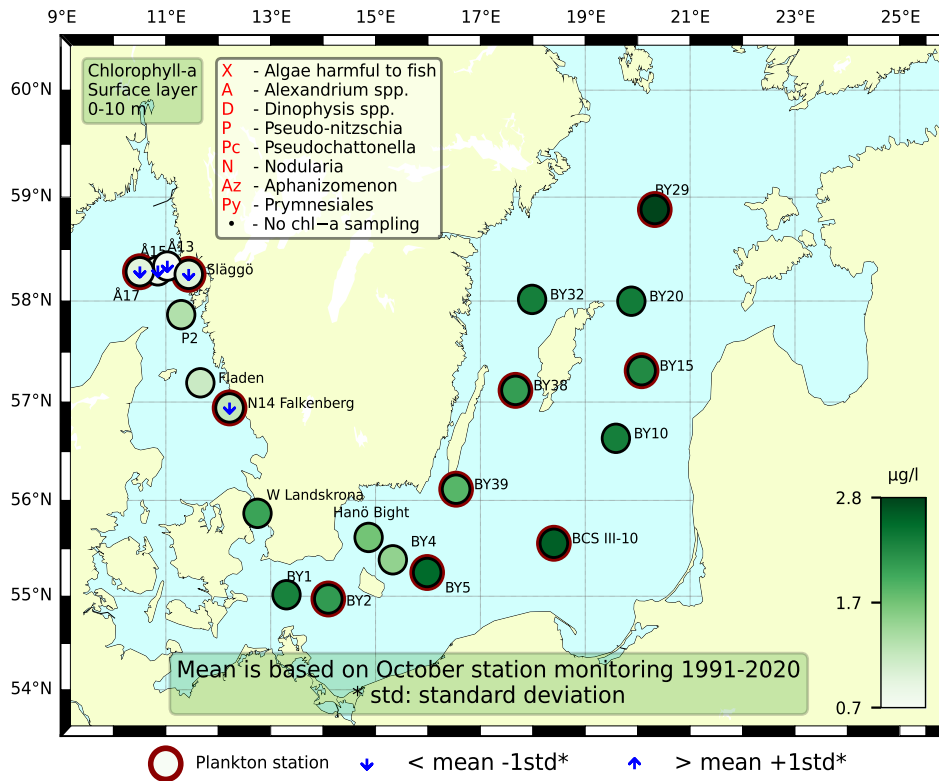


Sammanfattning

I rapporten saknas resultat från Anholt E på grund av hård vind som gjorde att provtagning inte var möjlig. Artdiversiteten var relativt hög men de totala cellantalen var låga i både Kattegatt och Skagerrak. Kiselalger dominerade vid samtliga stationer och *Pseudosolenia calcar-avis* återfanns i högre antal vid de stationerna som var kustnära. De integrerade klorofyllvärdena (0–10) i både Skagerrak och Kattegatt var lägre än det normala. De integrerade (0–20 m) var antingen i den lägre delen av vad som är normalt eller under det normala.

Artdiversiteten och cellantalen var relativt höga i södra Östersjön jämfört med övriga stationer under månaden, och planktonsamhället dominerades av kiselalger. Detta var särskilt tydligt vid station BY2, där *Dactyliosolen fragilissimus* och *Cerataulina pelagica* förekom i högre utsträckning. I övriga delar av Östersjön var både artdiversitet och cellantal låga, med förhöjda cellantal endast hos mindre arter. Vid tre stationer – BY2, BY29 och BY39 – observerades även låga förekomster av den filamentösa cyanobakterien *Aphanizomenon flosaquae*. De integrerade klorofyllhalterna (0–10 m och 0–20 m) låg inom det normala för månaden.



Abstract

This report does not include station Anholt E in Kattegatt due to hard winds during the cruise. The species diversity was quite high at all stations but the total cell numbers were low in both Kattegatt and Skagerrak areas. Diatoms dominated and at the coastal stations, *Pseudosolenia calcar-avis* dominated. The integrated chlorophyll concentrations (0–10 m) in the Skagerrak and the Kattegatt were below normal at all stations. The integrated chlorophyll concentrations (0–20 m) were either in the lower range of normal or below normal.

Species diversity and cell abundances were relatively high in the southern Baltic Sea compared with the other stations during the month, and the plankton community was dominated by diatoms. This was particularly evident at station BY2, where *Dactyliosolen fragilissimus* and *Cerataulina pelagica* were more prevalent. In other parts of the Baltic Sea, both species diversity and cell abundances were low, with elevated cell counts observed only among small species. At three stations – BY2, BY29, and BY39 – low occurrences of the filamentous cyanobacterium *Aphanizomenon flosaquae* were observed. The integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for the month.

