

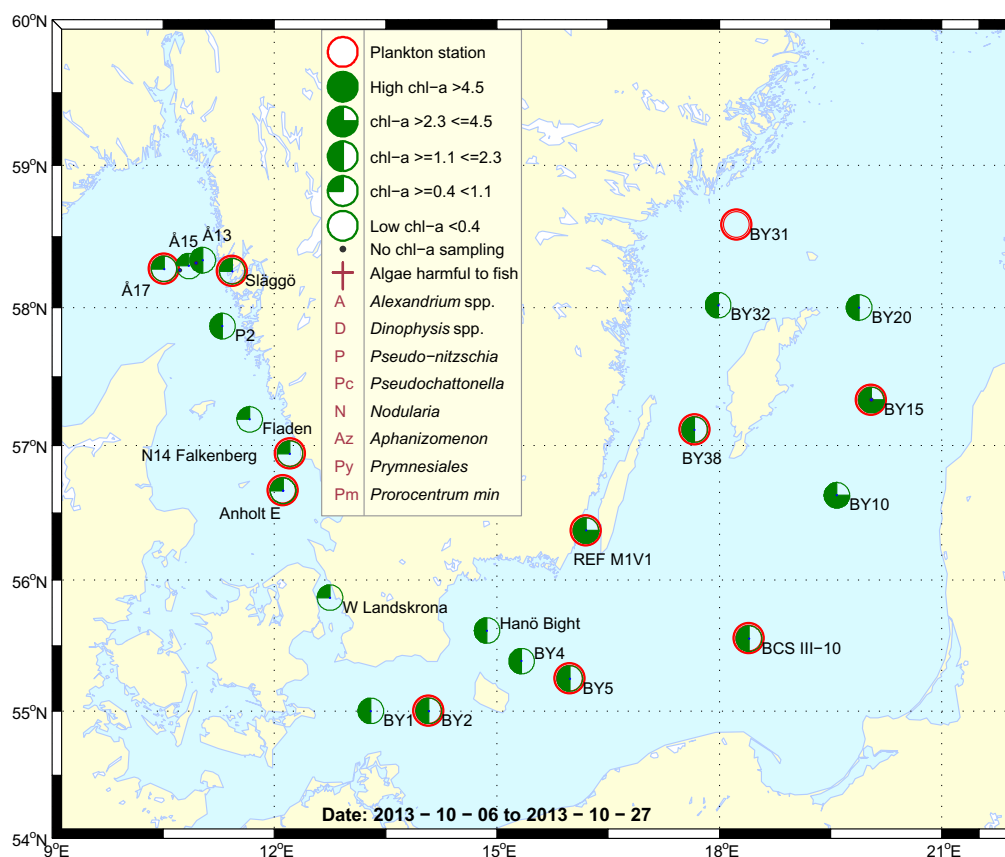
Sammanfattning

Rapporten innehåller resultat från två utsjöresor i oktober. Västkusten och sydvästra Östersjön undersöktes i början av månaden, Egentliga Östersjön i slutet.

Artantal och cellantal av växtplankton var mycket låga i Skagerrak och Kattegatt. De integrerade klorofyll *a*-värdena låg inom medel vid samtliga stationer.

Även i Östersjön var växtplanktonfloran på sparlåga, förutom vid REF M1V1 i Kalmar sund där en blomning av kiselalgen *Skeletonema marinoi* pågick. Samtliga integrerade klorofyll *a*-värden låg inom medel.

Ingen mer detaljerad beskrivning ges i denna rapport, utöver artlista och klorofylldiagram.



Abstract

This report presents the results from two October cruises. The Skagerrak, the Kattegat and Southwestern Baltic areas were visited in the beginning of the month, and the Baltic Proper at the end.

The number of species and cell numbers were very low in the Skagerrak and the Kattegat. The integrated chlorophyll *a* concentrations were within average at all stations.

The phytoplankton flora was scarce in the Baltic. The exception was at REF M1V1 in the Kalmar Sound where a bloom of the diatom *Skeletonema marinoi* was observed. All integrated chlorophyll *a* concentrations were within average.

