

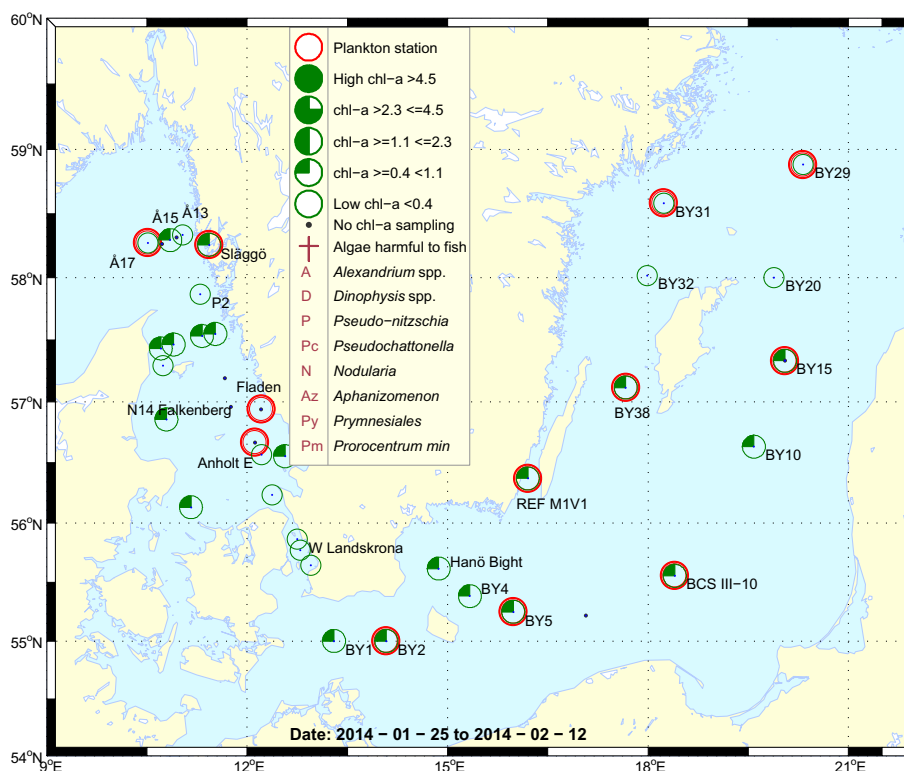
Sammanfattning

Efter ett nystartat samarbete mellan SMHI och SYKE, Finland, kommer här den första AlgAwarerapporten med data från provtagningar gjorda från det finska fartyget R/V Aranda.

Samtliga växtplanktonprov, från Skagerrak, Kattegatt och Östersjön var mycket glesa. Artantalet och cellantalen var låga.

Växtplanktonläget innebar också låga halter av klorofyll *a*, vilket gör att ingen mer detaljerad beskrivning ges i denna rapport, utöver artlista och klorofylldiagram.

Klorofylldata saknas från Kattegattstationerna, vilket orsakade de tomma diagrammen på sidan 7.



Abstract

A new cooperation between SMHI and the Finnish SYKE has started. This is the first AlgAware with data from samplings with the Finnish ship R/V Aranda.

All phytoplankton samples from the Skagerrak, the Kattegat and the Baltic Sea contained low species diversities and all of the cell counts were low.

The chlorophyll *a* concentrations were consequently low why no further detailed information will be presented in this report, only a species list and chlorophyll diagrams.

Chlorophyll data are missing from the Kattegat stations which caused the empty diagrams on page 7.



The dinoflagellate *Peridiniella catenata* was present at REF M1V1 in the Kalmar Sound.



