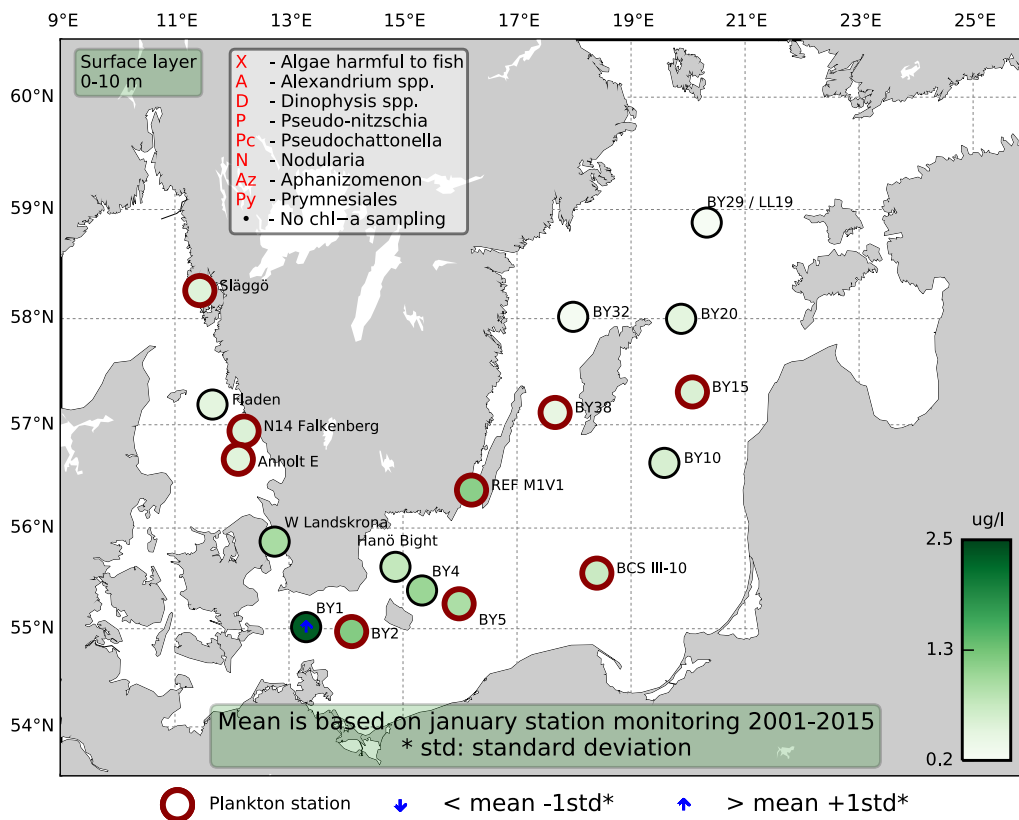


Sammanfattning

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

Alla stationer i Skagerrak förutom Släggö fick utgå på grund av hårda vindar.

Inga växtplanktondetaljer presenteras utöver detta, enbart artlistor och klorofylldiagram.

