

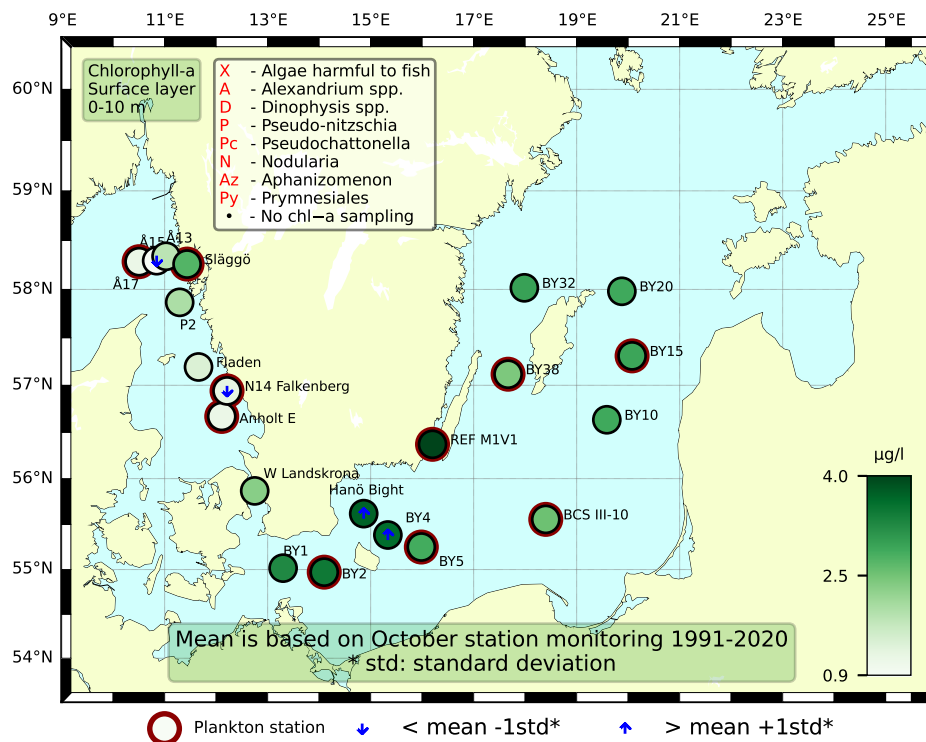
Sammanfattning

Växtp planktondiversiteten var mycket låg, antalet arter var något förhöjt vid Släggö jämfört med övriga Västerhavsstationer, men de totala cellantalen var låga i hela området. Vid Släggö fanns moderata antal av kiselflagellaten *Octactis speculum* och dess nakna form, *Dictyochaetes** som är potentiellt giftig. Ett annat potentiellt giftigt släkte, *Pseudochattonella**, observerades också vid Släggö i mycket låga cellantal.

Även i Östersjön var både cellantal och antalet arter låga. Små mängder av den filamentösa cyanobakterien *Aphanizomenon flosaquae* fanns i sydvästra Östersjön vid BY2 och BY5. I övrigt var det mest små cryptomonader och ciliater samt generellt små arter som observerades.

De integrerade klorofyllhalterna från 0-20 m (diagrammen) var inom det normala för månaden. De från 0-10 m (kartan) var stort sett inom det normala, förutom vid BY4 och Hanöbukten i södra Östersjön där de var över det normala.

På grund av den mycket låga aktiviteten bland växtp plankton denna månad så presenteras ingen mer utförlig text av de enskilda stationerna, bara artlistor och klorofylldiagram.



Abstract

The phytoplankton diversity was very low. The number of species at Släggö was somewhat enhanced compared to the other Skagerrak and Kattegat stations, but the total cell numbers were low in the entire area. At Släggö, moderate cell numbers of the silicate flagellate *Octactis speculum* and its naked form, *Dictyochaetes** were found. *Dictyochaetes** are potentially toxic. Another toxic genus, *Pseudochattonella**, was also observed at Släggö in very low cell numbers.