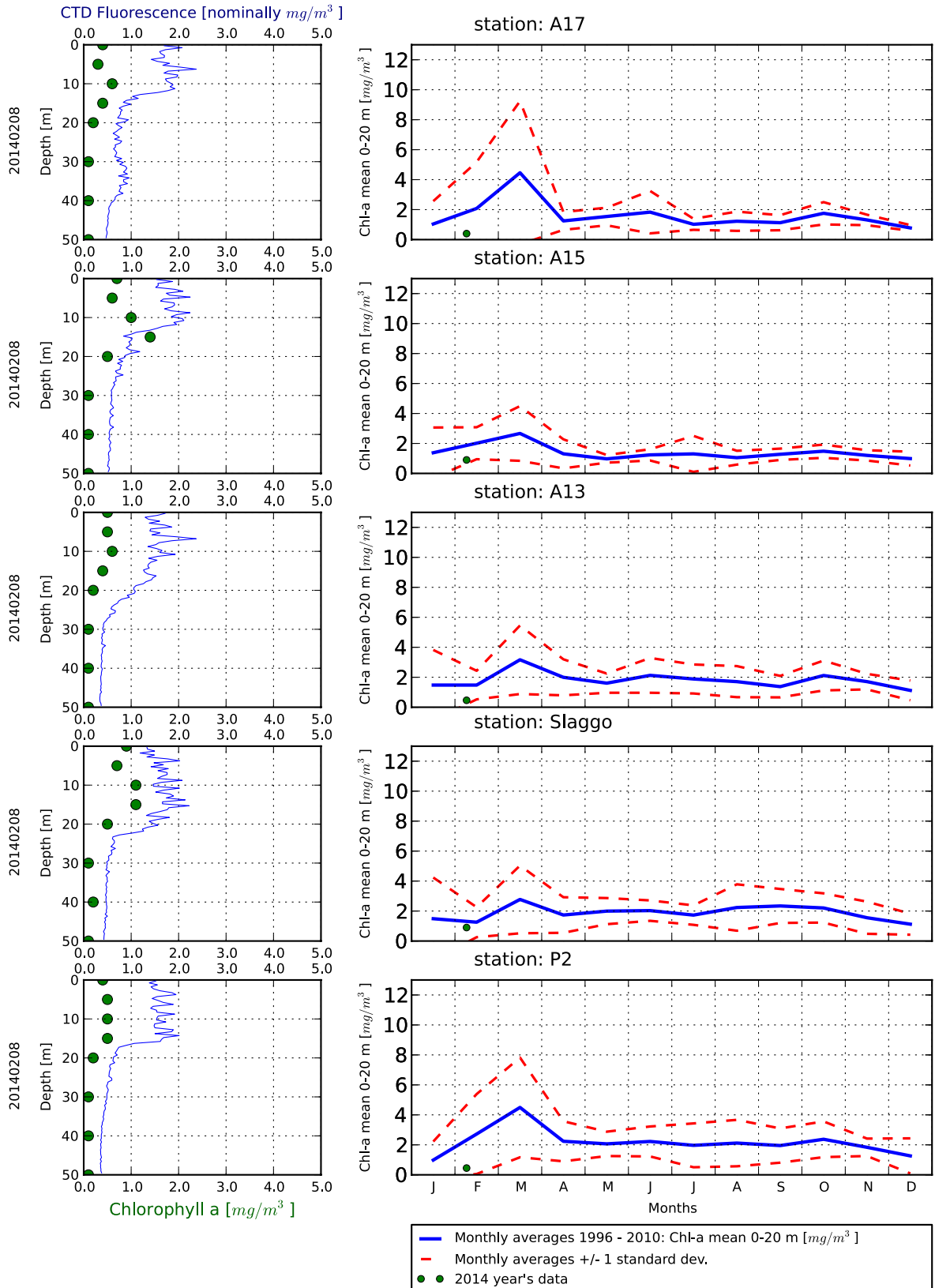
The Finnish research vessel Aranda

Phytoplankton analysis and text by:
Ann-Turi Skjevik

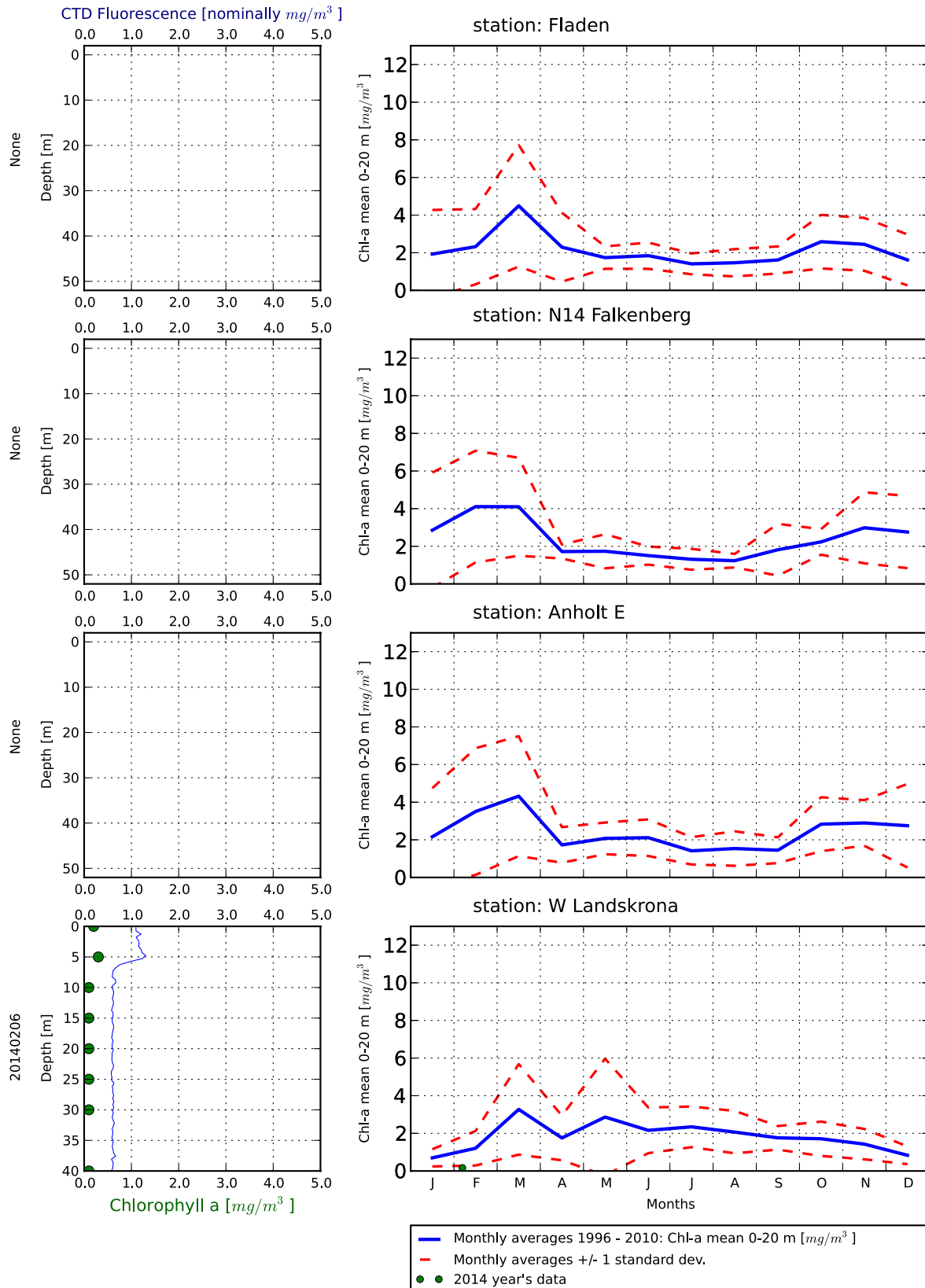
Selection of observed species	Släggö	N14	Anholt E
Red=potentially toxic species	8/2	6/2	6/2
Hose 0-10 m	presence	presence	presence
<i>Cerataulina pelagica</i>			present
<i>Chaetoceros</i> spp		present	present
<i>Chaetoceros debilis</i>			present
<i>Chaetoceros decipiens</i>		present	
<i>Chaetoceros subtilis</i> v. <i>subtilis</i>			present
<i>Coscinodiscus concinnus</i>	present		present
<i>Rhizosolenia setigera</i>		present	present
<i>Skeletonema marinoi</i>		present	present
<i>Thalassiosira angulata</i>	present	present	present
<i>Ceratium fusus</i>			present
<i>Ceratium longipes</i>			present
<i>Ceratium tripos</i>	present	present	common
<i>Dinophysis acuminata</i>	present	present	present
<i>Dinophysis norvegica</i>	present	present	present
<i>Gyrodinium spirale</i>		present	
<i>Heterocapsa</i> spp	present	present	
<i>Heterocapsa rotundata</i>	present		
<i>Katodinium glaucum</i>	present	present	
<i>Peridiniella danica</i>			present
<i>Dictyocha speculum</i>	present	present	present
<i>Eutreptiella</i> spp		present	present
<i>Planctonema lauterbornii</i>		present	
Cryptomonadales	common	very common	common
<i>Calliacantha natans</i>			present
<i>Katablepharis remigera</i>		present	
<i>Leucocryptos marina</i>	present		
<i>Telonema subtile</i>		present	
Ciliophora	present	present	common
<i>Mesodinium rubrum</i>	present	common	