Below follows a more detailed information on species composition and abundance. Species marked with * are potentially toxic or harmful.

The Skagerrak

Å17 (open Skagerrak) 25th of October

The species diversity was high but the total cell counts were low. The diatom genus *Pseudo-nitzschia* was found in highest cell counts among the larger cells. Only a few cells of dinoflagellates were noted. The coccolithophorid *Emiliana huxleyi* was rather numerous among the smaller cells. The integrated chlorophyll concentration (0–10 m) was below normal while the deeper integrated chlorophyll (0–20 m) was normal for this month.

Släggö (Skagerrak coast) 25th of October

The total cell numbers were low but the biodiversity was relatively high. Diatoms were the most abundant group with for example *P. calcar-avis* and *Leptocylindrus danicus*. The dinoflagellates were mainly represented by the genus *Tripes*. The coccolithophorid *E. huxleyi* was found in high cell numbers. Both integrated chlorophyll concentrations (0–10 and 0-20 m) were below normal for the month.

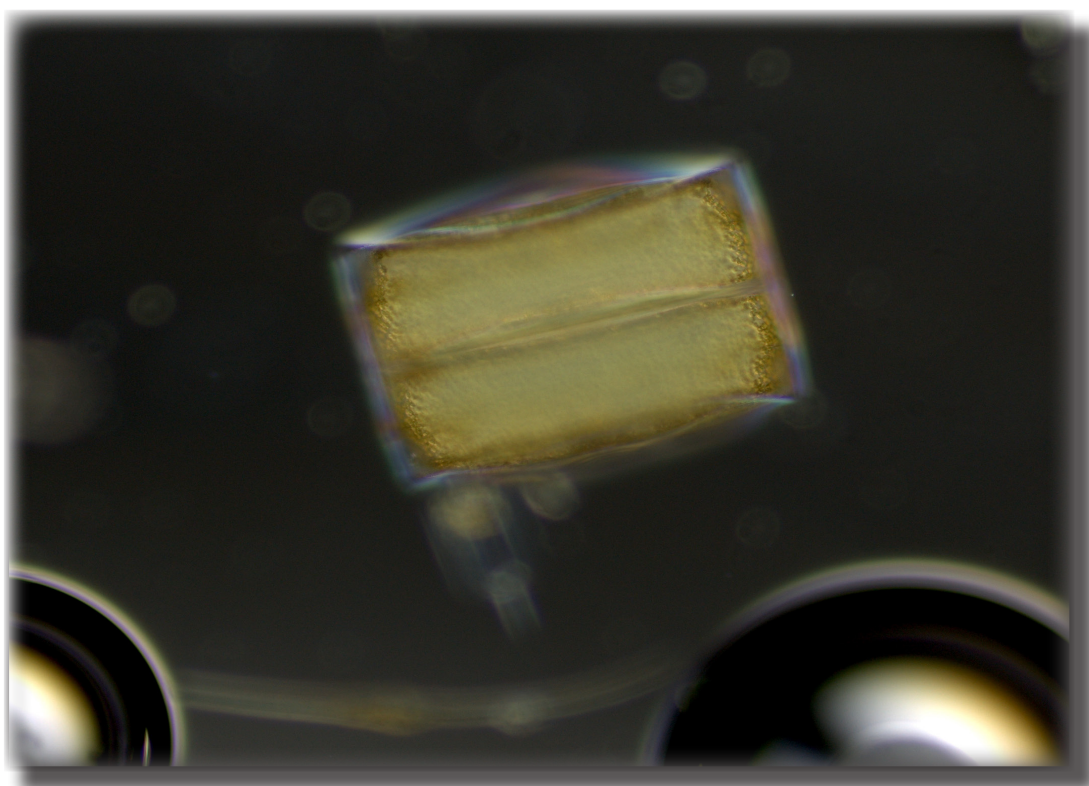


Fig 1. The very large centric diatom *Coscinodiscus wailesii* was found in the Skagerrak. The species can vary very much in size. Photo: M. Johansen.

The Kattegat

N14 Falkenberg 25th of October

The species diversity was high but total cell counts were low. The diatoms *P. calcar-avis*, *Skeletonema marinoi*, *Cerataulina pelagica* and *Dactyliosolen fragilissimus* were found in high cell numbers. The dinoflagellates were only found in low cell numbers. The smaller cells were dominated by different cryptomonads. Both integrated chlorophyll concentrations (0–10 and 0-20 m) were below normal for the month.