The number of species and total cell numbers were low in the Baltic area as well. Low amounts of the filamentous cyanobacterium *Aphanizomenon flosaquae* were found in the southeastern parts at BY2 and BY5. Mainly small species were observed.

The integrated chlorophyll concentrations from 0-20 m (diagrams) were normal for this month. Those integrated from 0-10 m (map) were mostly normal, only BY4 and Hanö Bight were above normal for this month.

Due to the very low phytoplankton activity this month, no further text is presented from the individual stations in this report, only species lists and chlorophyll diagrams.

Dictyocha fibula, *Octactis speculum* and Dictyochales

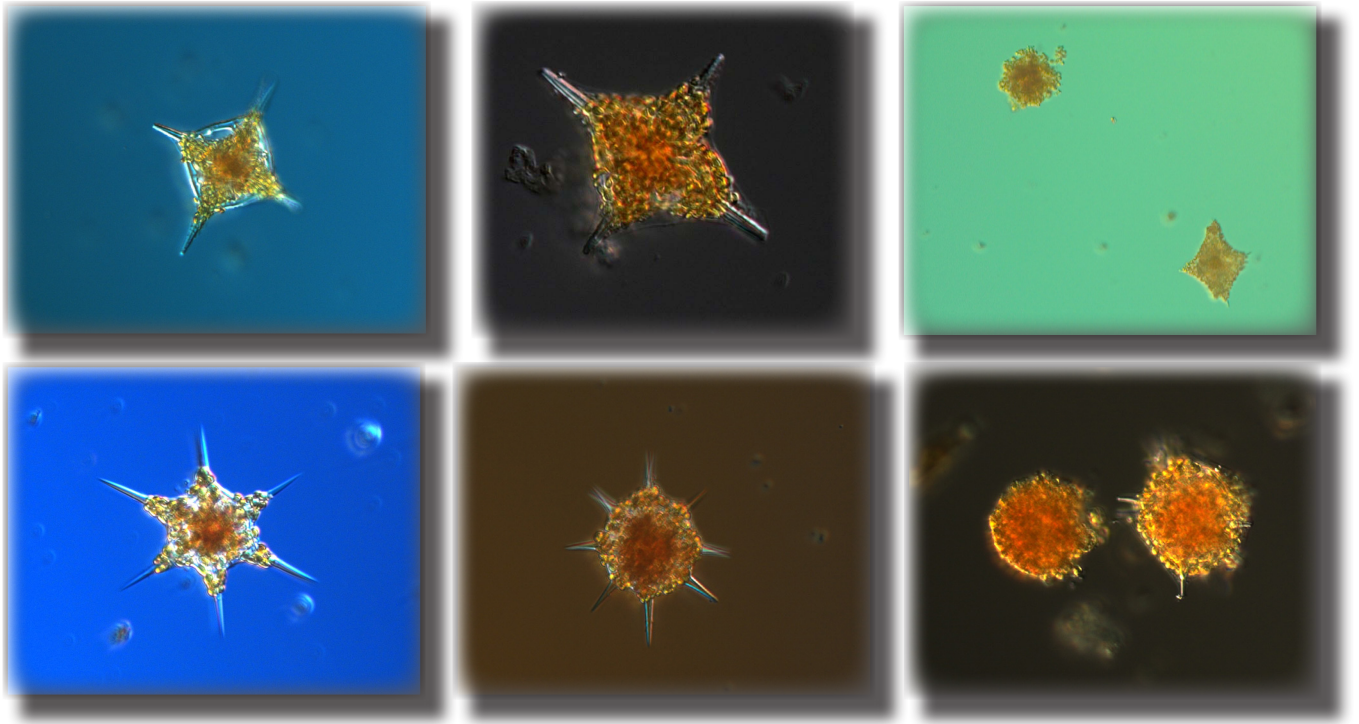
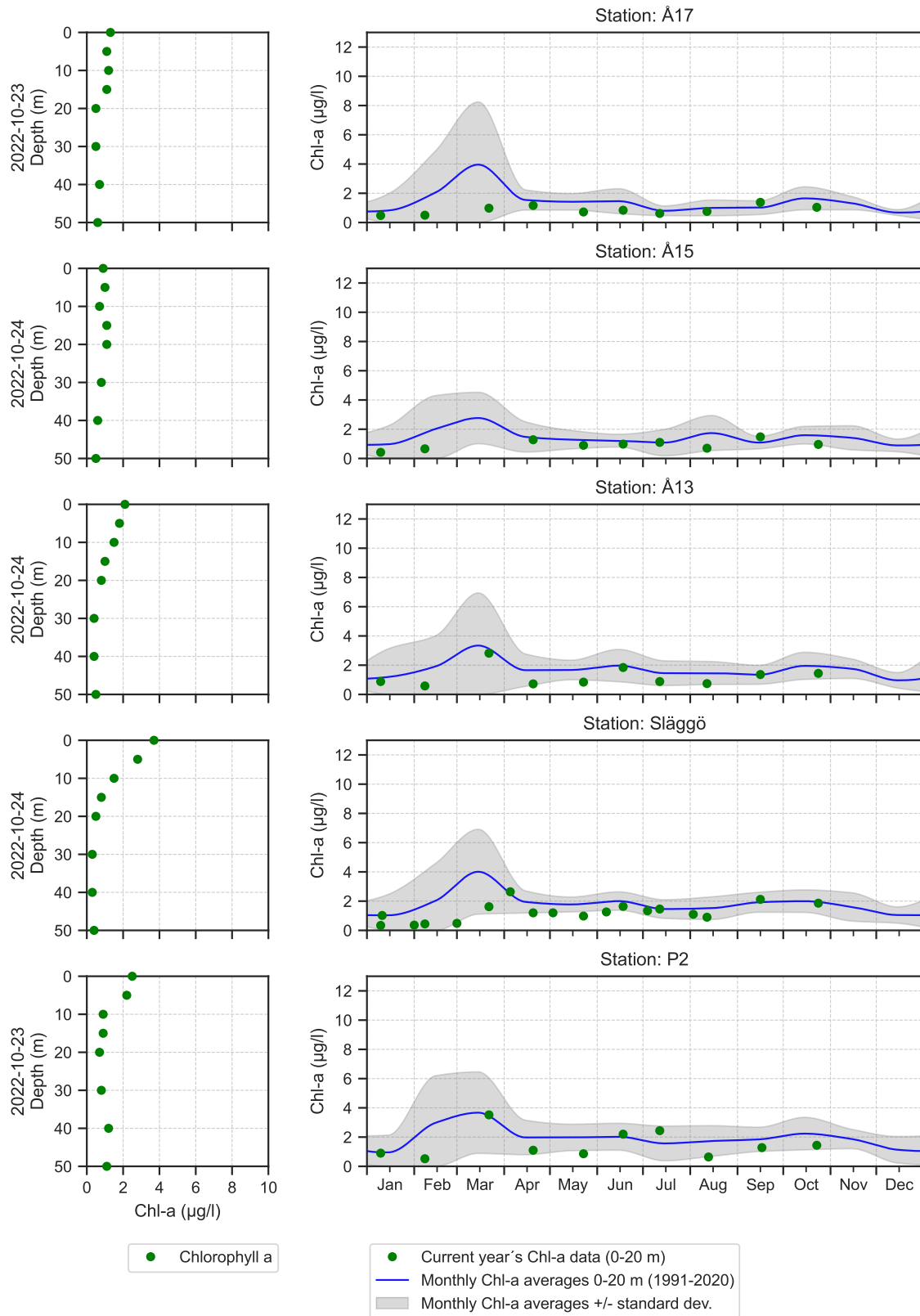


Photo 1: The silicate flagellates *Dictyocha fibula* (upper images) and *Octactis speculum* (lower images) both have a naked stage in which they are potentially toxic. It is impossible to differentiate the species in the light microscope when in the naked stage, which is why they in this stage are called by their common higher taxonomic level, Dictyochales. Photos: A-T Skjevik.

