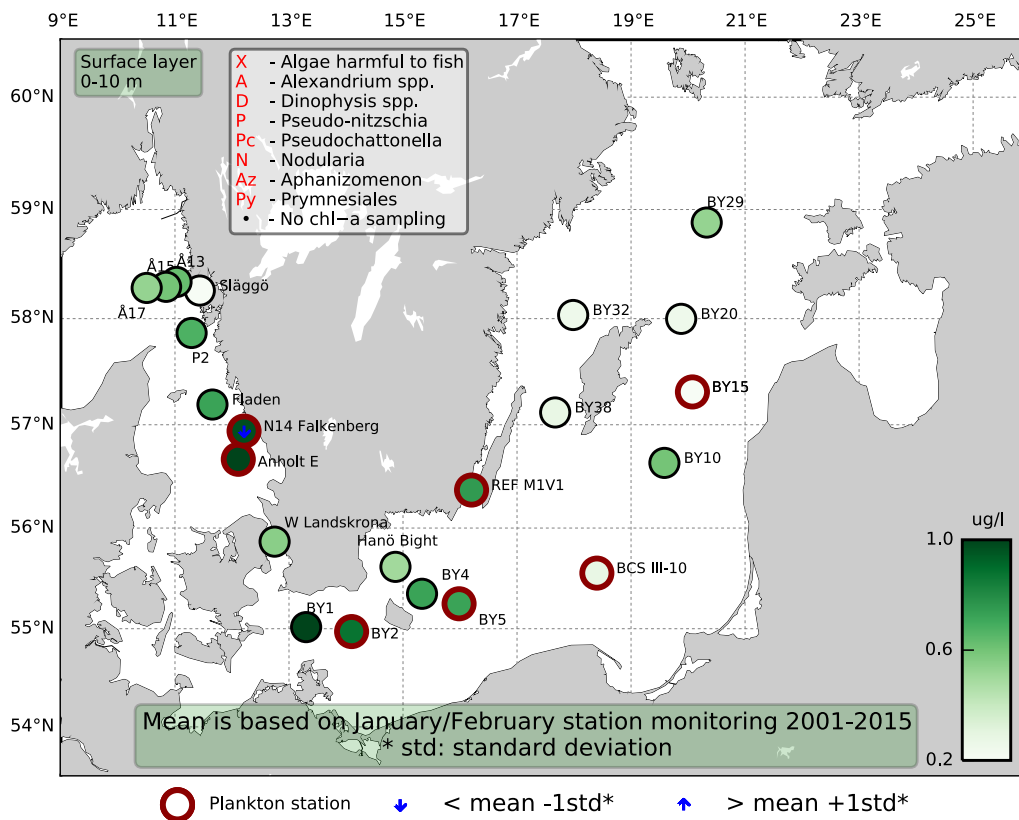


Sammanfattning

Samtliga växtplanktonprov, från Skagerrak, Kattegatt och Östersjön var mycket glesa. Artantalen och cellantalen var mycket låga. De integrerade klorofyllvärdena (0-20m) var normala för denna månaden vid Östersjöstationerna och under det normala i Västerhavet.

Inga detaljer presenteras i denna rapport utöver artlistor och klorofylldiagram.



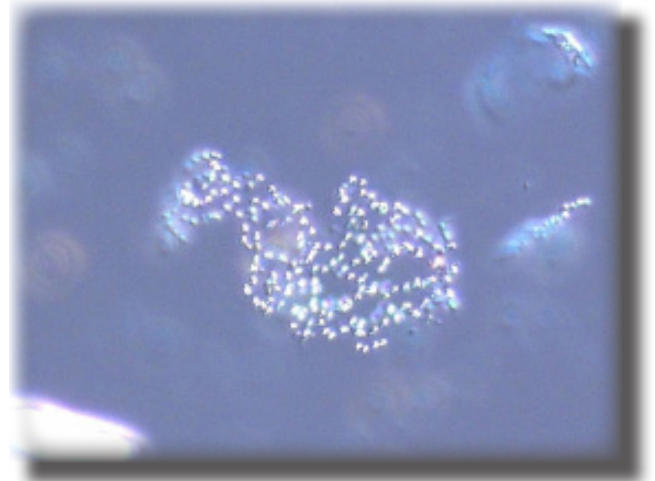
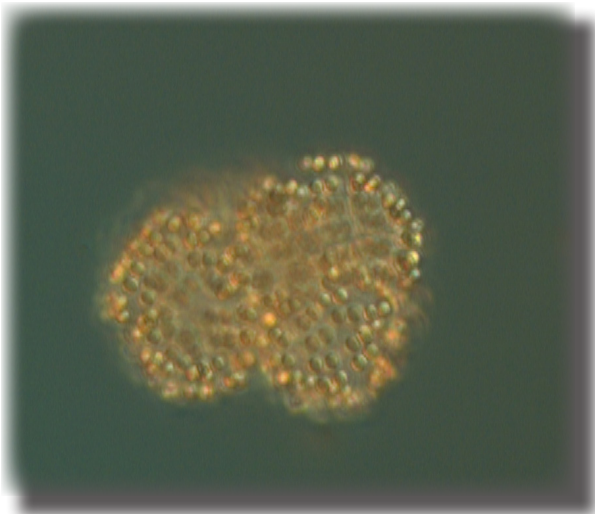
Abstract