The Baltic

BY5 21st of October, BCSIII-10 21st of October

The phytoplankton diversity was low, but total cell numbers were relatively high. The diatom *D. fragilissimus* was the most abundant species, followed by *C. pelagica* and smaller taxa, including cells from the order Gymnodiniales. Integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for this month.

BY29 22nd of October

The phytoplankton diversity was moderate compared to the nearby station, while total cell numbers were low. The threadlike cyanobacterium *Aphanizomenon flosaquae* and small species from the order Cryptomonadales were relatively abundant. Integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for this month.

BY31 Landsort deep 22nd of October, BY38 23rd of October

Both phytoplankton diversity and total cell numbers were low. Only small species, such as Cryptomonadales and cells from the order Gymnodiniales, were relatively abundant. *Actinocyclus octonarius* was present at low abundances. Integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for this month.

BY39 23rd of October

Phytoplankton diversity and total cell numbers were low. *A. flosaquae* and small taxa, including cells from the order Cryptomonadales, were relatively abundant. Integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for this month.

BY2 24th of October

Species diversity was moderate compared to the other Baltic stations, and diatoms dominated the community. The diatoms *D. fragilissimus* and *C. pelagica* were the most abundant species. *A. flosaquae* was also present. Integrated chlorophyll concentrations (0–10 m and 0–20 m) were within the normal range for this month.

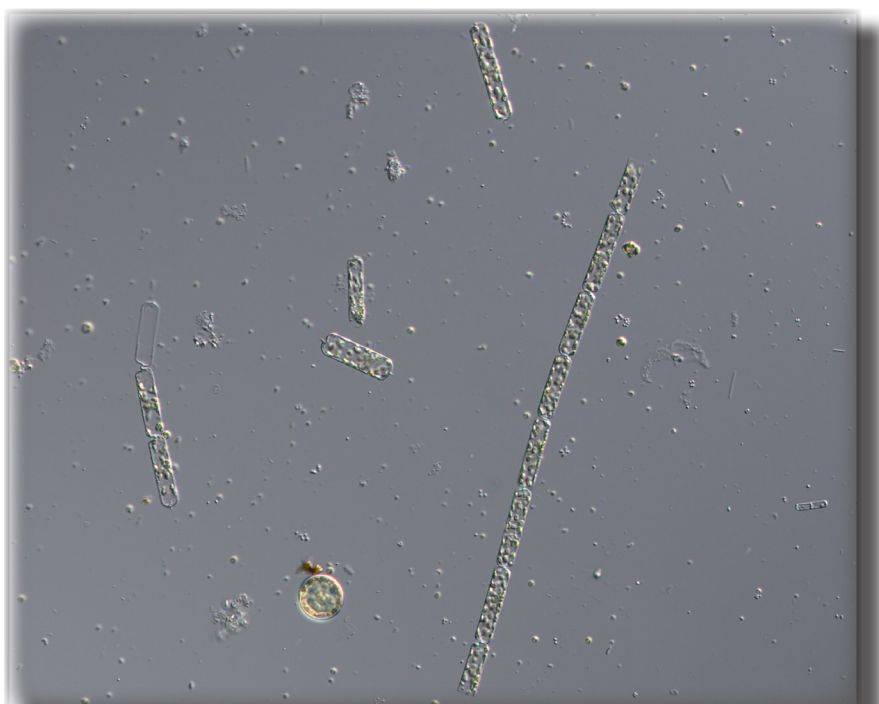
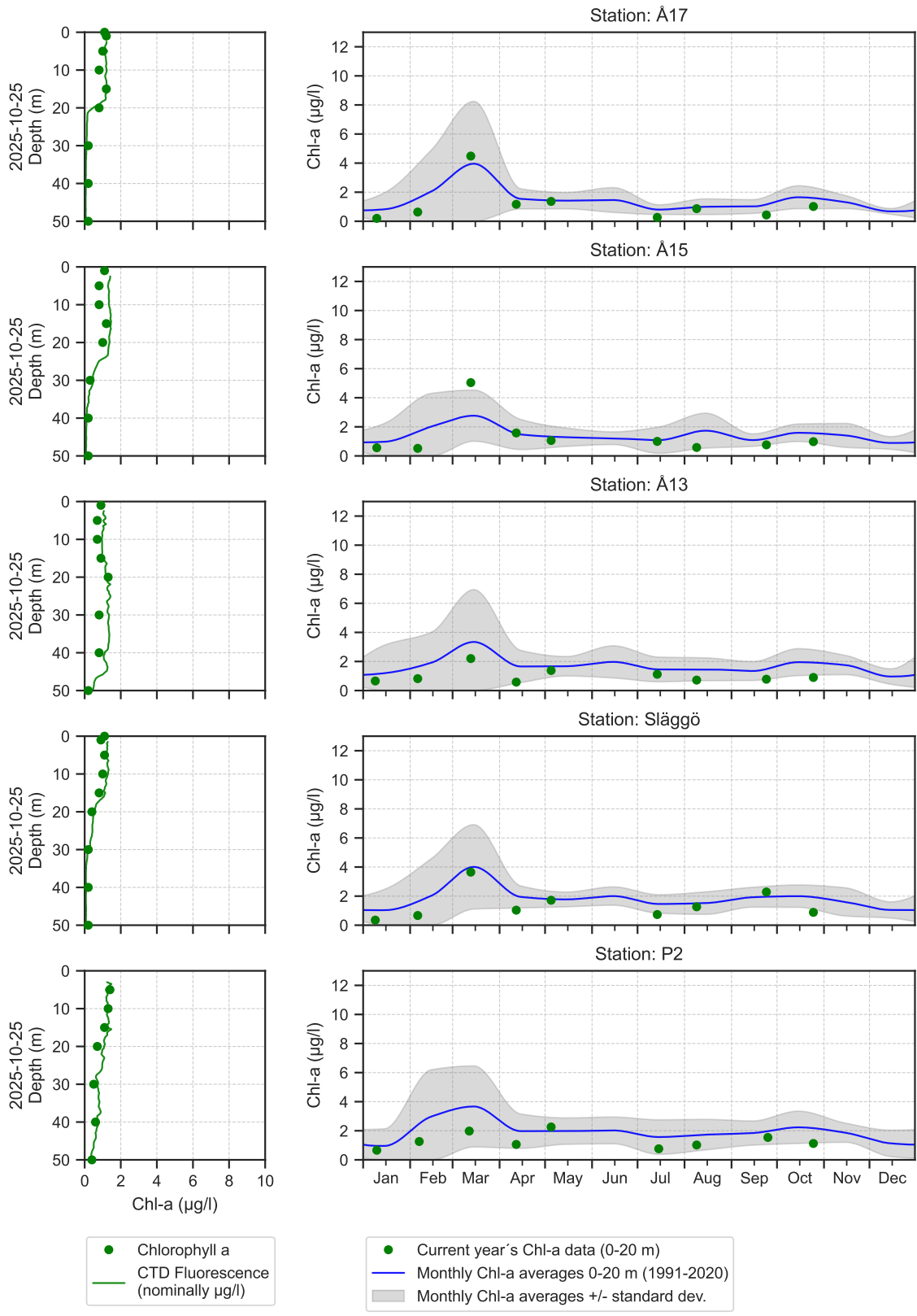