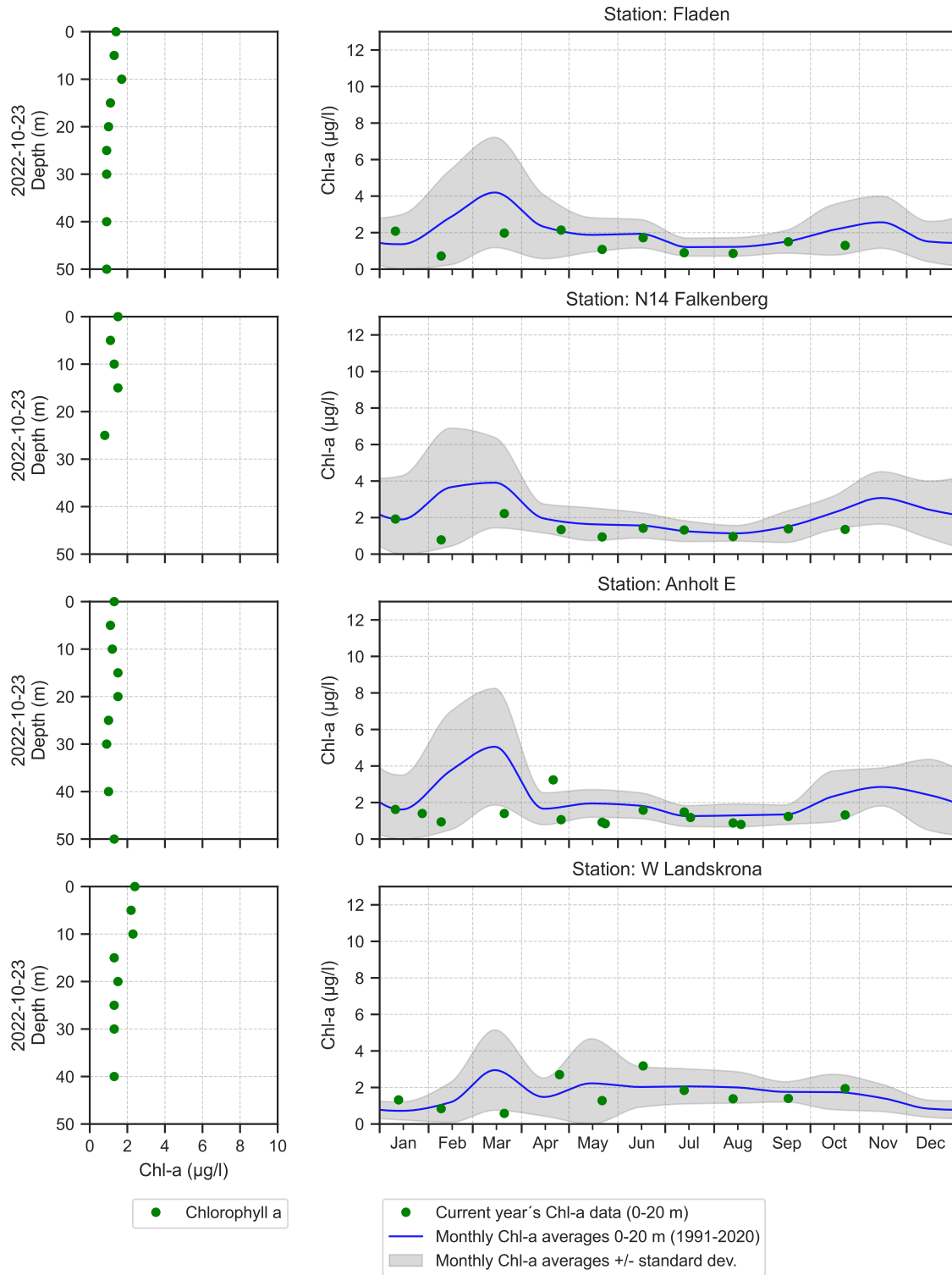
Selection of observed species	Anholt E	N14	Släggö	Å17
Red=potentially toxic species	23/10	23/10	24/10	23/10
Hose 0-10 m	presence	presence	presence	presence
Centrales			present	
Cerataulina pelagica	present	present	present	present
Chaetoceros danicus			present	present
Chaetoceros subtilis			present	
Dactyliosolen fragilissimus	present	present	present	
Guinardia flaccida	present	present	present	
Leptocylindrus danicus		present	present	present
Leptocylindrus minimus			present	present
Nitzschia longissima			present	
Pseudo-nitzschia	present	present	present	present
Pseudosolenia calcar-avis	common	common	present	
Rhizosolenia setigera f. pungens		present	present	
Skeletonema marinoi			present	
Thalassionema nitzschioides			present	
Thalassiosira angulata			present	
Dinophysis acuminata			present	
Dinophysis acuta	present		present	present
Dinophysis norvegica			present	
Gymnodinium verruculosum	present			present
Gyrodinium flagellare		present	present	present
Katodinium glaucum			present	
Phalacroma rotundatum	present			
Polykrikos schwartzii	present	present		
Prorocentrum micans			present	
Protoperidinium			present	
Protoperidinium steinii				present
Scrippsiella		present		
Torodinium robustum			present	
Triplos furca			common	present
Triplos fusus	present	present	present	
Triplos lineatus		present	present	
Triplos longipes			present	
Triplos macroceros				present
Triplos muelleri	present	present	present	present
Acanthoica quattrosipina			present	
Emiliania huxleyi	common	common	present	common
Dictyocha fibula			present	
Dictyochaetes	present	common	common	
Octactis speculum	present	present	common	present
Pseudochattonella			present	
Pseudopedinella		present	present	present
Pseudopedinella pyriformis			present	
Cryptomonadales	present	common	common	present
Leucocryptos marina			present	
Calliacantha natans		present		
Choanoflagellata		present		present
Ciliophora		present	present	present
Laboea strobila	present	present	present	
Mesodinium rubrum			present	
Strombidium			present	