All phytoplankton samples from the Skagerrak, the Kattegat and the Baltic Sea had low species diversities. All of the cell counts were very low. The integrated chlorophyll concentrations were normal at the Baltic stations and below normal at the Skagerrak and Kattegat stations.

No details will be presented in this report, only species lists and the chlorophyll diagrams.



The diatom *Nitzschia longissima* was present at the Kattegat and Skagerrak stations.



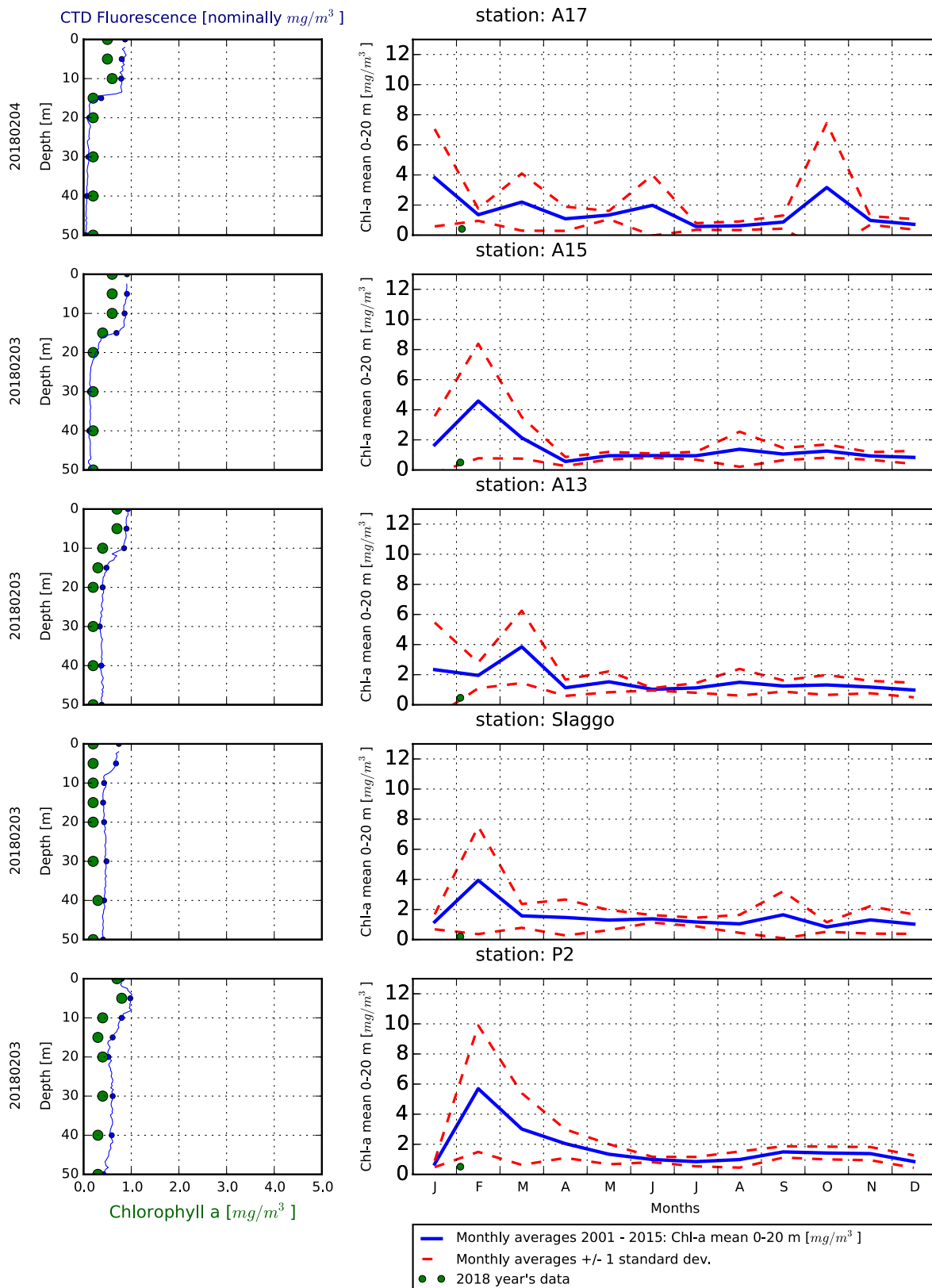
Colonies of pico cyanobacteria were present at all of the Baltic phytoplankton stations.