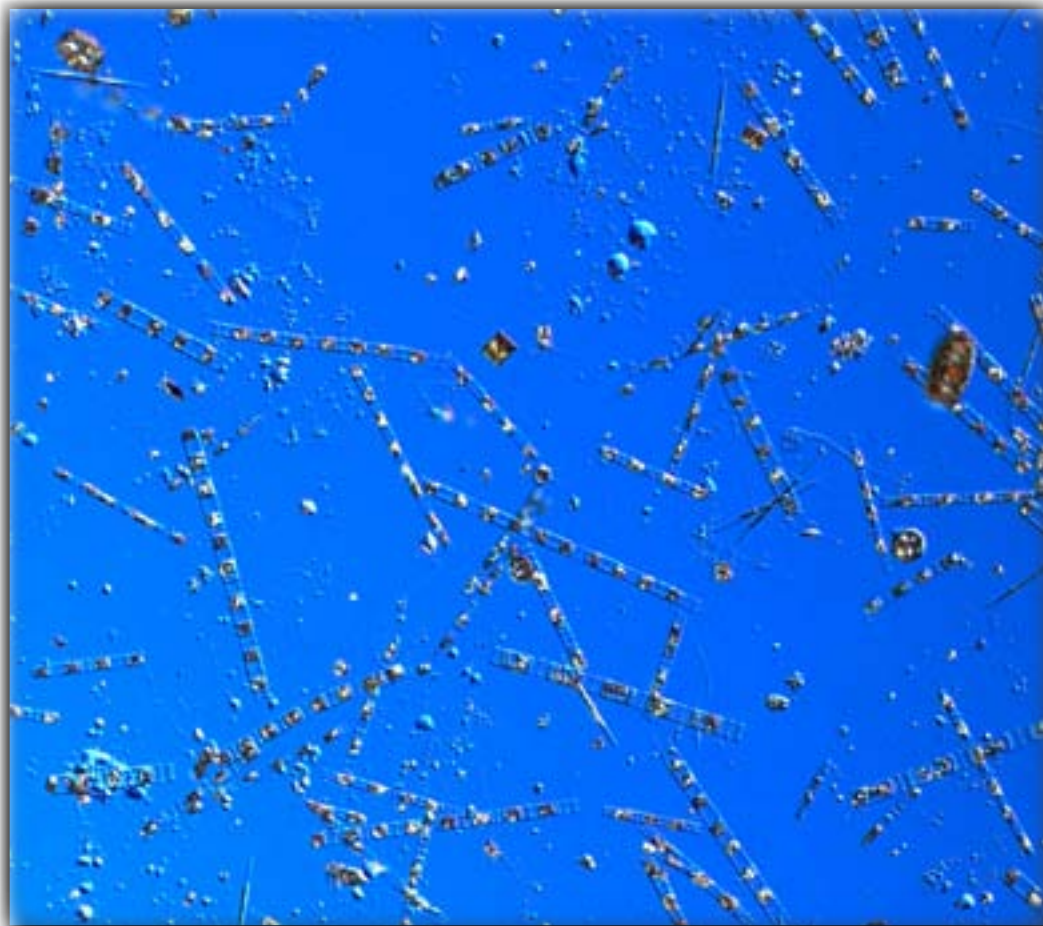
No more detailed information will be presented in this report, apart from a species list and chlorophyll diagrams.



The dinoflagellate *Ceratium tripos* was common in the Kattegat samples.



The diatom *Pseudo-nitzschia* spp. was common at Anholt E.