Selection of observed species	BCSIII10	BY15	BY2	BY38	BY5	REFM1V1
Red=potentially toxic species	21/10	20/10	22/10	19/10	21/10	19/10
Hose 0-10 m	presence	presence	presence	presence	presence	presence
Centrales		present	present	common	present	present
Chaetoceros castracanei	present	present	present			
Chaetoceros convolutus			present			
Chaetoceros danicus	present	present	present		present	common
Chaetoceros decipiens						present
Cyclotella		present				present
Dactyliosolen fragilissimus	present		common		present	
Leptocylindrus minimus	present					
Skeletonema marinoi			present		present	present
<i>Dinophysis acuminata</i>						present
<i>Dinophysis norvegica</i>		present				
Gymnodinium verruculosum	present	present	common	present	present	
Heterocapsa	present	present	present		present	present
Heterocapsa rotundata	present		present	present	present	present
Eutreptiella			present	present	present	present
Pseudopedinella		present	present			present
Pseudopedinella pyriformis			present			
Binuclearia lauterbornii		present	present		present	
Aphanizomenon			common		present	
Aphanothece paralleliformis				present		
Cyanodictyon		present				
Pseudanabaena			present		present	present
Snowella		present				
Monoraphidium		present		present		
Cryptomonadales	common	common	common	common	common	common
Leucocryptos marina				present	present	present
Oocystis		present		present		
Pyramimonas	present		present		present	
<i>Prymnesiales</i>		present	present			
Calliacantha natans		present	present		present	
Choanoflagellata				present		present
Ebria tripartita	present	present			present	present
Ciliophora	common	present	common	common	present	present
Helicostomella subulata		present		present	present	
Mesodinium rubrum	present	present	present	present	present	present
Strombidium			present	present		