Selection of observed species	BY2	BY5	REF M1V1	BY15	BCS III-10	BY38	BY29	BY31
Red=potentially toxic species	10/2	10/2	5/2	11/2	11/2	4/2	4/2	4/2
	presence	presence	presence	presence	presence	presence	presence	presence
<i>Attheya septentrionalis</i>	present	present						
<i>Chaetoceros</i> spp			present					
<i>Chaetoceros subtilis</i> v. <i>subtilis</i>						present		
<i>Skeletonema marinoi</i>		present	present	present	present			present
<i>Thalassiosira</i> spp			present					
<i>Heterocapsa</i> spp		present						
<i>Heterocapsa rotundata</i>		present						
<i>Katodinium glaucum</i>		present		present				
<i>Peridiniella catenata</i>			present					
<i>Prymnesium polylepis</i>	present							
<i>Prymnesiales</i>		present	present					
<i>Eutreptiella</i> spp	present	present		present	present		present	
<i>Planctonema lauterbornii</i>					present			
<i>Pterosperma</i> spp		present	present			present	present	
<i>Scenedesmus</i> spp		present						
<i>Pyramimonas</i> spp								present
Cryptomonadales	common	common	common	very common	very common	common	common	common
<i>Aphanizomenon flos aquae</i>						present		present
<i>Aphanocapsa</i> spp				present	present	present		present
<i>Aphanothece paralleliformis</i>				present				
<i>Aphanothece</i> spp		present						
<i>Cyanodictyon</i> spp	present							
<i>Lemmermanniella</i> spp				present	present	present	present	present
<i>Snowella</i> spp	present					present		
<i>Woronichinia</i> spp	present	present						present
<i>Calliacantha longicaudata</i>		present						
<i>Calliacantha natans</i>		present		present		present		
Craspedophyceae		present						
<i>Cryothecomonas scybalophora</i>			present					
<i>Leucocryptos marina</i>				present				
Ciliophora	present	present	present	present	present		present	present
<i>Mesodinium rubrum</i>	present	present	common	present	present	present	present	present