Phytoplankton analysis and text by:
Ann-Turi Skjevik

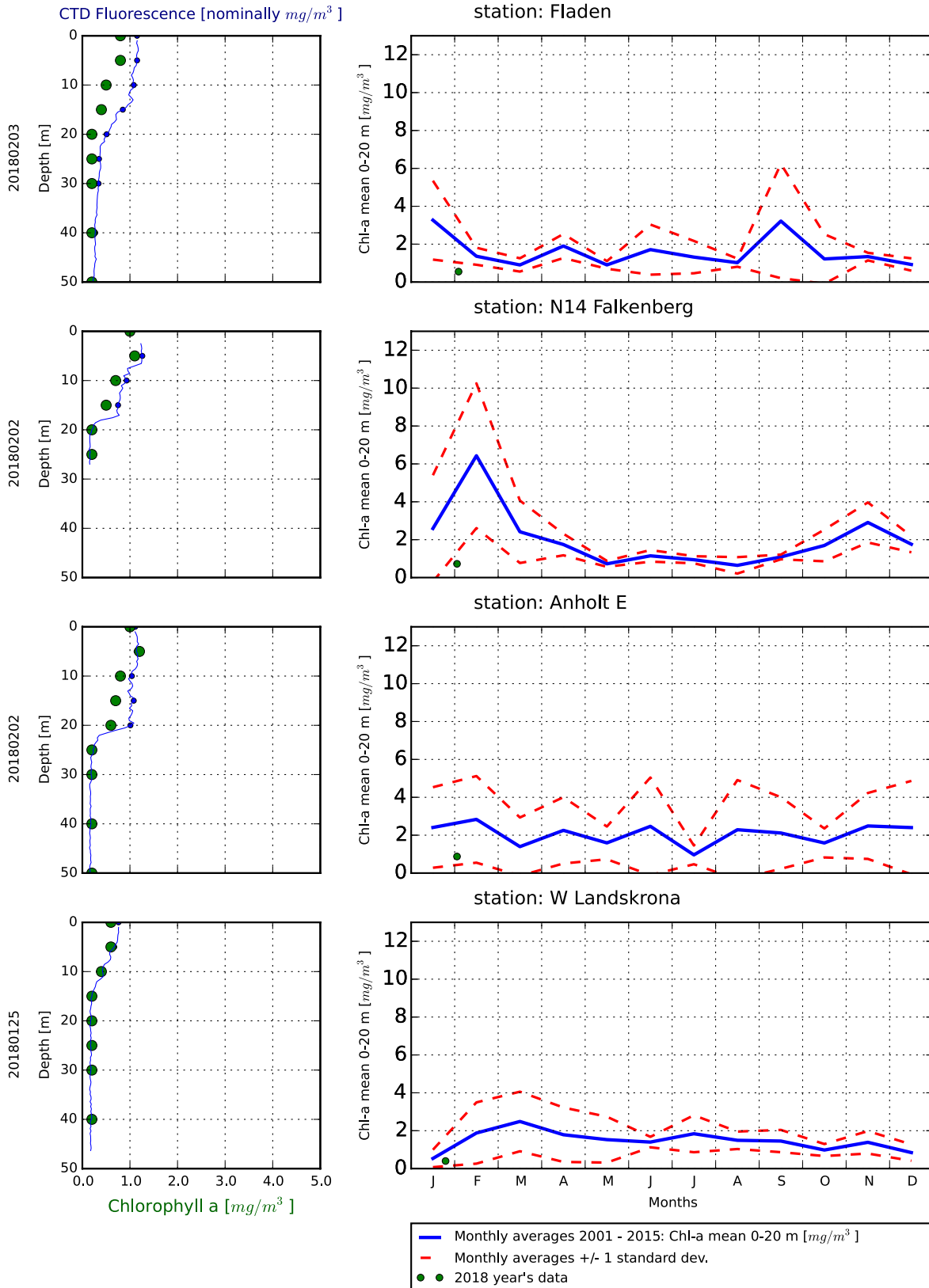
Selection of observed species	Anholt E	N14	Släggö	Å17
Red=potentially toxic species	22/2	22/2	22/2	22/2
Hose 0-10 m	presence	presence	presence	presence
Cylindrotheca closterium		present		present
Chaetoceros danicus				present
Chaetoceros subtilis		present		
Coscinodiscus radiatus	present			
Guinardia delicatula			present	
Leptocylindrus danicus				present
Navicula transitans	present			
Nitzschia longissima	present	present	present	present
Pseudo-nitzschia spp	present	present	present	common
Rhizosolenia hebetata		present		
Skeletonema marinoi	common	present		present
Thalassionema nitzschioides		present		
Thalassiosira spp	present			present
Thalassiosira angulata	present	present		
Amphidinium spp	present			
Azadinium spp				present
Ceratium fusus		present		
Ceratium lineatum		present	present	present
Ceratium longipes		present		present
Ceratium tripos	present	present	present	
Dinophysis acuminata	present		present	present
Dinophysis dens	present			
Dinophysis norvegica	present	present	present	
Gymnodiniales	present	common	present	present
Gymnodinium simplex			present	
Gymnodinium verruculosum		present	present	
Gyrodinium flagellare				present
Heterocapsa spp			present	
Heterocapsa rotundata		present		
Katodinium glaucum				present
Peridinales	present			present
Cryptomonadales	common	very common	common	common
Leucocryptos marina	present	present		
Pseudanabaena spp	present		present	
Dictyocha speculum		present		present
Pseudopedinella spp		present		
Emiliania huxleyi				present
Prymnesiales				present
Heterosigma akashiwo				present
Telonema spp		present		
Mesodinium rubrum		present		
Stenosemella spp	present	present		
Ciliophora	present	common	present	present