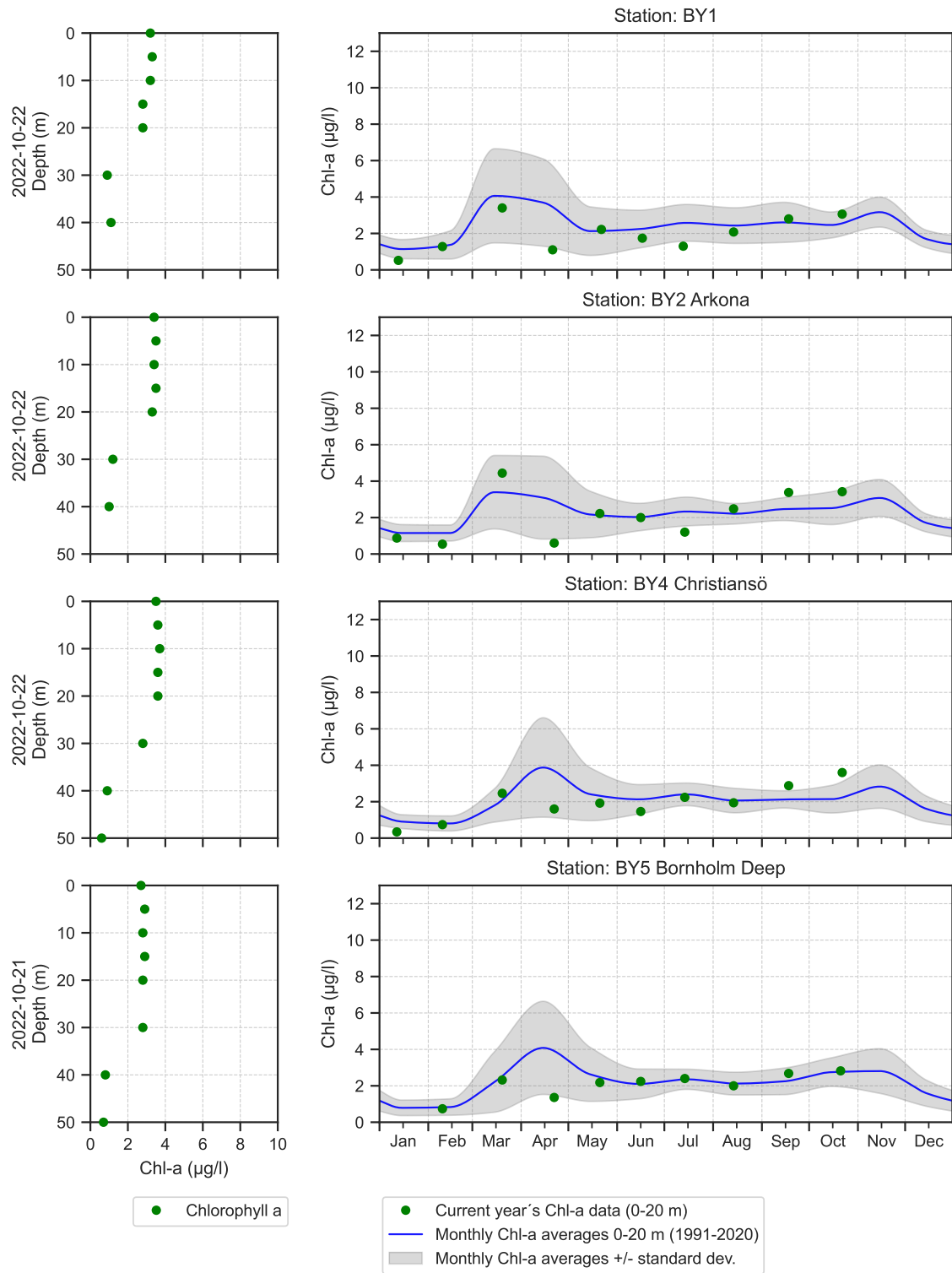
The Skagerrak



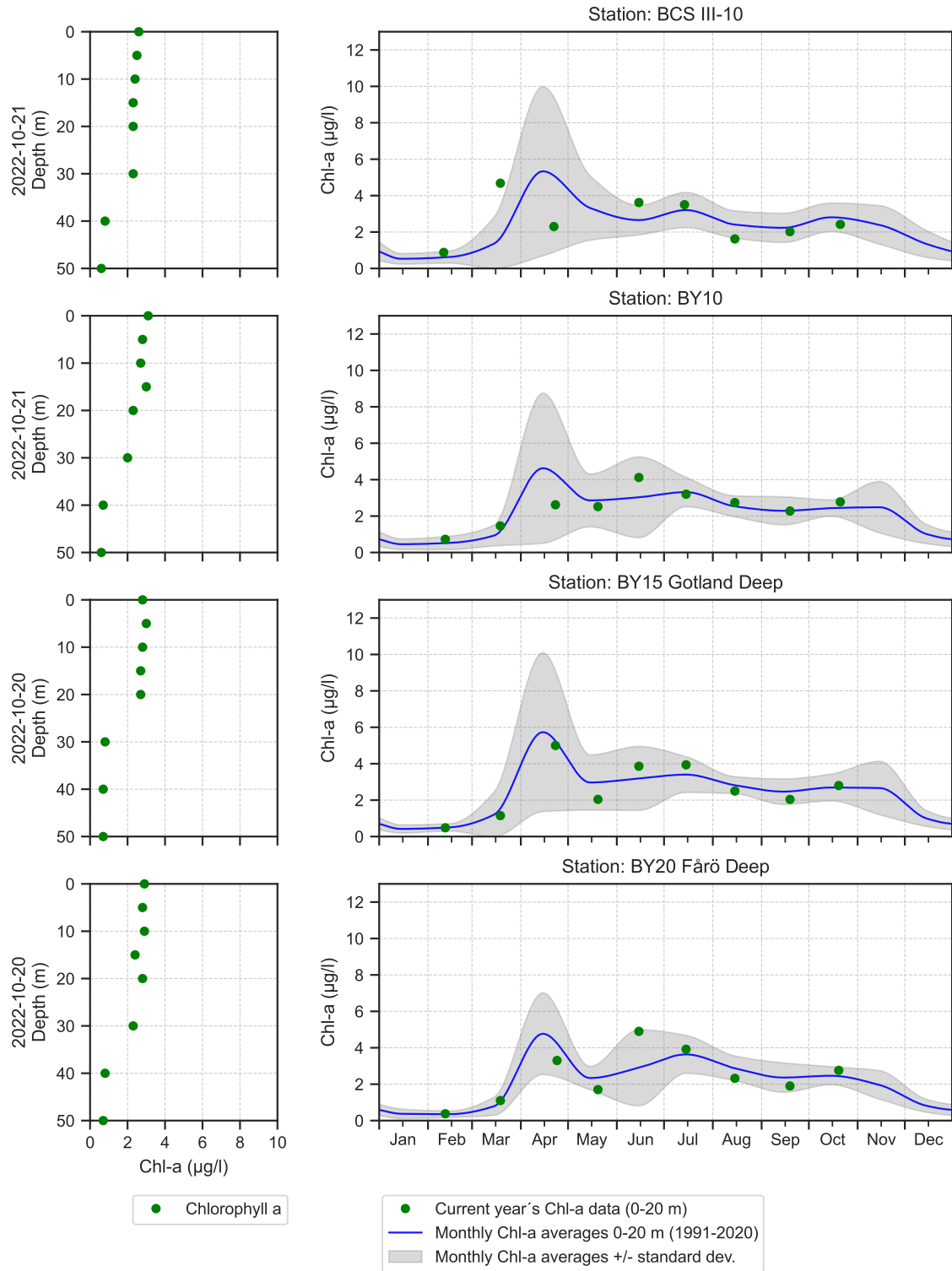
The Kattegat and The Sound



