SMHI
Oceanographic Unit
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AlgAware
ALGAL SITUATION IN MARINE WATERS SURROUNDING SWEDEN

Sammanfattning

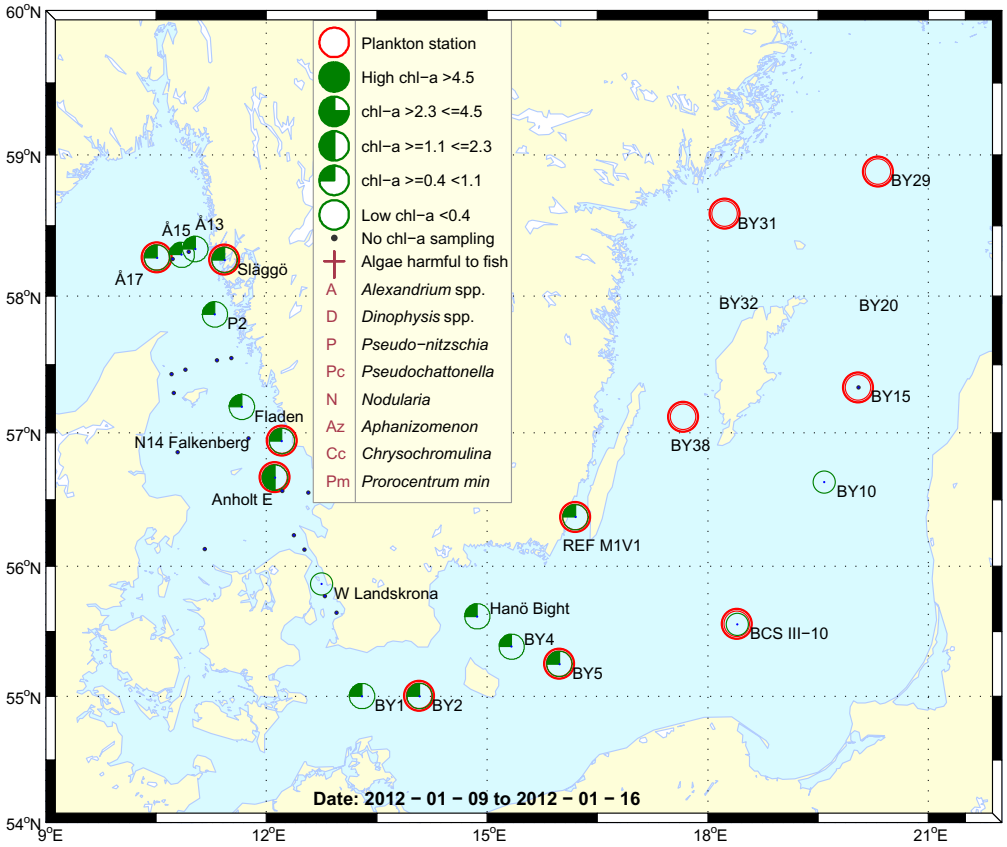
Ett omfattande vinterlugn håller sitt grepp om växtplanktonsamhällena i alla provtagningsområdena i Västerhavet och i Östersjön.

Rester av en *Ceratium*-blomning fanns vid Skagerraks kust (Släggö) och i Kattegatt. I övrigt var arterna få och cellantalen låga.

I Östersjön var cryptomonader vanliga, men annars fanns inget att rapportera.

De integrerade (0-20 m) klorofyll *a* värdena var låga, men normala för månaden i alla provtagningsområden.

Rapporten är en förkortad version på grund av brist på händelser i växtplanktonvärlden.



Abstract

Winter calm are the key words summarizing the phytoplankton situation throughout the sampling areas in the Western Sea and in the Baltic in January.

Fragments from a *Ceratium* bloom was found at the Skagerrak coast (Släggö) and in the Kattegat. The diversity was very low.

Cryptomonads were common in the Baltic Sea, besides this there was nothing to report.

The integrated (0-20 m) chlorophyll *a* concentrations were low, but within normal for this month in all sampling areas.

This report is a shortened version because of lack of events in the phytoplankton world.

More detailed information on species composition and abundance

The abstract, the data lists and the chlorophyll diagrams cover the phytoplankton situation this time.

The phytoplankton have taken their shoes off and gone to rest before the busy spring comes.