Selection of observed species	BY2	BY5	BY15	BCSIII-10	BY29	BY31	BY38	REFM1V1
Red=potentially toxic species	26/1	26/1	28/1	27/1	29/1	31/1	1/2	1/2
Hose 0-10 m	presence	presence	presence	presence	presence	presence	presence	presence
Centrales	common	present	present	present	present	present	present	present
Chaetoceros castracanei	present							
Chaetoceros danicus	present	present	present	present		present		present
Chaetoceros similis		present						
Chaetoceros subtilis	present	present	present		present	present	present	present
Coscinodiscus spp		present						
Proboscia alata		present						
Skeletonema marinoi					present		present	common
Thalassiosira spp			present	present				present
Amphidinium spp			present		present			
Amphidinium crassum					present			
Dinophysis acuminata					present	present		
Gymnodiniales	present	present	present	present	present		present	present
Gymnodinium verruculosum			present					
Heterocapsa rotundata	present							present
Katodinium glaucum				present	present		present	
Peridiniella catenata					present	present		
Peridiniella danica		present						
Protoperidinium spp			present		present	present	present	
Cryptomonadales	common	common	common	common	common	present	present	common
Aphanizomenon spp	present			present				
Aphanocapsa spp	present	present	present					present
Aphanothece spp		present					present	
Cyanodictyon spp		present						
Lemmermanniella spp	present	present		present		present		present
Snowella spp	common	present	present	present	present	present	present	present
Pseudopedinella spp		present						
Eutreptiella spp	common	present	present	present	present			present
Pterosperma spp	present	present	present		present	present	present	present
Pyramimonas spp	present							
Prymnesiales spp		present	present					
Oocystis spp	present			present				
Planctonema lauterbornii	present	common	present	common	present	present	common	present
Mesodinium rubrum	present	common	present	present	present	present	present	present
Strombidium spp	present				present			
Ciliophora	present	present	common	present	common	common	present	present