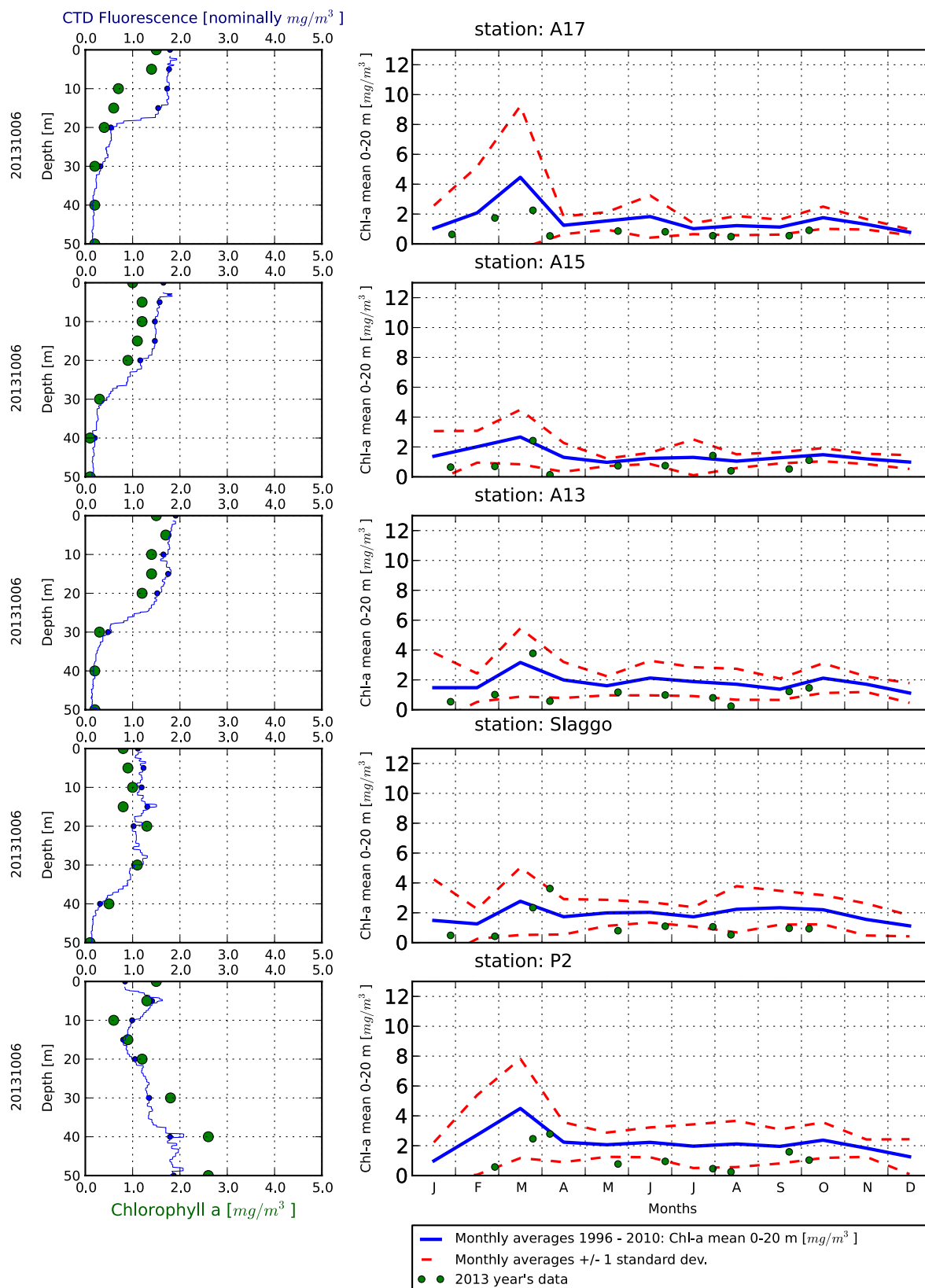


The diatom *Skeletonema marinoi* was abundant at REF M1V1.