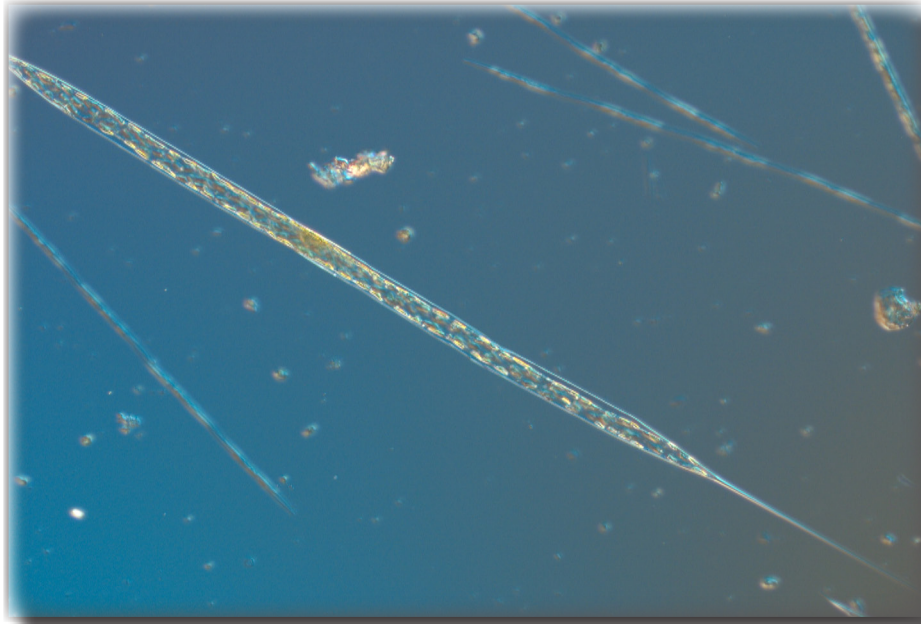


Abstract

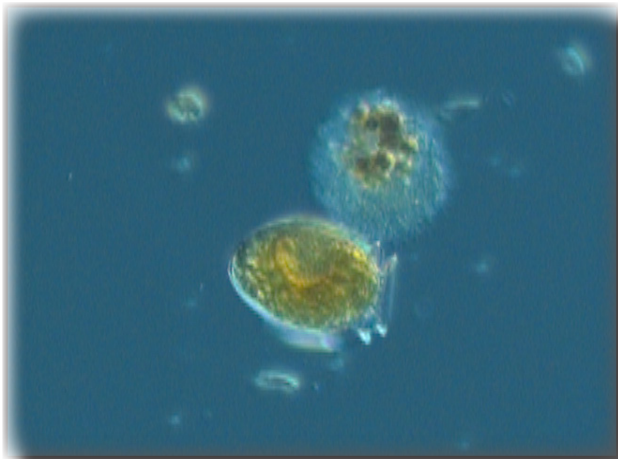
All phytoplankton samples from the Skagerrak, the Kattegat and the Baltic Sea had low species diversities. All of the cell counts were very low.

All of the Skagerrak stations except Släggö were not visited during the cruise due to bad weather conditions.

No further detailed phytoplankton information will be presented in this report, only species lists and the chlorophyll diagrams.



The diatom *Rhizosolenia setigera* was present at the Kattegat stations.



The dinoflagellate *Dinophysis acuminata* was present at BY38.