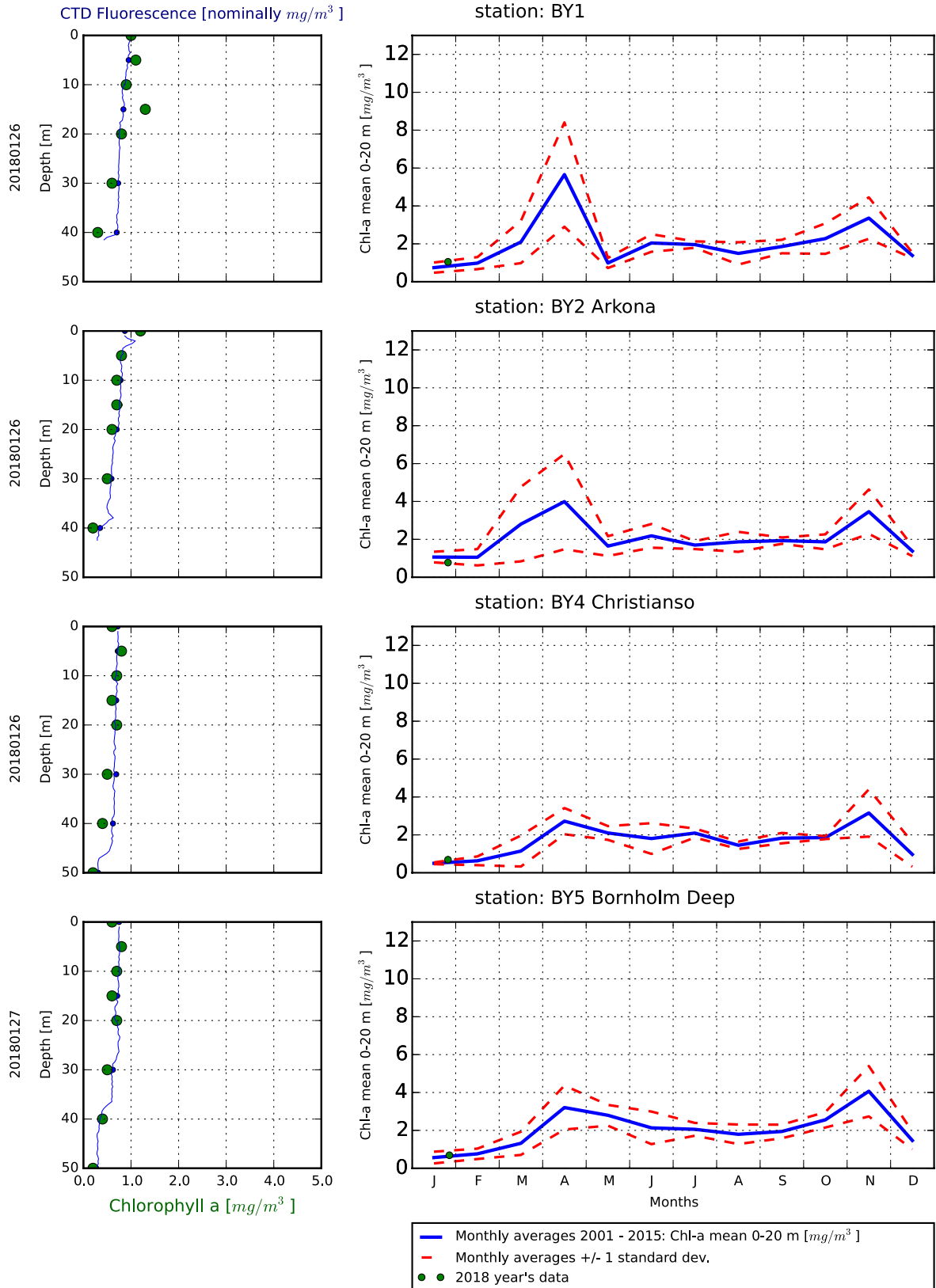
The Skagerrak



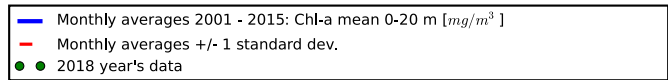
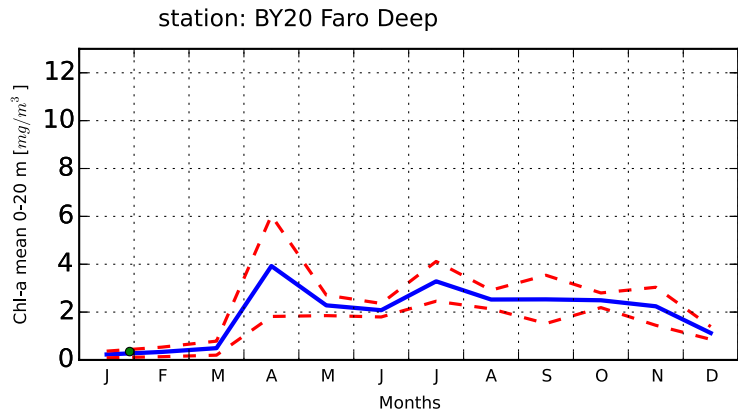
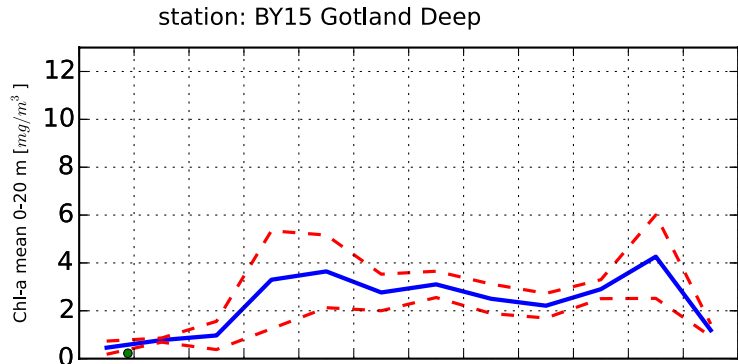