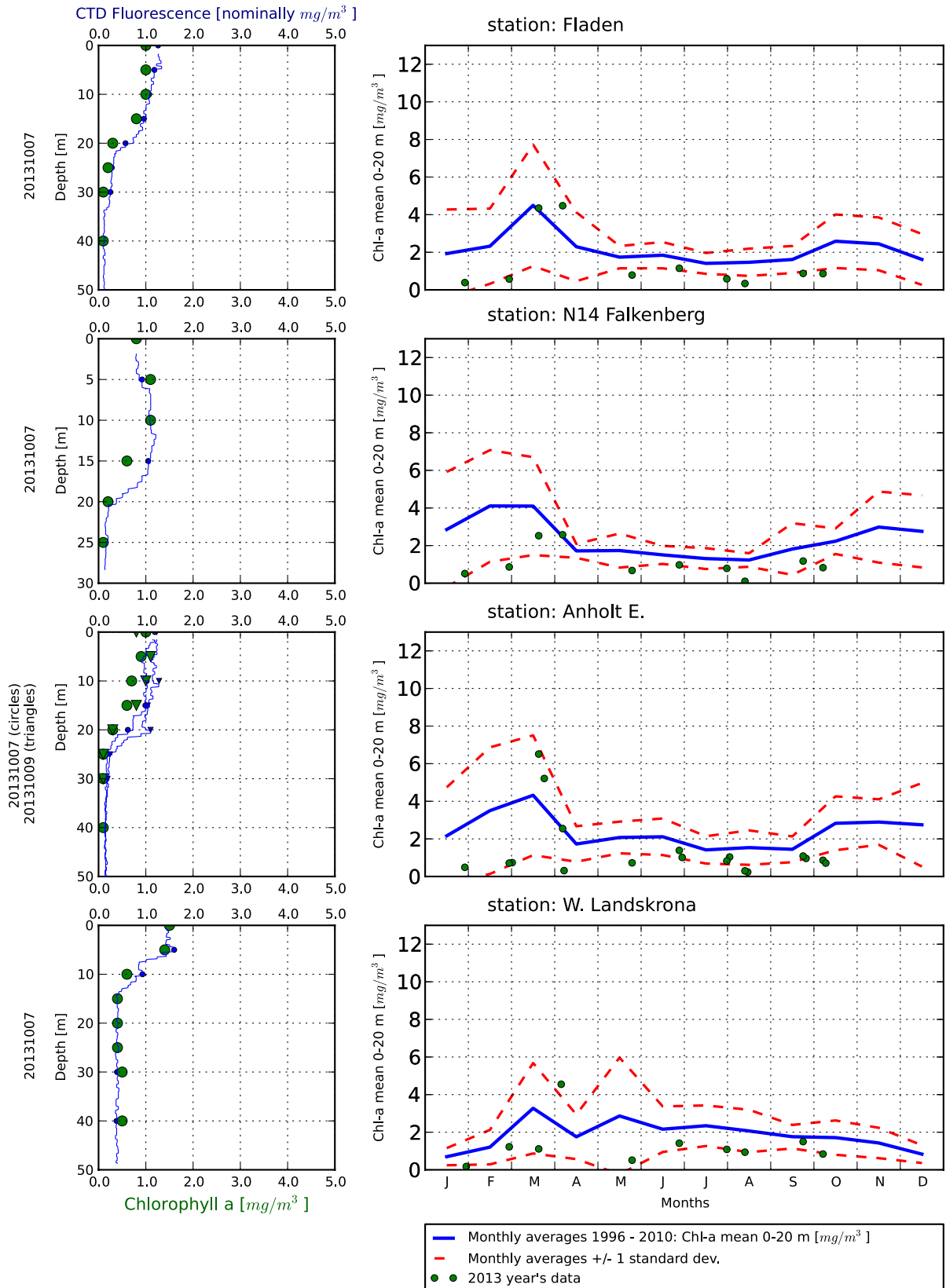
Selection of observed species	Å17	Släggö	N14	Anholt E	Anholt E
Red=potentially toxic species	6/10	6/10	7/10	7/10	9/10
Hose 0-10 m	presence	presence	presence	presence	presence
<i>Asterionellopsis glacialis</i>		present			
<i>Chaetoceros affinis</i>				present	present
<i>Chaetoceros curvisetus</i>		present			present
<i>Chaetoceros danicus</i>					present
<i>Chaetoceros socialis</i>		present	present		present
<i>Chaetoceros wighamii</i>				present	present
<i>Cylindrotheca closterium</i>	present	present		present	
<i>Dactyliosolen fragilissimus</i>		present			
<i>Ditylum brightwellii</i>				present	present
<i>Guinardia delicatula</i>					present
<i>Lennoxia faveolata</i>	present				
<i>Leptocylindrus danicus</i>		present			
<i>Proboscia alata</i>		present	present	present	present
<i>Pseudo-nitzschia</i> spp		present		present	common
<i>Skeletonema marinoi</i>	present				present
<i>Thalassionema nitzschioides</i>					present
<i>Azadinium</i> spp	present	present			
<i>Amphidinium acutissimum</i>	present				
<i>Ceratium furca</i>		present	present		
<i>Ceratium fusus</i>			present	present	present
<i>Ceratium lineatum</i>	present		present	common	present
<i>Ceratium longipes</i>			present	present	present
<i>Ceratium tripos</i>		present	common	common	common
<i>Dinophysis acuminata</i>			present	present	
<i>Dinophysis norvegica</i>			present	present	present
<i>Gyrodinium flagellare</i>		present			
<i>Katodinium glaucum</i>			present		
<i>Lingulodinium polyedrum</i>				present	
<i>Pronoctiluca pelagica</i>	present				
<i>Prorocentrum micans</i>		present	present	present	present
<i>Prorocentrum minimum</i>		present			present
<i>Protoperidinium</i> spp			present	present	present
<i>Prymnesiales</i> spp	present	present	present	present	present
<i>Dictyocha speculum</i>			present	present	present
<i>Pseudopedinella</i> spp	present				
<i>Pyramimonas</i> spp	present		present		
Cryptomonadales spp	common	common	present	common	common
Craspedophyceae	present	present	present		
<i>Commation</i> spp			present		
<i>Leucocryptos marina</i>	present	present			
<i>Helicostomella subulata</i>			present	present	present
<i>Mesodinium rubrum</i>				present	
<i>Tiarina fusus</i>				present	present
<i>Ciliophora</i> spp	present	present	present	present	present