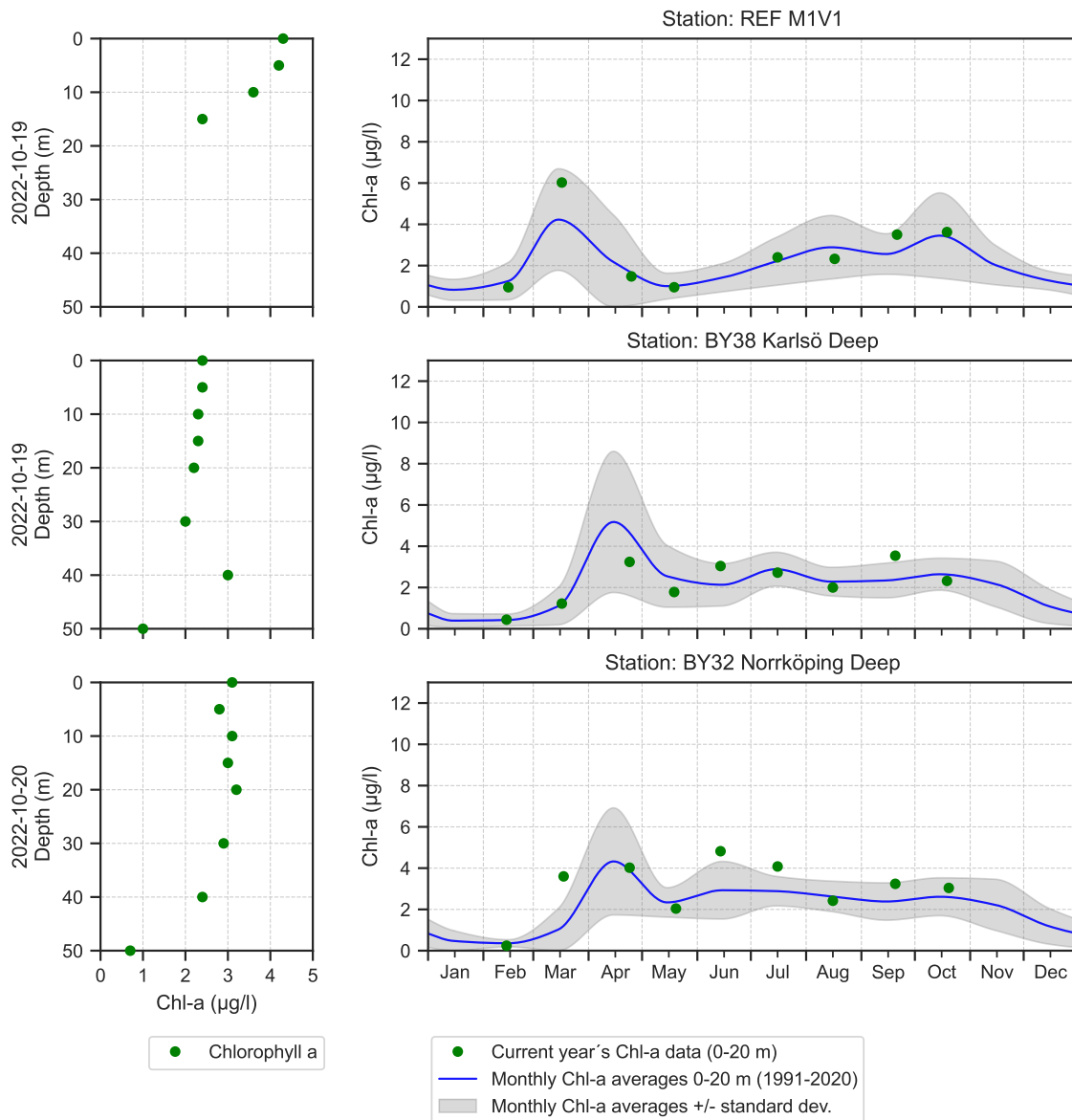
The Southern Baltic



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. 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, magkramper 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.