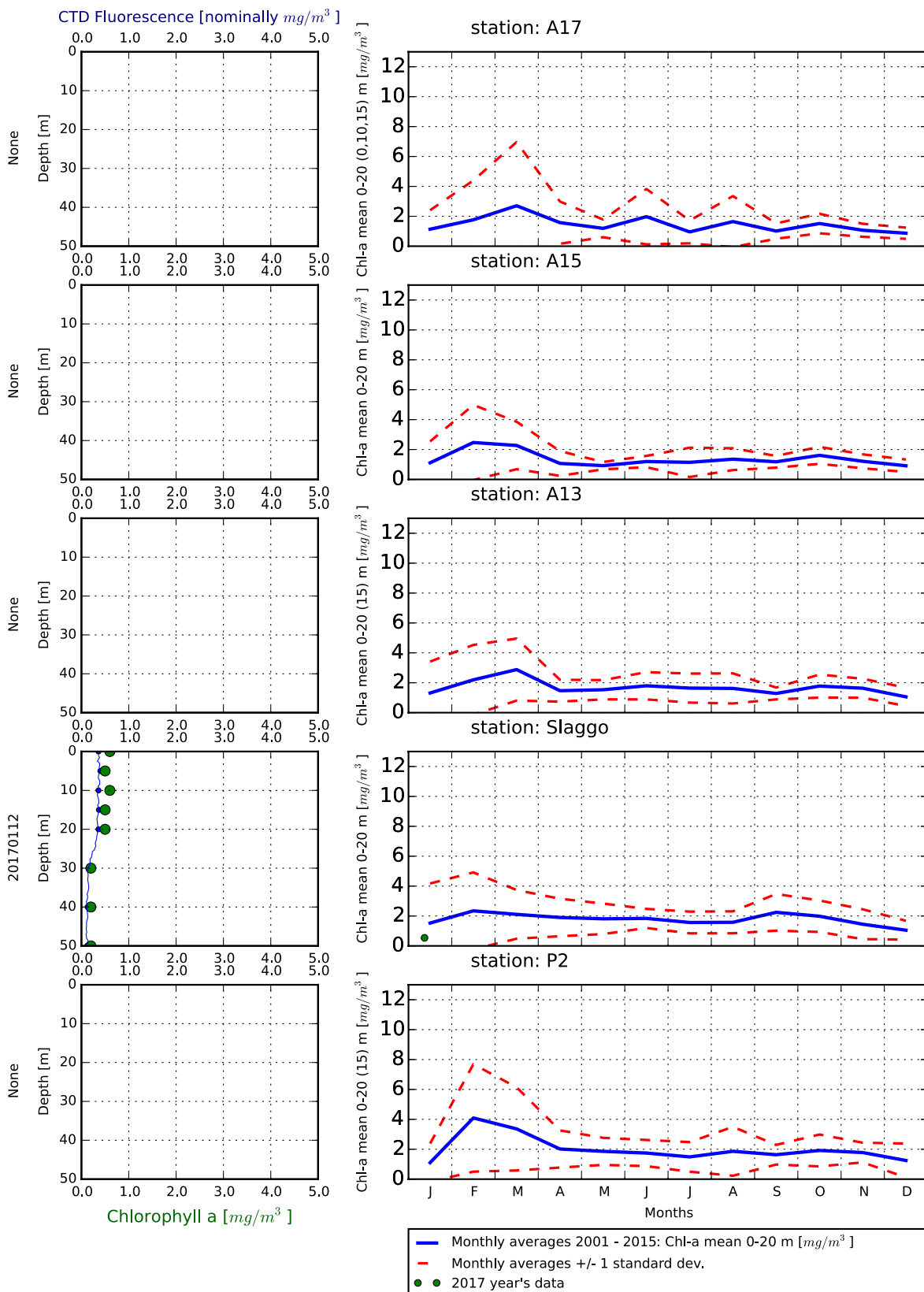
The diatom *Pseudo-nitzschia* was present at Anholt E.

Phytoplankton analysis and text by:
Ann-Turi Skjevik

Selection of observed species	Släggö	N14	Anholt E
Red=potentially toxic species	12/1	13/1	13/1
Hose 0-10 m	presence	presence	presence
Chaetoceros similis			present
Chaetoceros subtilis			present
Ditylum brightwellii	present		present
Nitzschia longissima	present	present	present
Proboscia alata	present		present
Pseudo-nitzschia			present
Rhizosolenia hebetata	present		
Rhizosolenia setigera		present	present
Skeletonema marinoi	present		present
Thalassionema nitzschioides	present		
Thalassiosira angulata	present		present
Akashiwo sanguinea	present		
Ceratium fusus		present	
Ceratium horridum	present		
Ceratium lineatum		present	present
Ceratium longipes			present
Ceratium tripos			present
Gymnodiniales		present	present
Peridiniella danica			present
Cryptomonadales		present	present
Dictyocha speculum	present	present	present
Pseudanabaena spp			present
Pyramimonas spp			present
Emiliana huxleyi	present	common	common