Selection of observed species	BY2	BY5	REF M1-V1	BY15	BCS III-10	BY38
Red=potentially toxic species	8/10	8/10	26/10	27/10	27/10	26/10
	presence	presence	presence	presence	presence	presence
<i>Asterionellopsis glacialis</i>			present			
<i>Chaetoceros danicus</i>		present	present			present
<i>Chaetoceros impressus</i>		present		present	present	
<i>Coscinodiscus centralis</i>			present	common	present	present
<i>Coscinodiscus</i> spp	present	common				
<i>Cyclotella choctawhatcheana</i>	present		present			present
<i>Skeletonema marinoi</i>	present		very common		present	
<i>Rhizosolenia setigera</i>	present					
<i>Ceratium tripos</i>	present					
<i>Dinophysis acuminata</i>			present	present	present	
<i>Dinophysis norvegica</i>			present	present		
Gymnodiniales						present
<i>Heterocapsa rotundata</i>			common	present	present	present
<i>Heterocapsa</i> spp			present			present
<i>Prorocentrum micans</i>	present					
<i>Prorocentrum minimum</i>	present		common		present	
<i>Protopteridinium</i> spp	present				present	
<i>Dinobryon balticum</i>	present					
<i>Planctonema lauterbornii</i>					present	
<i>Pseudopedinella</i> spp						present
<i>Eutreptiella</i> spp				present	present	present
<i>Pterosperma</i> spp					present	present
<i>Pyramimonas</i> spp	present	present	present	present		present
<i>Aphanizomenon flos-aquae</i>		common		present		common
<i>Woronichinia</i> spp				common	present	common
Pico cyanobacteria colonies				common		
Cryptomonadales	common	very common	common	very common	very common	very common
<i>Calliakantha natans</i>			present	present		present
Craspedophyceae	present	present	present			
<i>Ebria tripartita</i>	present	present	present	present	present	
<i>Prymnesiales</i>	present	present	present	present		
<i>Helicostomella subulata</i>	present		present	present		present
<i>Mesodinium rubrum</i>		present	present	common	present	present
Ciliophora	present	common	common	common	common	common