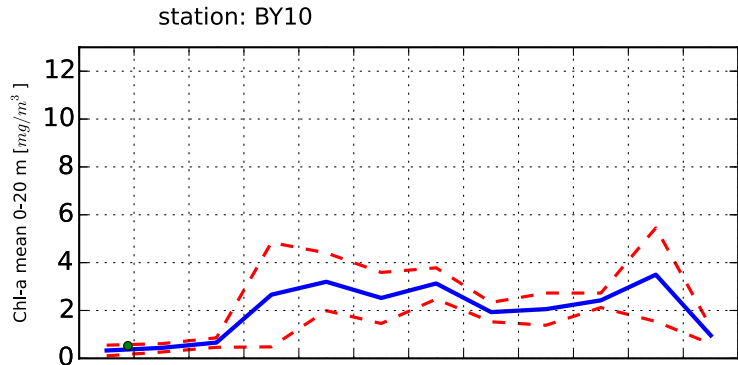
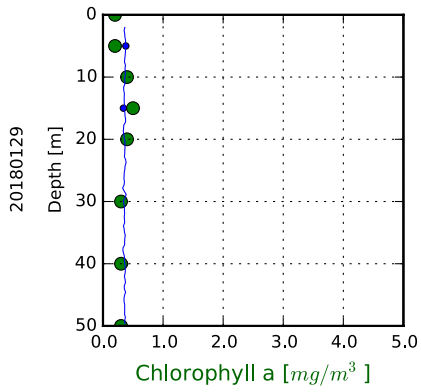
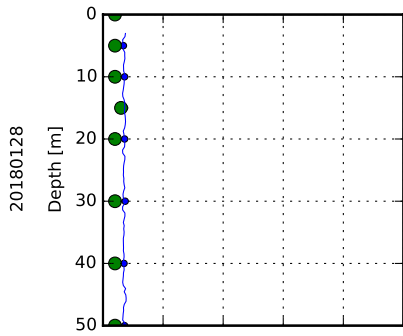
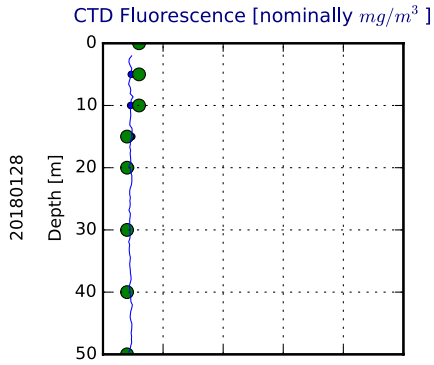
The Kattegat and The Sound