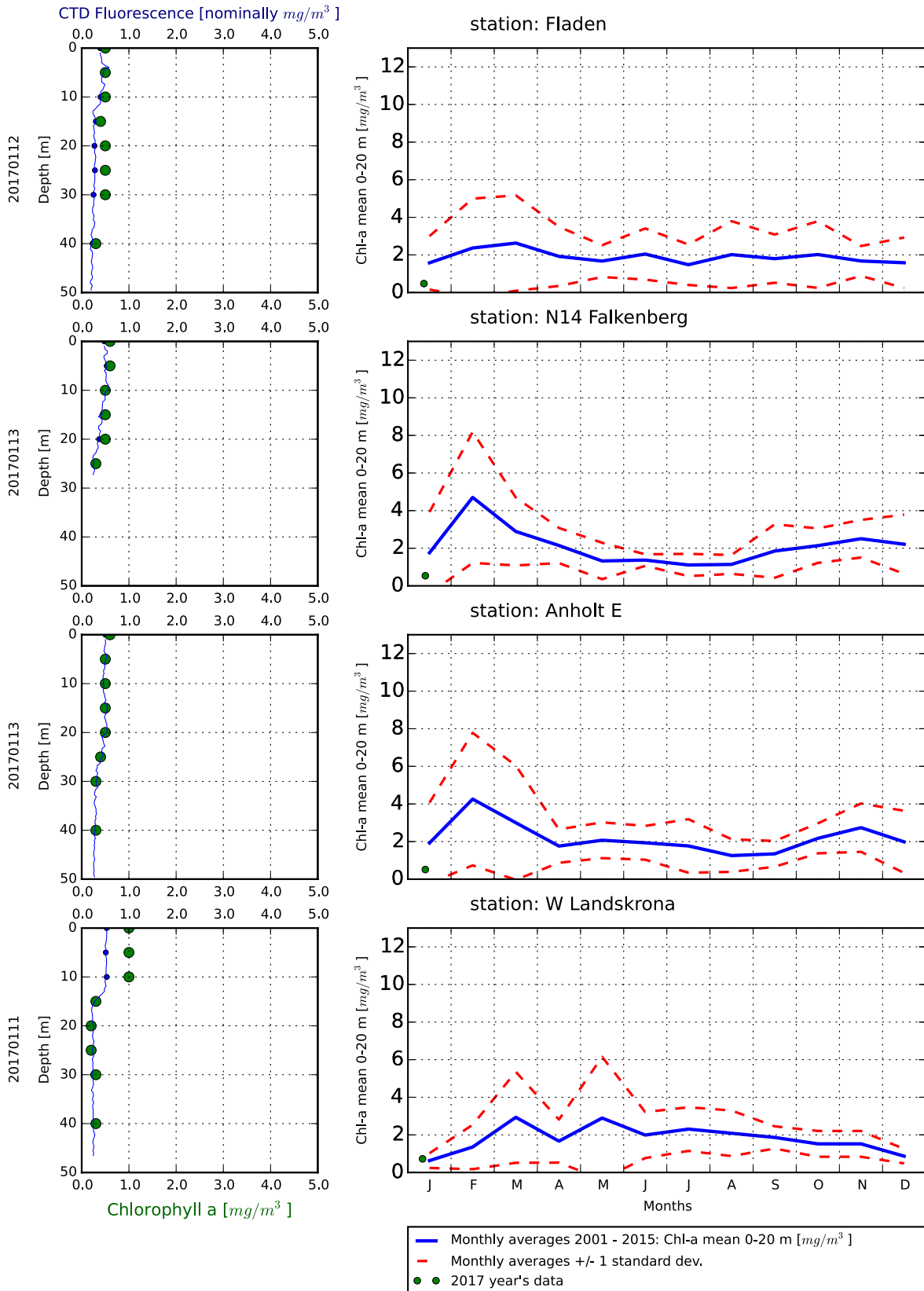
Selection of observed species	BY2	BY5	BCS III-10	BY15	REF M1V1	BY29	BY31	BY38
Red=potentially toxic species	10/1	10/1	10/1	9/1	14/1	15/1	15/1	14/1
Hose 0-10 m	presence	presence	presence	presence	presence	presence	presence	presence
Chaetoceros danicus					present		present	
Chaetoceros impressus		present	present	present	present	present	present	present
Chaetoceros subtilis				present				
Skeletonema marinoi	present				present		present	
<i>Dinophysis acuminata</i>								present
Gymnodiniales		present		present	present			
Gymnodinium verruculosum	present							
Katodinium glaucum						present		
Cryptomonadales	common	present	present	present	common	present	present	present
Eutreptiella spp	present	present				present		
Pterosperma spp				present	present			
Planctonema lauterbornii		present				present	present	present
Aphanizomenon flos-aquae		present	present			present		present
Lemmermanniella spp						present		
Snowella spp	present		present	present		present		
Choanoflagellidea						present		
Ciliophora	present	present	present	present	present	present	present	present
Mesodinium rubrum	present	present		present	present	present		present