Fig 2. The diatom *Dactyliosolen fragilissimus* was common in the southern parts of the Baltic Sea. Photo: A. Torstensson.

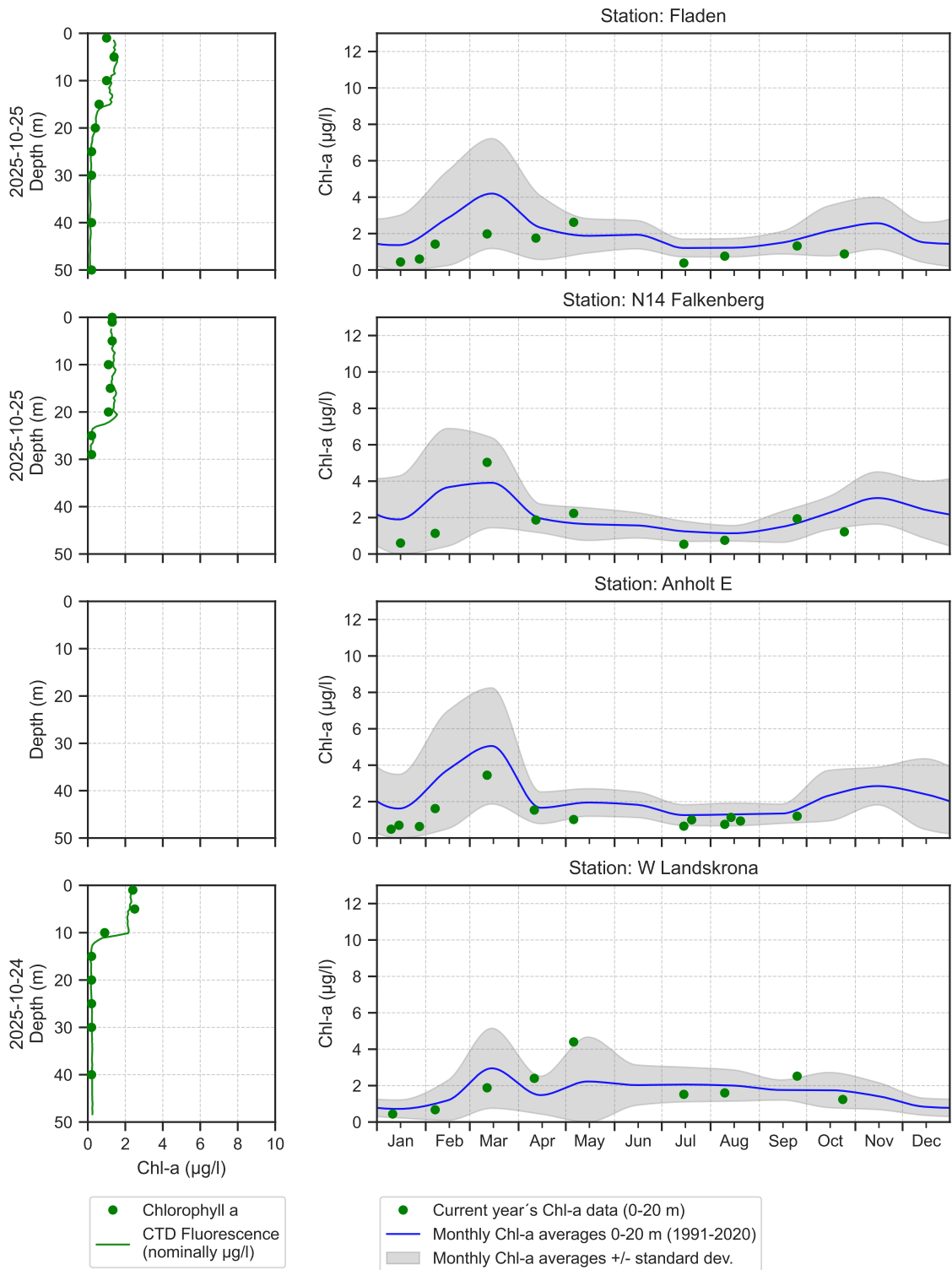
Selection of observed species	N14	Släggö	Å17
Red=potentially toxic species	25/10	25/10	25/10
Hose 0-10 m	presence	presence	presence
Centrales			present
Cerataulina pelagica	common	present	present
Chaetoceros			present
Chaetoceros affinis	present		
Chaetoceros cf. convolutus	present	present	
Chaetoceros curvisetus	present	present	present
Chaetoceros danicus			present
Chaetoceros thronsenii	present		
Coscinodiscus radiatus	present		
Coscinodiscus wailesii		present	
Dactyliosolen fragilissimus	common		
Detonula pumila		present	
Ditylum brightwellii		present	
Guinardia delicatula	present		present
Guinardia flaccida			present
Lauderia annulata			present
Lennoxia faveolata	present	present	
Leptocylindrus danicus	present	common	present
Leptocylindrus minimus	present		present
Pleurosigma			present
Pseudo-nitzschia	present	present	common
Pseudosolenia calcar-avis	common	common	present
Rhizosolenia cf. hebetata	present		
Rhizosolenia imbricata			present
Rhizosolenia setigera	present		
Rhizosolenia setigera f. pungens	present		present
Skeletonema marinoi	common	present	
Thalassiosira	present		
Thalassiosira gravida			present
Akashiwo sanguinea			present
Dinophysis tripos			present
Gymnodiniales	present	common	present
Heterocapsa rotundata			present
Polykrikos schwartzii			present
Pronoctiluca pelagica			present
Protoperidinium		present	
Protoperidinium divergens		present	present
Tripos furca	present	common	
Tripos fusus	present	present	
Tripos lineatus		common	present
Tripos longipes		present	present
Tripos muelleri	present		
Emiliania huxleyi		common	common
Pleurochrysis			present
Prymnesiales	present		
Heterosigma akashiwo	present		
Cryptomonadales	common	common	present
Leucocryptos marina		present	
Telonema subtile	present	present	
Dictyochales			present
Octactis speculum		common	
Pseudochattonella	present		
Pseudopedinella pyriformis		present	
Paulinella ovalis			present
Ciliophora	present	present	common
Laboea strobila	present		
Tintinnidae		present	

