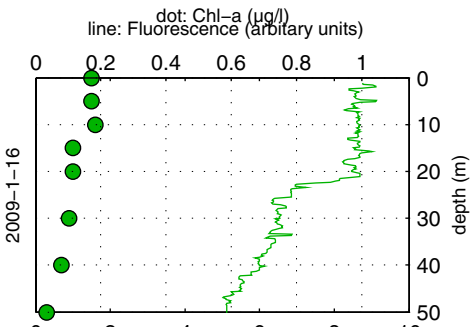
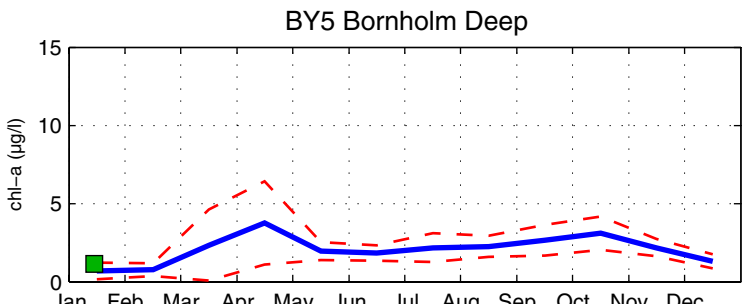
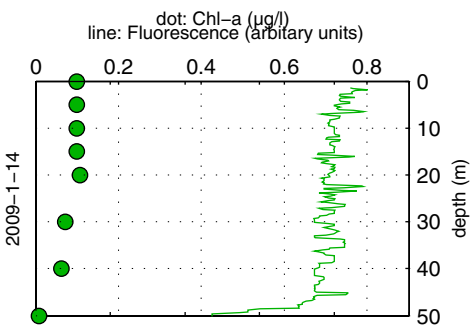
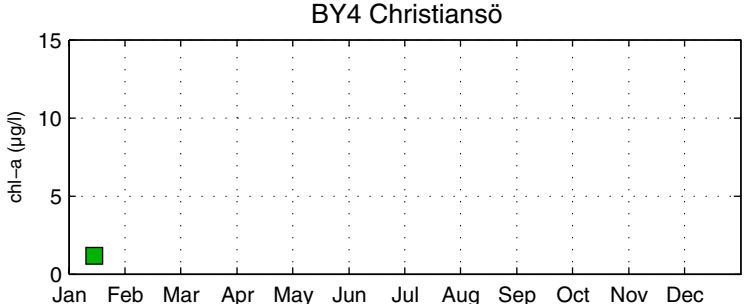
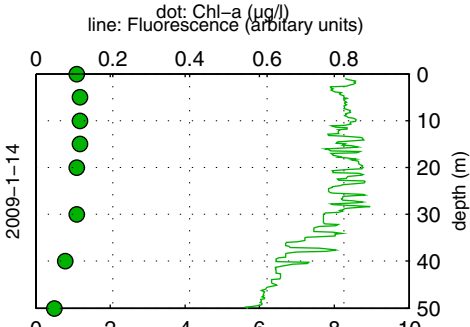
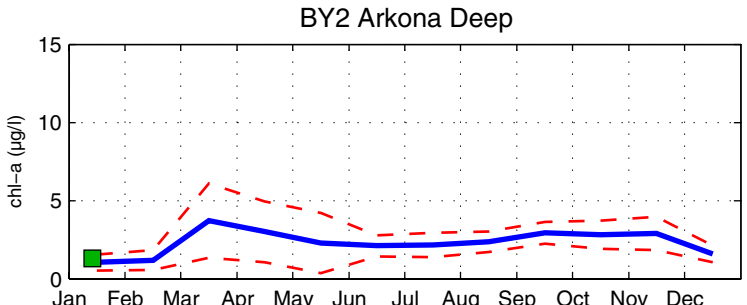
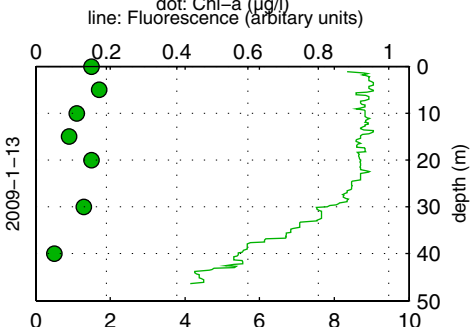
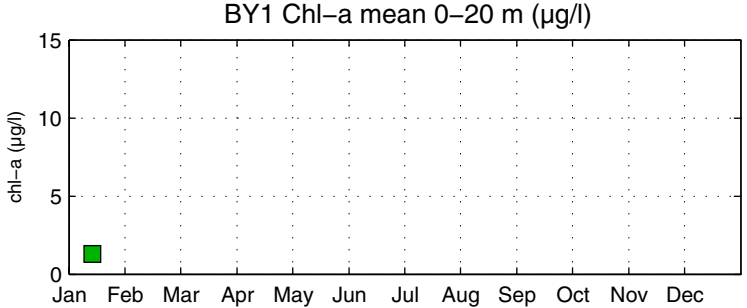
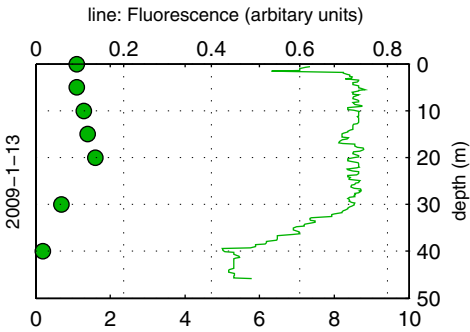
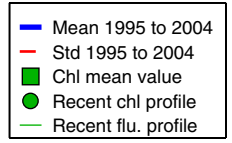
The Skagerrak