The Skagerrak

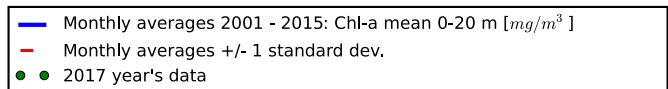
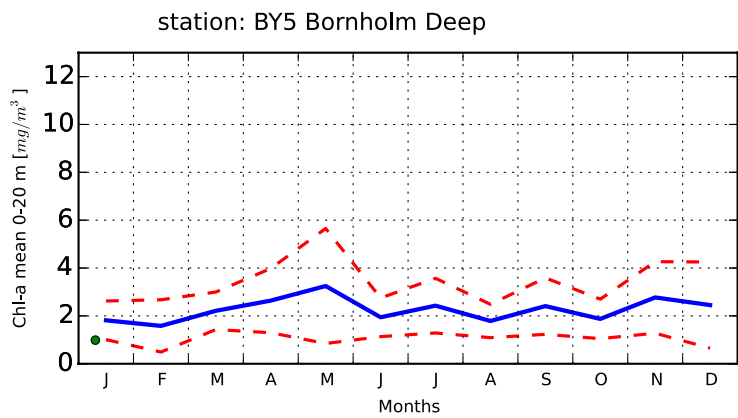
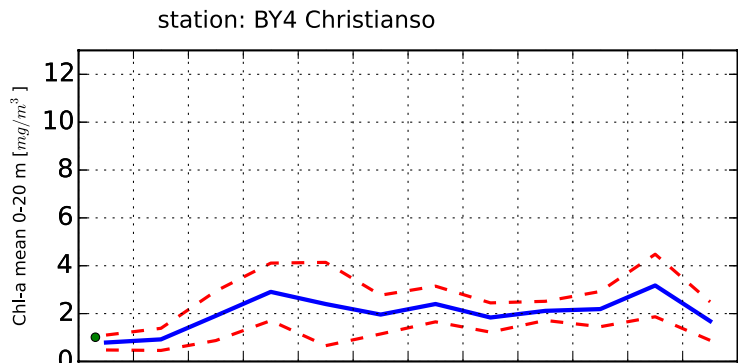