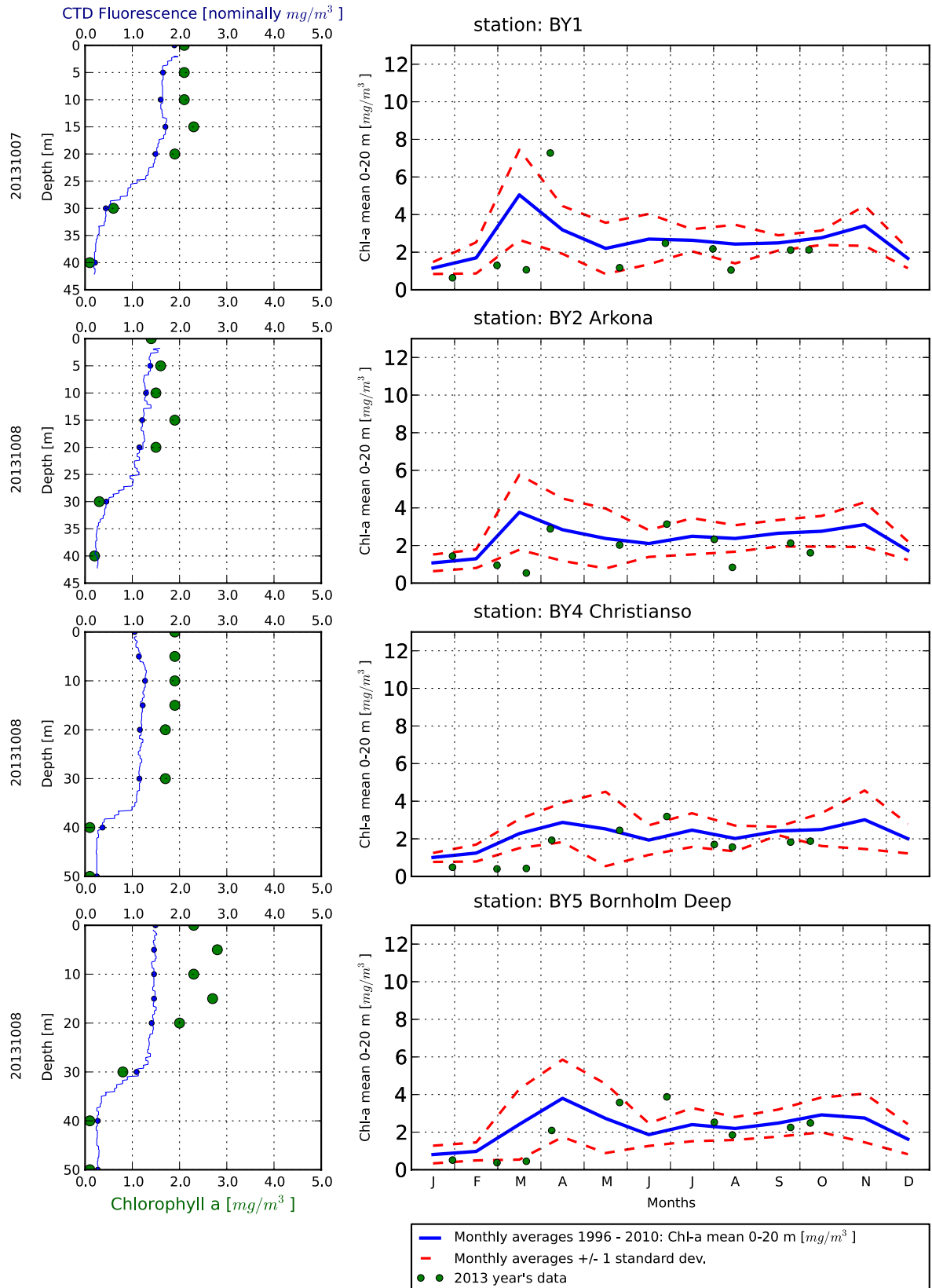
The Skagerrak



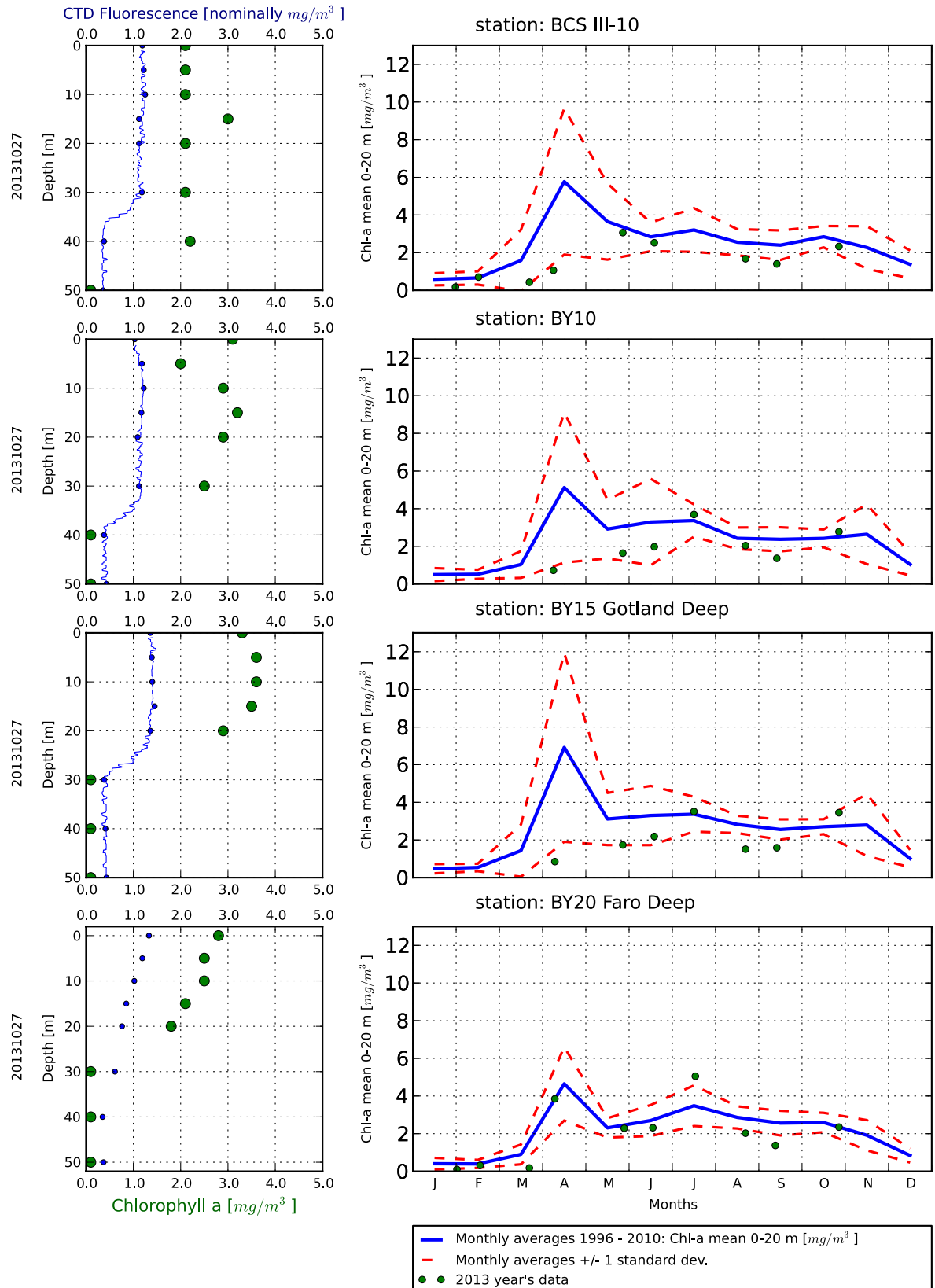