Selection of observed species	BY5	BCSIII-10	BY29	BY31	BY38	BY39	BY2
Red=potentially toxic species	2025-10-21	2025-10-21	2025-10-22	2025-10-22	2025-10-23	2025-10-23	2025-10-24
Hose 0-10 m	presence	presence	presence	presence	presence	presence	presence
Ciliophora	present	present	present	present	present	present	present
Actinocyclus octonarius	present	present		present	present		present
Centrales		present	present				
Cerataulina pelagica	present	present					common
Chaetoceros	present						
Chaetoceros convolutus							present
Chaetoceros danicus	present	present	present	present	present		
Coscinodiscus granii			present				
Dactyliosolen fragilissimus	very common	very common					common
Pseudo-nitzschia		present					
Pseudosolenia calcar-avis							present
Skeletonema marinoi		present					present
Cryptomonadales	present		present	present	present	present	present
Aphanizomenon flosaquae			present			common	present
Pseudanabaena			present		present	present	
Snowella				present	present		
Woronichinia			present				
Gymnodiniales	present	present		present	present	present	present
Heterocapsa rotundata	present		present	present	present	present	present
Eutreptiella						present	present
Mesodinium rubrum	present	present	present		present	present	present
Pyramimonas			present				
Ebria tripartita	present						present
Oocystis			present		present		
Binuclearia lauterbornii			present	present			