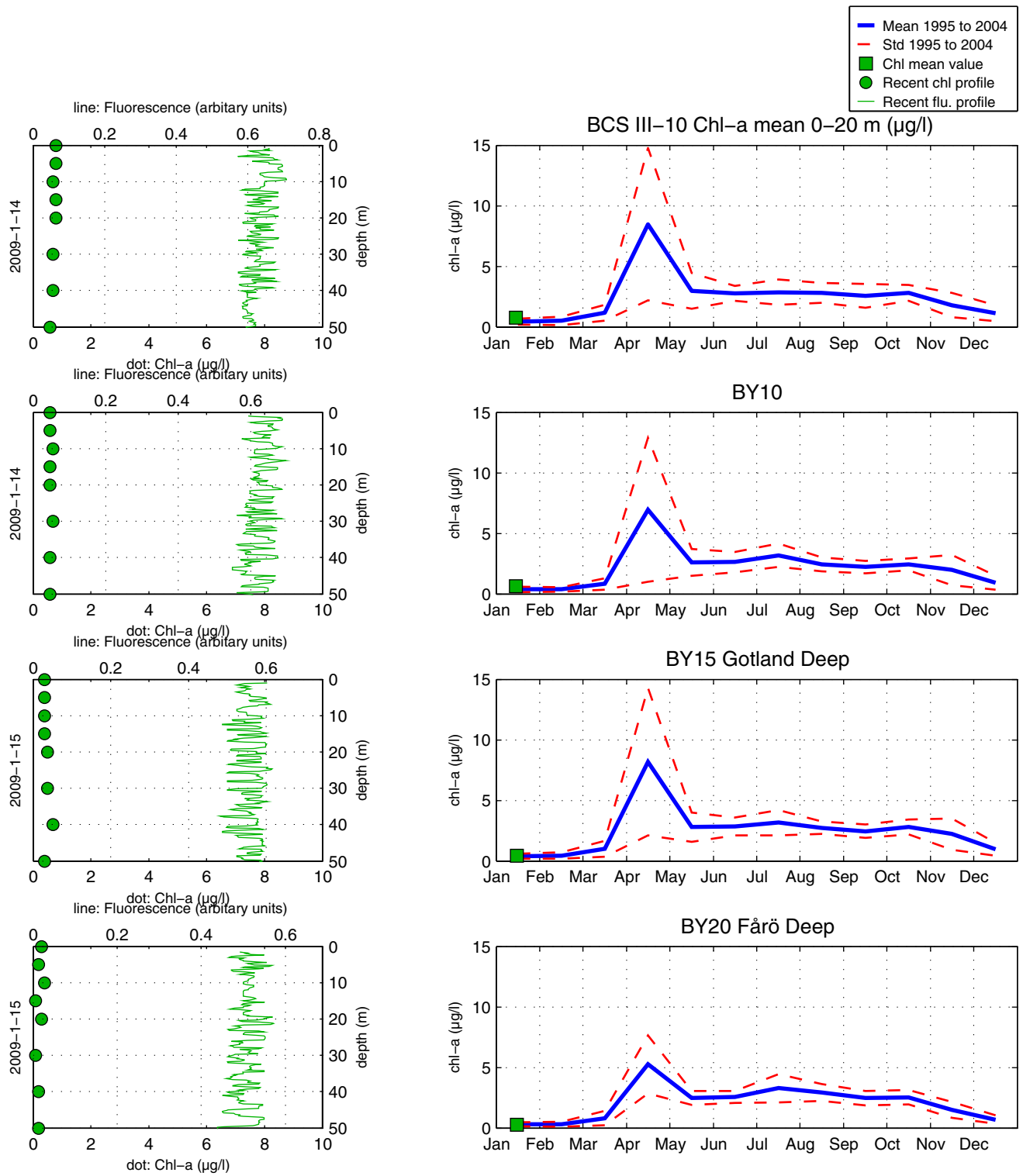
The Kattegat and the Sound



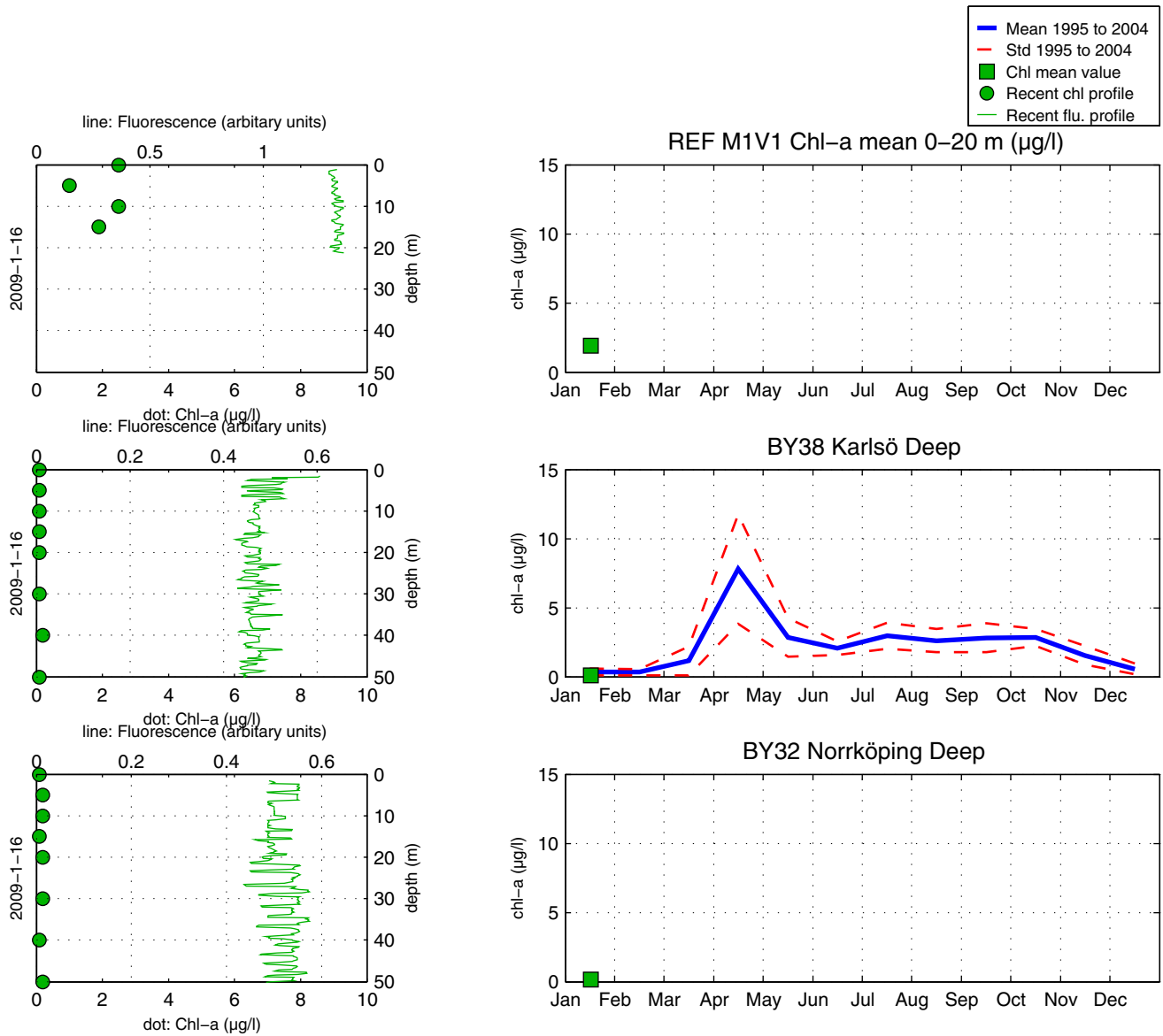
The Southern Baltic



The Eastern Baltic



The Western Baltic



Om klorofylldiagrammen

Klorofyll *a* är ett mått på mängden växtplankton. Prover tas från ett antal djup från U/F Argos. Data presenteras både från de fasta djupen och som medelvärdet 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 from the R/V Argos. 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.