The Kattegat and the Sound



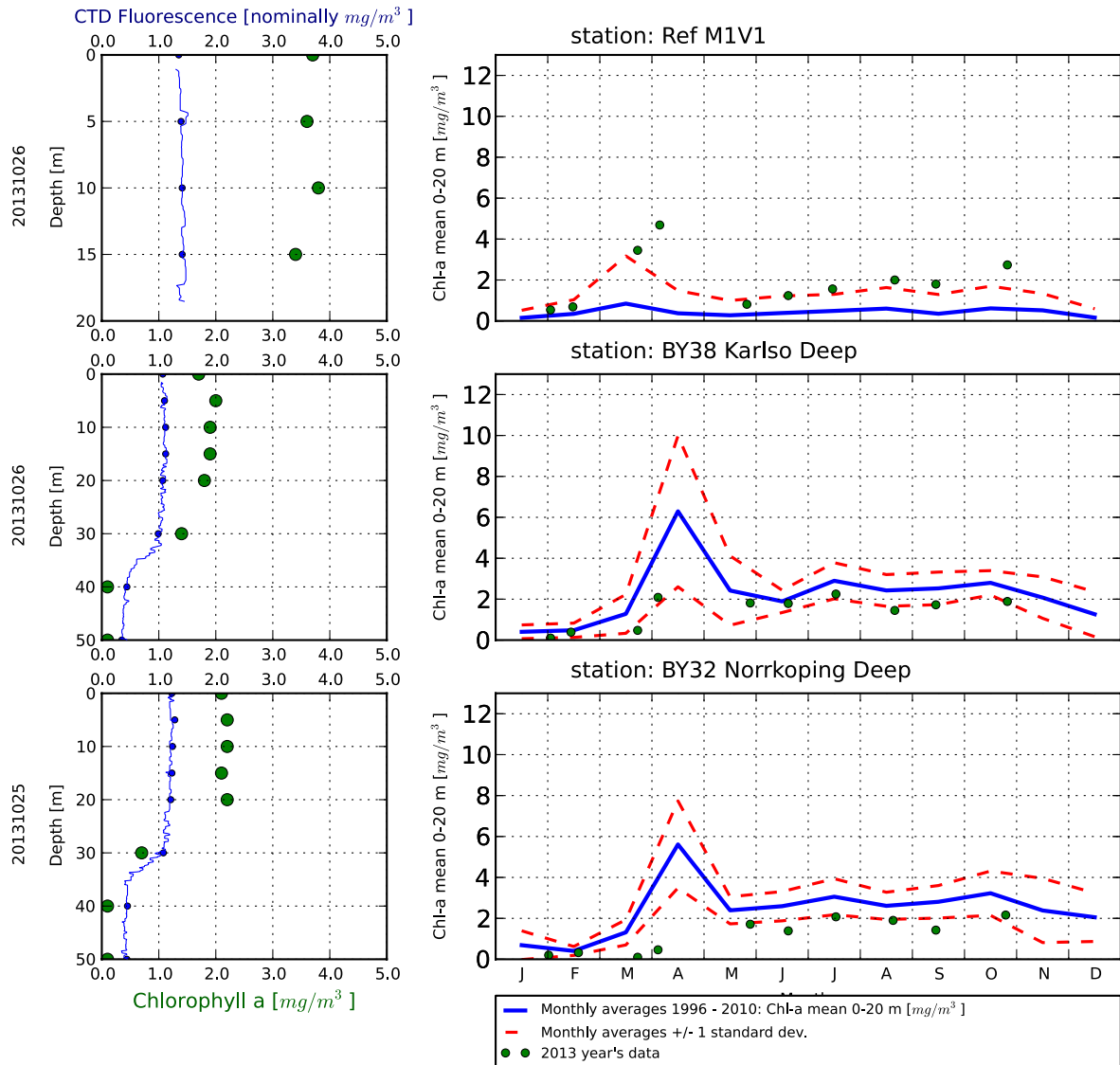
The Southern Baltic



The Eastern Baltic



The Western Baltic



Om klorofylldiagrammen

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