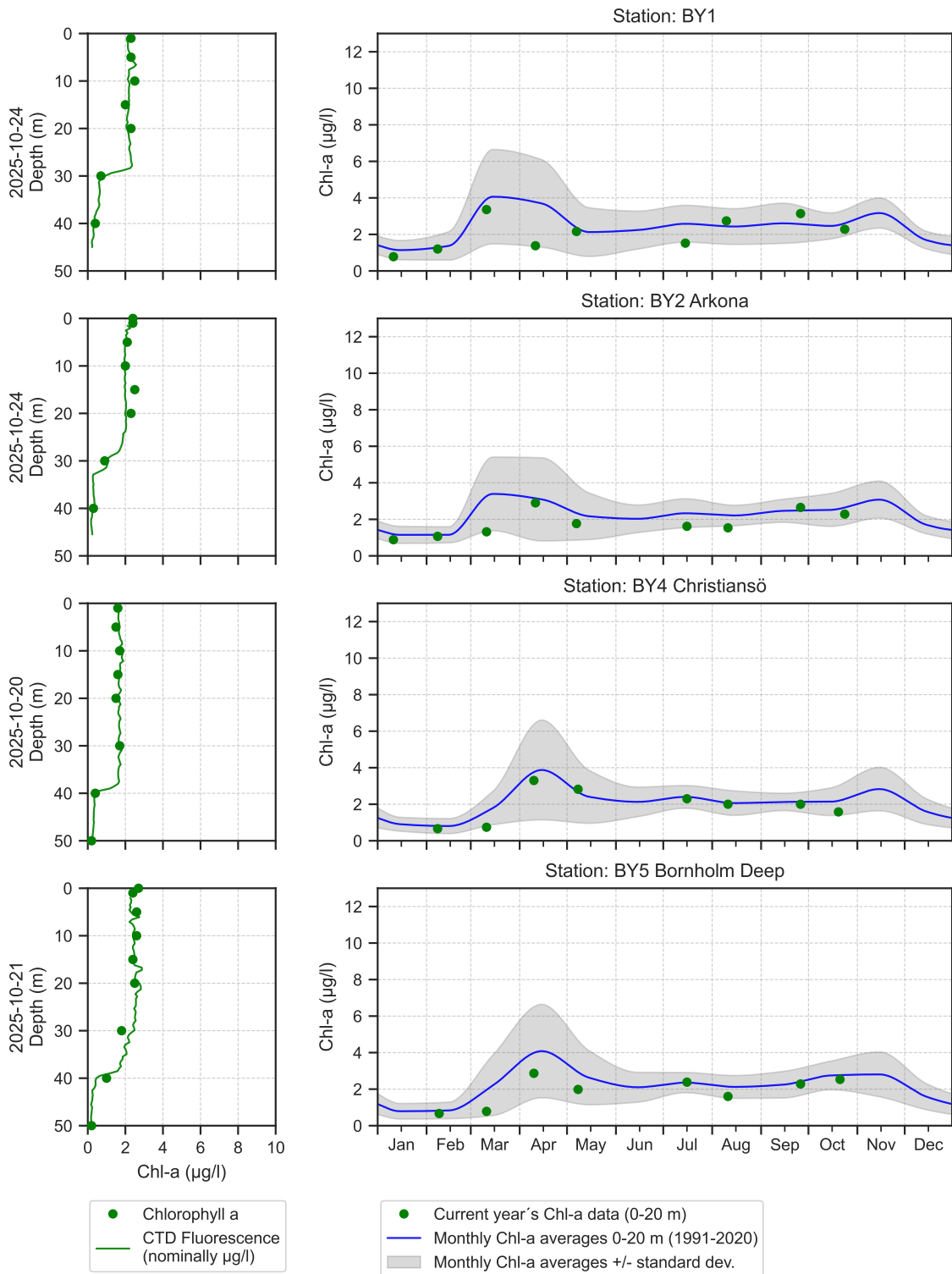
The Skagerrak



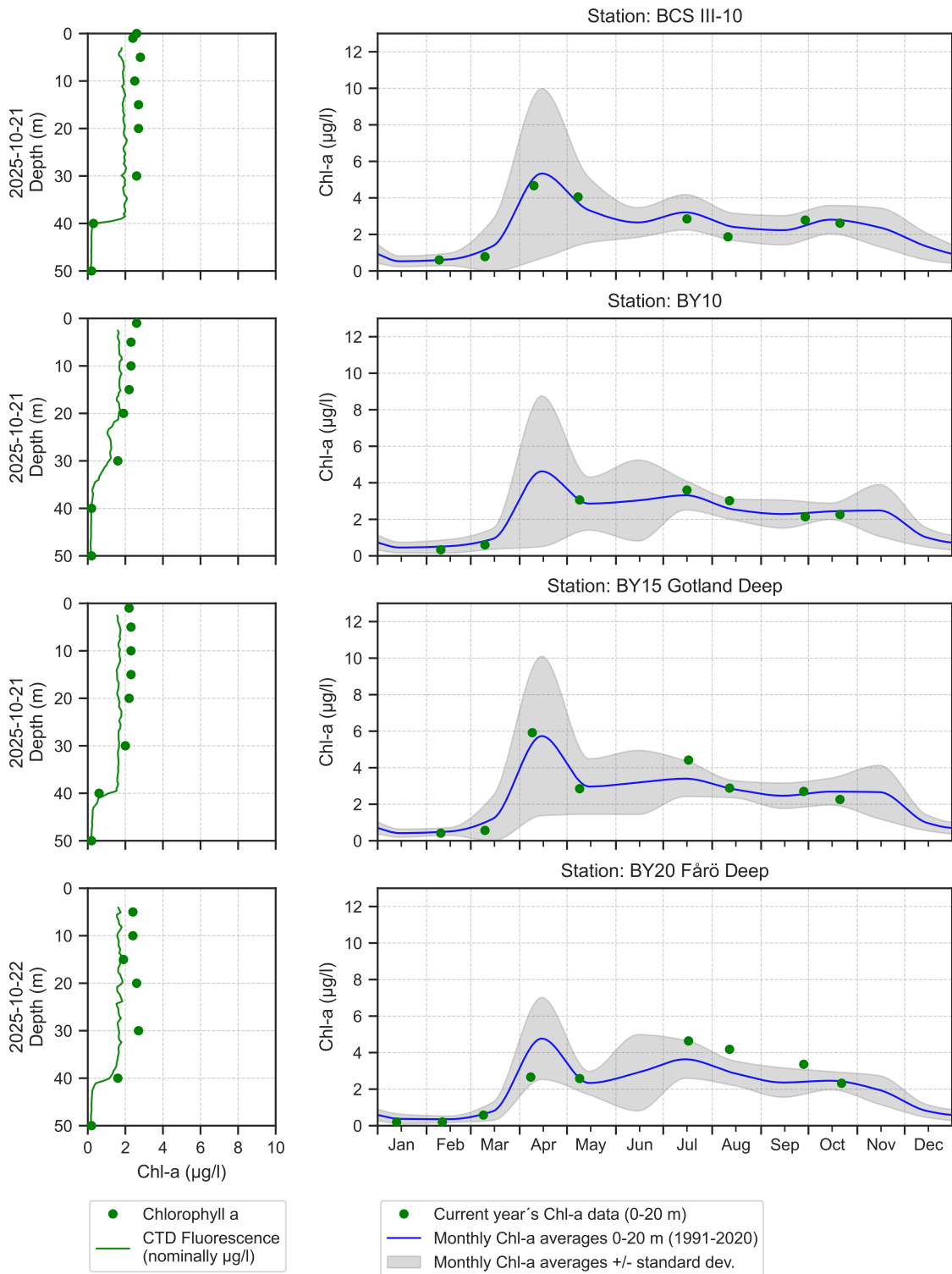
The Kattegat and The Sound



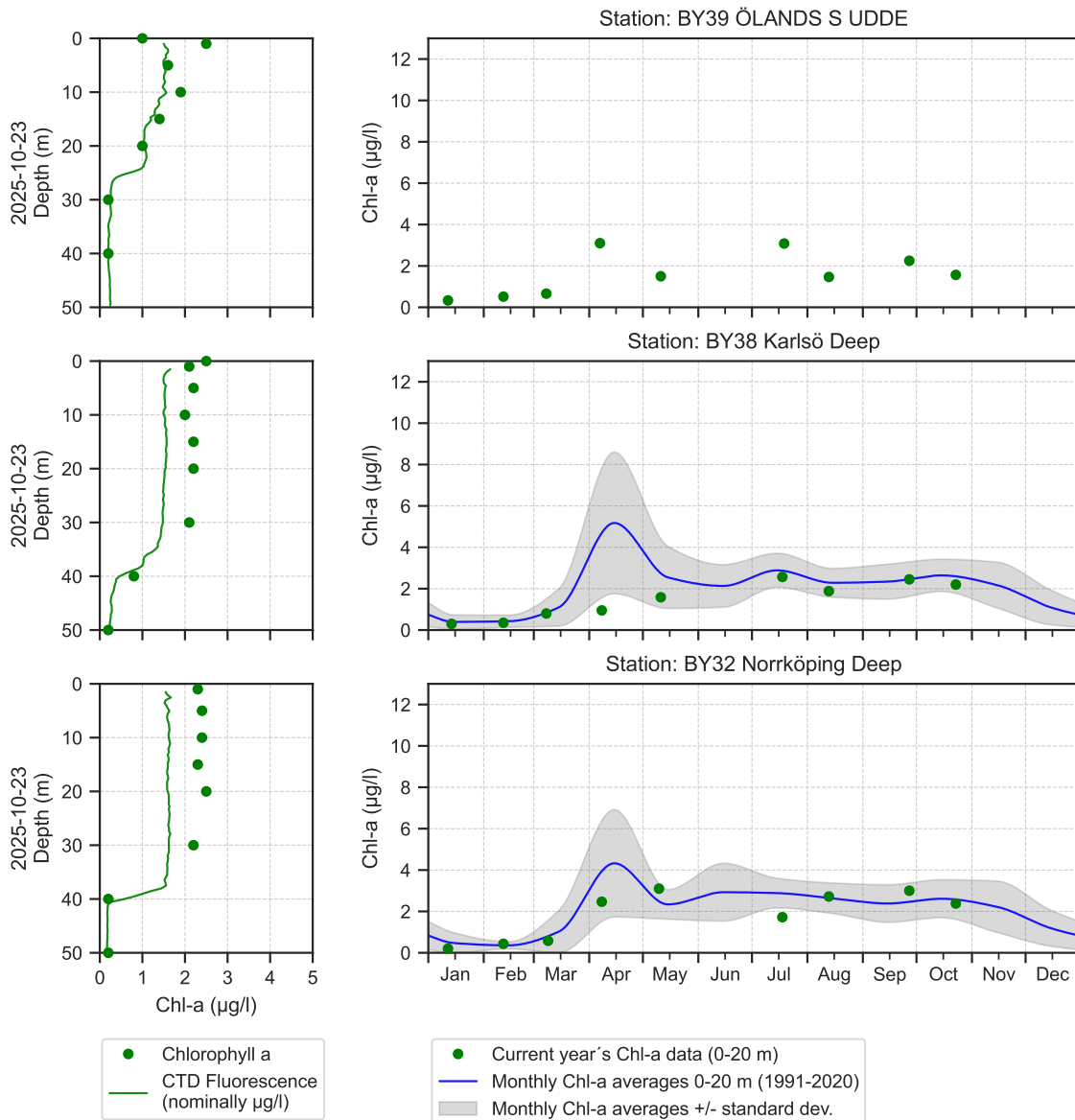
The Southern Baltic



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 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. 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 algbloomningar finns under perioden juni-augusti på www.smhi.se. Resultat från provtagningarna kan hämtas från SMHI:s databas på sharkweb.smhi.se. Hydrografidata läggs ut varje månad, växtplanktondata läggs ut en gång per år.

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. Results from the expeditions are found in the SMHI database, sharkweb.smhi.se. Data are published monthly, phytoplankton data however, are published once a year.

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.

Oversikt 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.