Phytoplankton analysis and text by:
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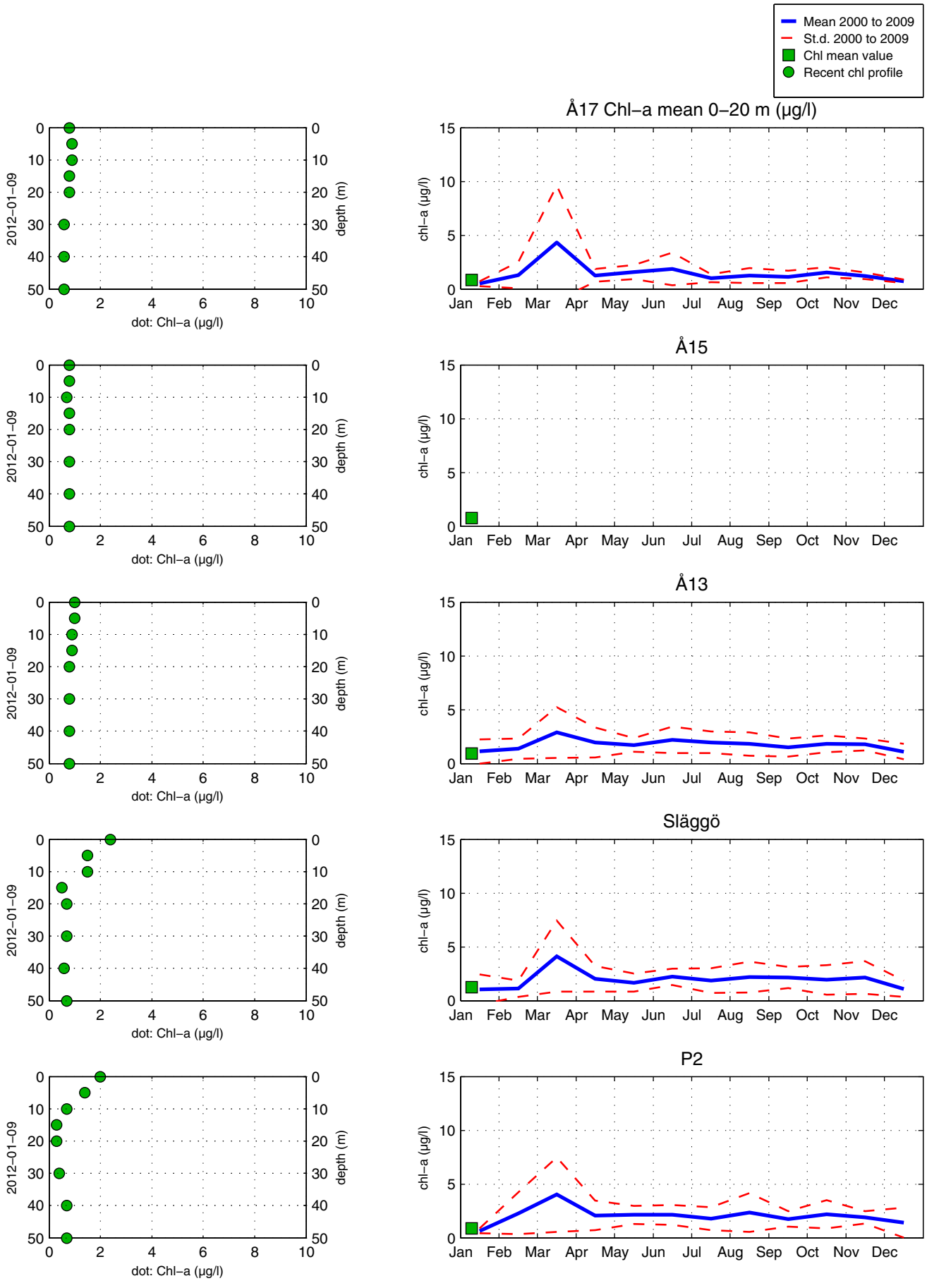
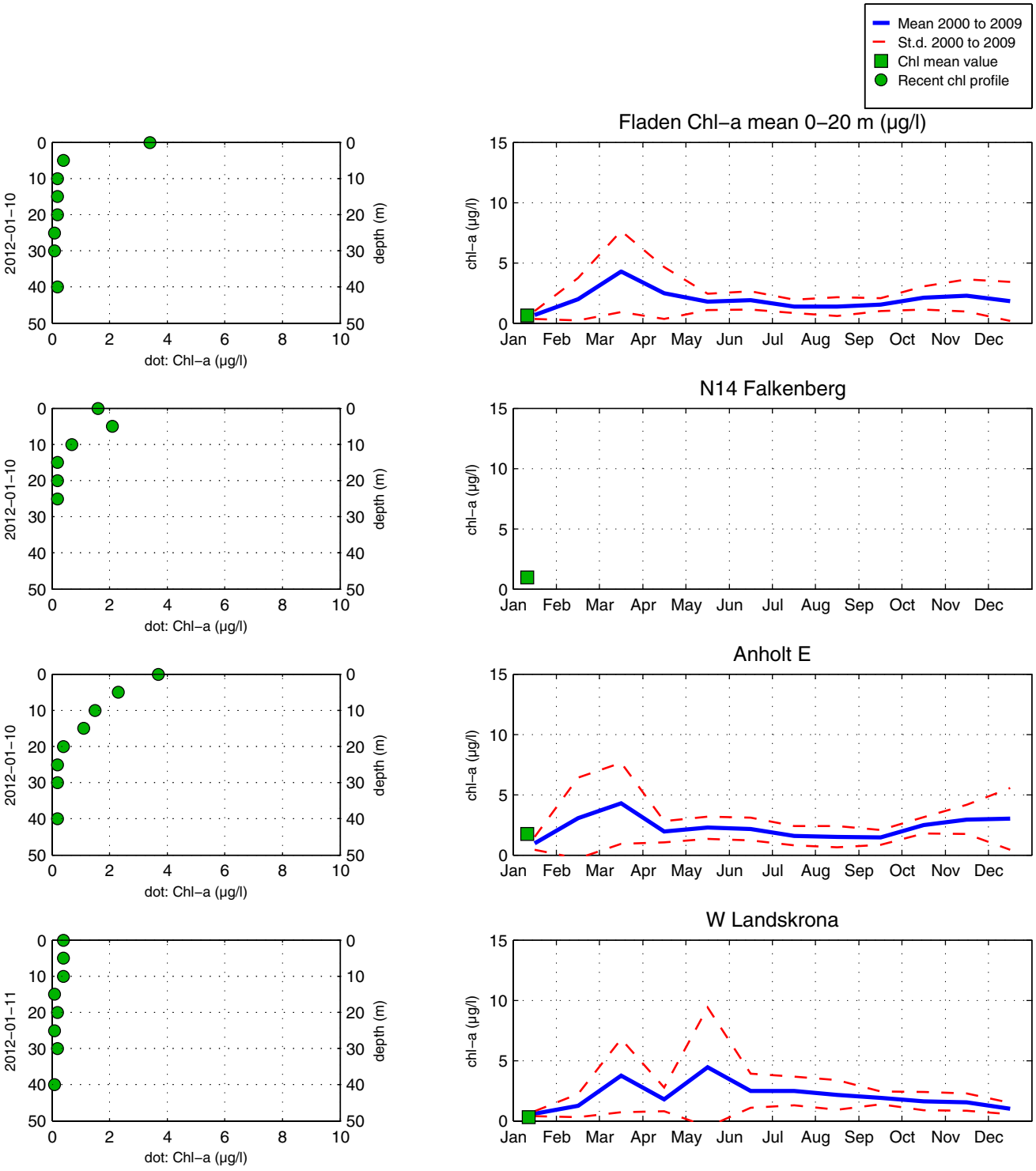
Selection of observed species	Å17	Släggö	N14	Anholt E
Red=potentially toxic species	9/1	9/1	10/1	10/1
	cells/l	cells/l	cells/l	cells/l
Chaetoceros danicus	present			
Chaetoceros subtilis		present	present	
Chaetoceros spp.		present		present
Cylindrotheca closterium	present			present
Ditylum brightwellii				present
Nitzschia longissima		present		present
Pseudo-nizschia spp.	present			
Rhizosolenia imbricata	present			
Skeletonema marinoi		present	present	present
Thalassiosira angulata		present		
Akashiwo sanguinea			present	
cf. Azadinium sp.		present		
Ceratium furca		present		present
Ceratium fusus		present		
Ceratium lineatum	present	very common	very common	15 000
Ceratium longipes				present
Ceratium tripos		very common	common	very common
Dinophysis acuminata			present	
Dinophysis norvegica		present		
Gymnodiniales	present	common	present	present
Gymnodinium verruculosum		present		
Gyrodinium flagellare	present	present		present
Gyrodinium spirale			present	
Heterocapsa rotundata			present	present
Heterocapsa sp.		present	present	
Katodinium glaucum		present		
Lingulodinium polyedrum			present	
Peridiniales	present	present		