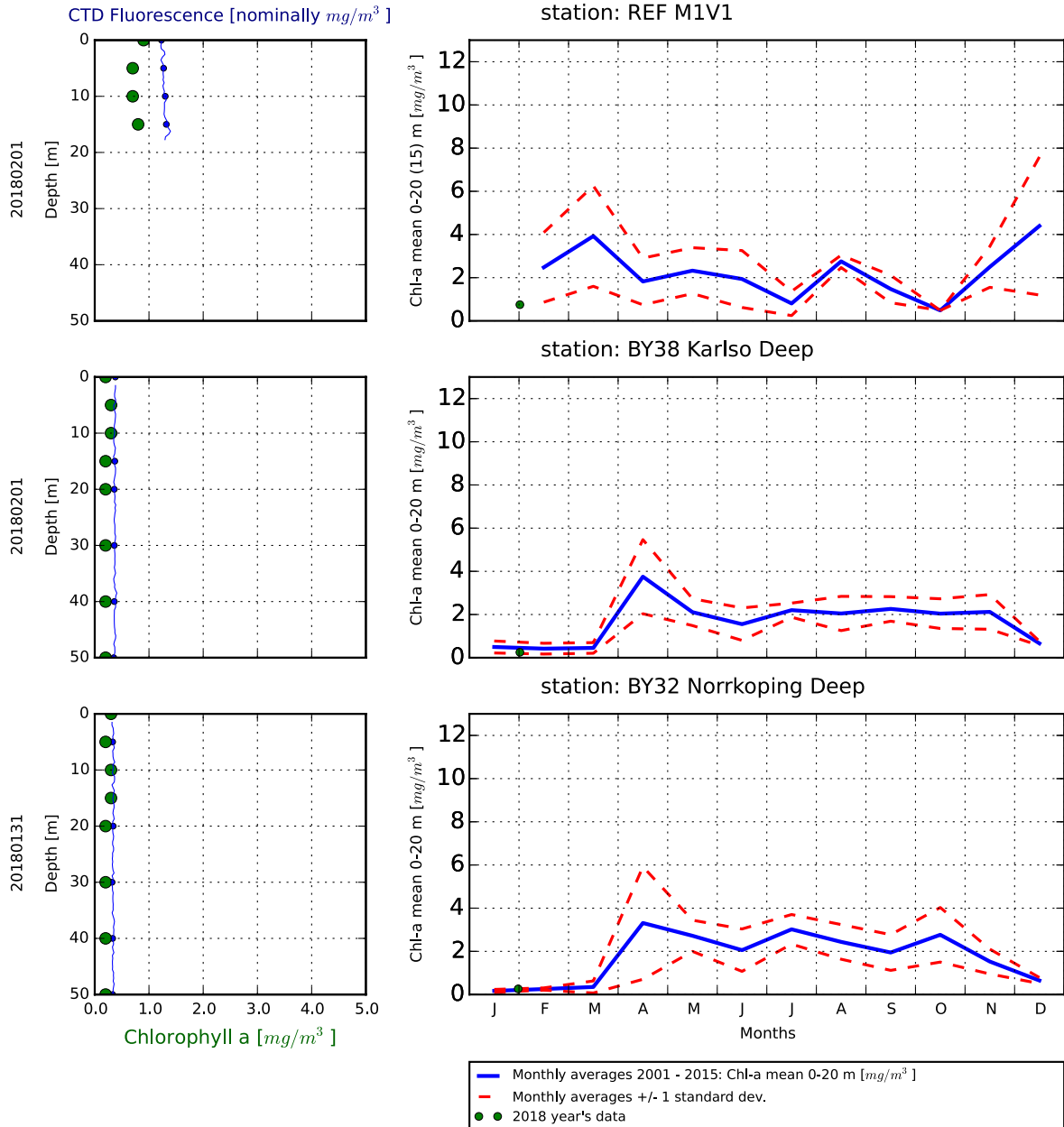
The Southern Baltic



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 (0-10 m) vid de olika stationerna. Pil upp eller ned indikerar om resultatet är över eller under en standardavvikelse från medel. Medel är beräknat utifrån aktuell månad under perioden 2001-2015. 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 (0-10 m) at sampling stations. The arrow up or down indicate whether the result is above or below one standard deviation from mean. The mean value is calculated using results from the actual month during the period 2001-2015. Presence of harmful algae at stations where species analysis is performed is shown with a symbol.