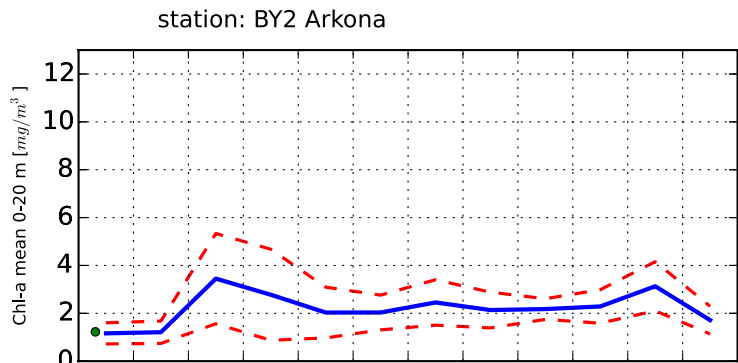
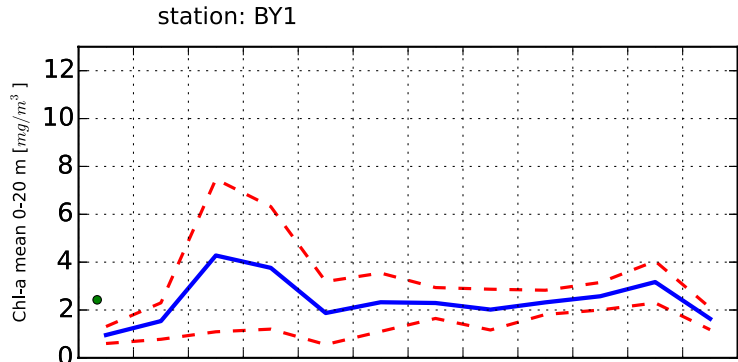
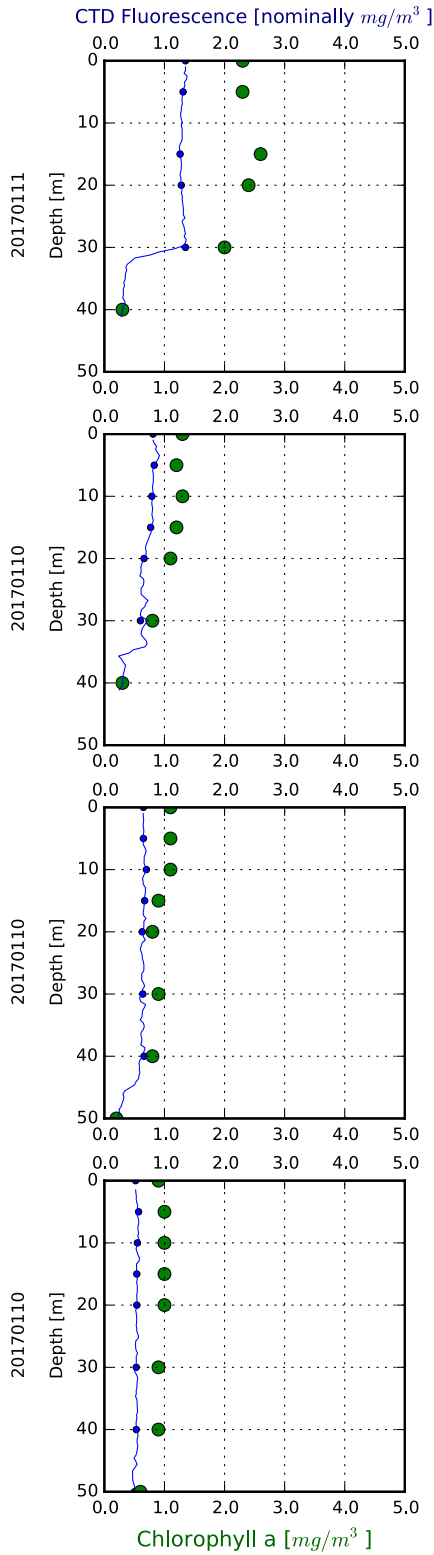