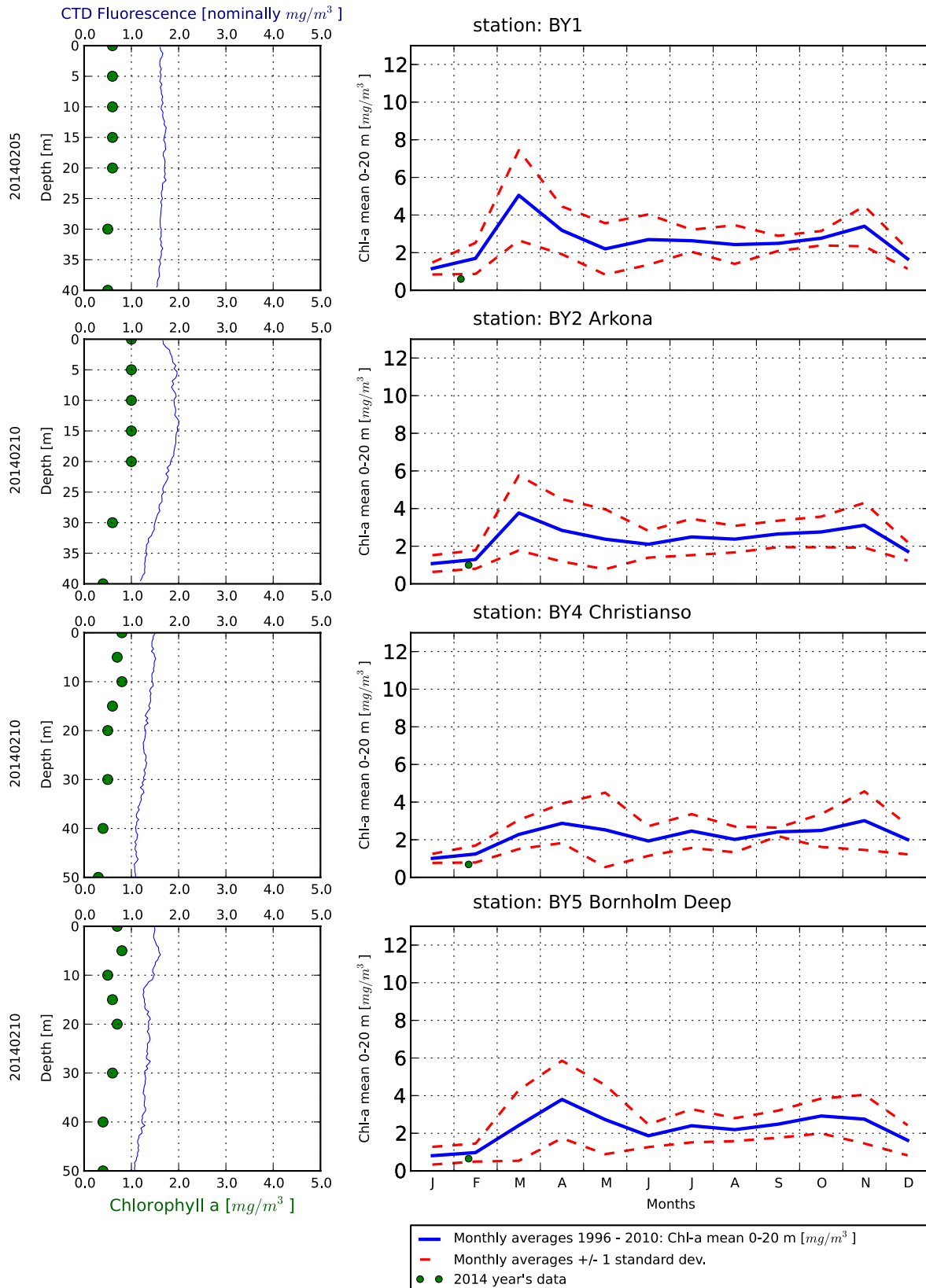
The Skagerrak



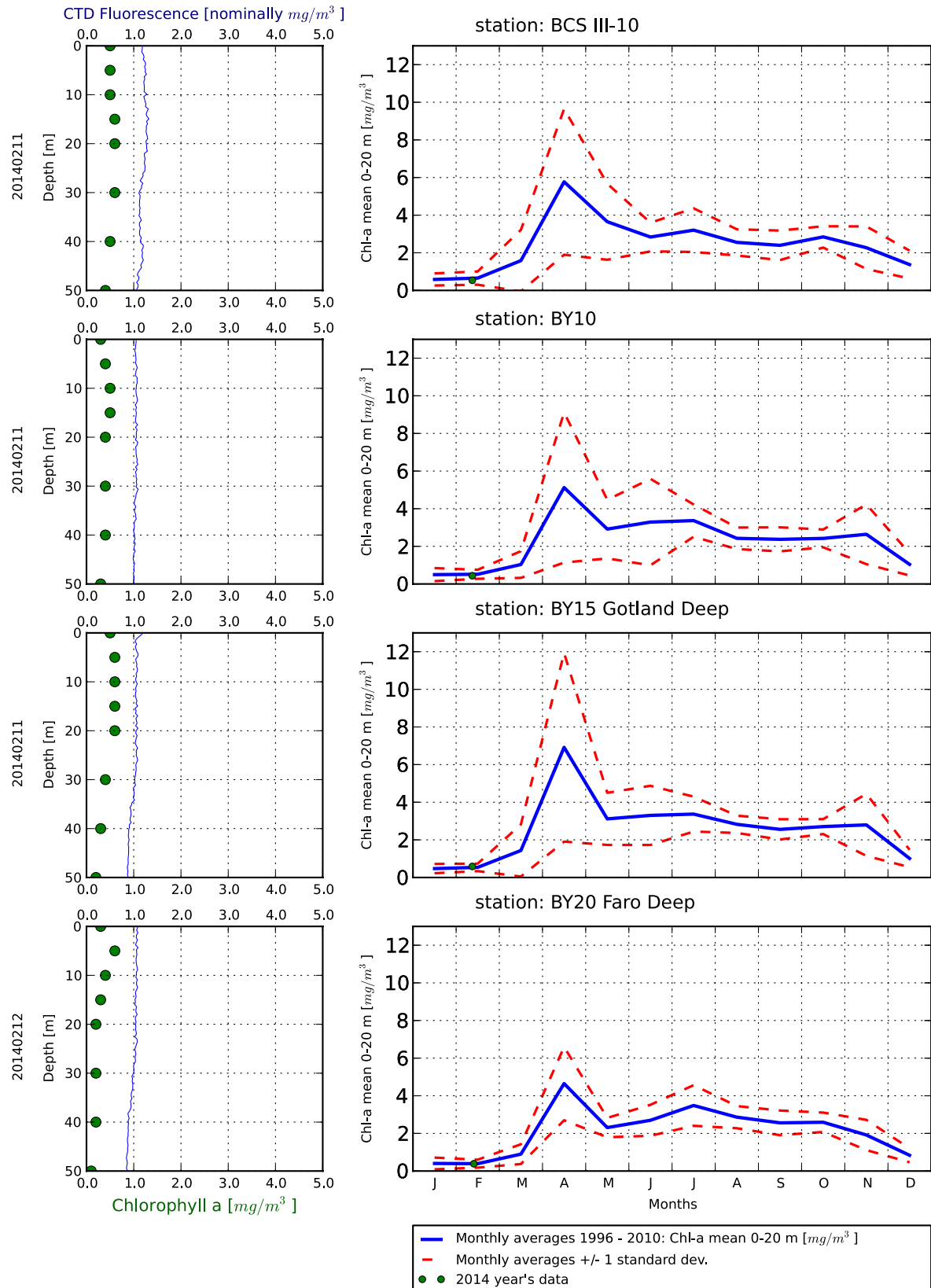
The Kattegat and The Sound



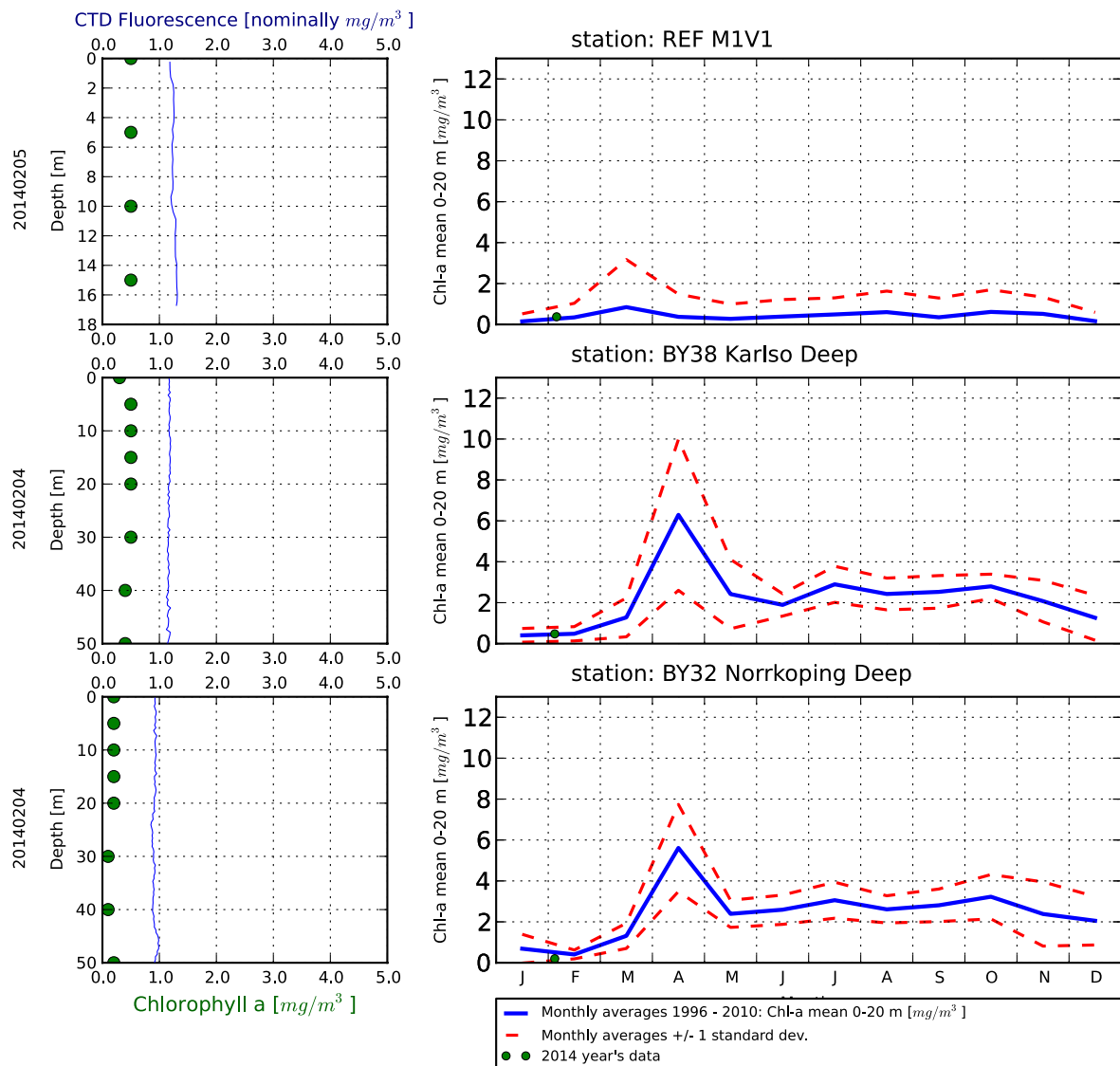
The Southern Baltic



The Eastern Baltic



The Western Baltic



Om klorofylldiagrammen

Klorofyll *a* är ett mått på mängden växtplankton. Prover tas från ett antal djup. 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 are 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.

Om AlgAware

SMHI genomför månatliga expeditioner i Östersjön och Västerhavet. Resultat baserade på semikvantitativ mikroskopanalys av planktonprover samt klorofyllmätningar presenteras kortfattat i denna rapport. Information från SMHIs satellitövervakning av algblomningar finns under perioden juni-augusti på www.smhi.se.

About AlgAware

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 SMHIs satellite monitoring of algal blooms is found on www.smhi.se during the period June-August.

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.