*All of the Skagerrak stations except Slaggö, at the coast, could not be visited during the cruise due to bad weather.

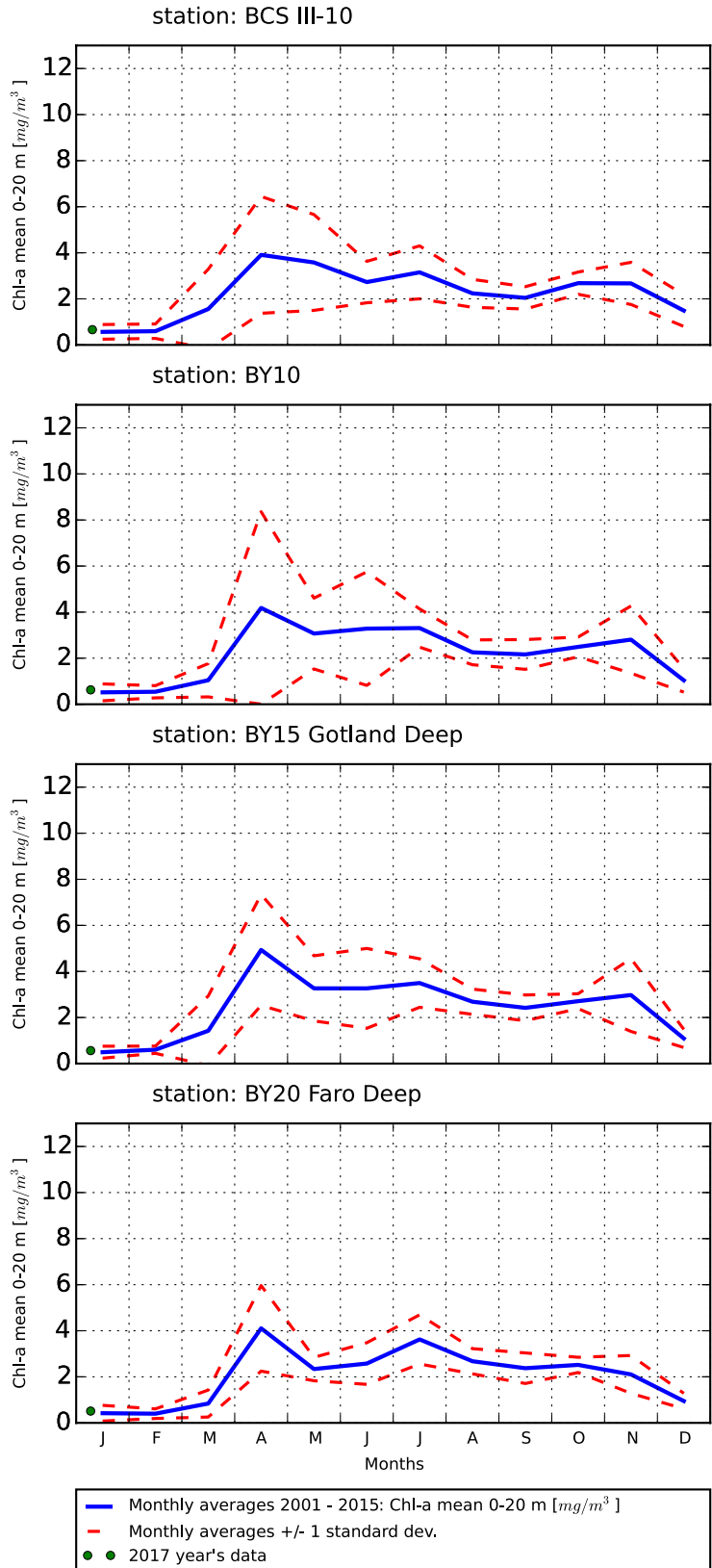
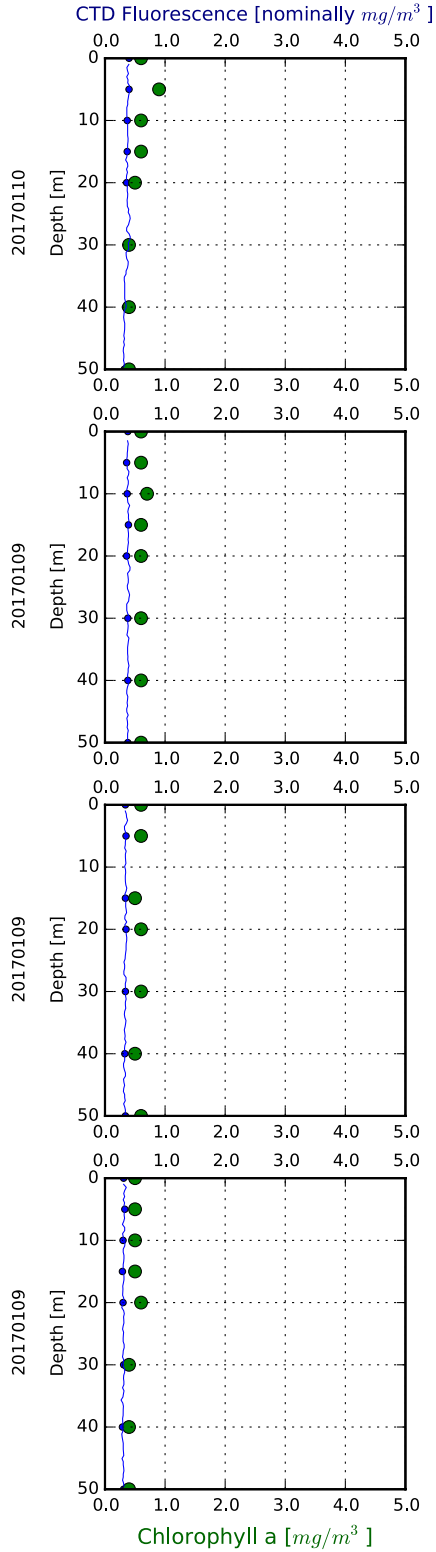
The Kattegat and The Sound



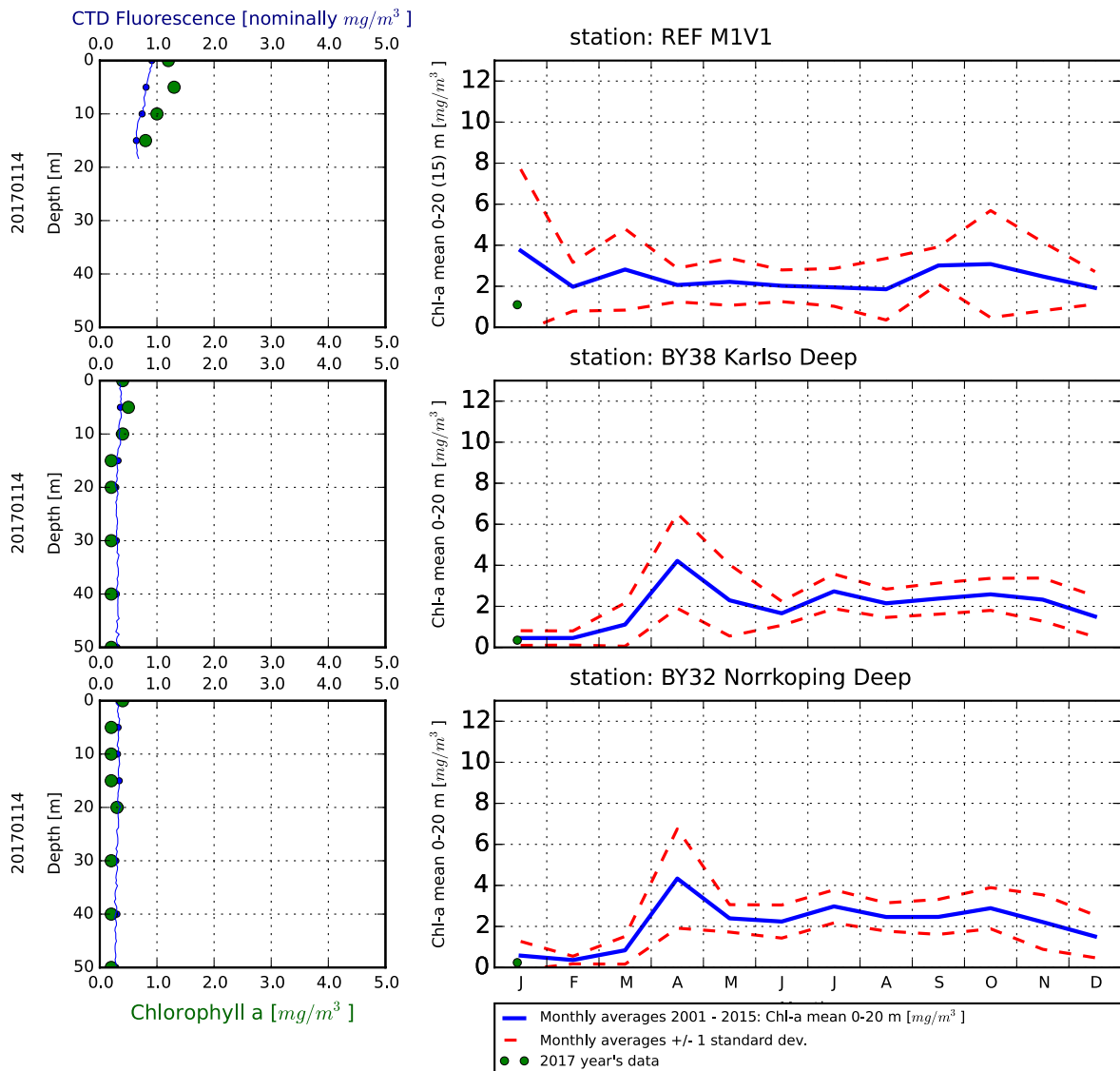
The Southern Baltic



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.