Peridiniella danica		present		
Protoperidinium spp.				present
Dichtyocha speculum	present		present	present
Cryptomonadales spp.	common	120 000	105 000	120 000
Pyramimonas spp.	present	present	present	
Telonema subtile		present	present	
Leucocryptos marina	present	present	present	present
Choanoflagellidea		present		
Ciliophora	present	present	present	present
Mesodinium rubrum		present		

Selection of observed species	**BY2**	**BY5**	**BCS III-10**	**BY15**	**Ref. M1-V1**
Red=potentially toxic species	**11/1**	**11/1**	**12/1**	**13/1**	**14/1**
	cells/l	**cells/l**	**cells/l**	**cells/l**	**cells/l**
Centrales spp.		present			present
Chaetoceros spp.					present
Coscinodiscus granii		present			
Skeletonema marinoi		present			present
Amphidinium sphenoides				present	
Dinophysis acuminata				present	
Gymnodiniales	present	present	present	present	
Heterocapsa spp.					present
Katodinium glaucum			present		
Peridiniales		present			
Peridiniella catenata					present
Protoperidinium spp.			present		
Cryptomonadales spp.	very common	common	common	present	common
Chrysochromulina spp.	present				
Cyanobacteria colony forming	present	common	common	common	present
Aphanizomenon spp.			present	present	
Planctonema lauterbornii	present				
Pyramimonas spp.	present				
Eutreptiella spp.	present				
Choanoflagellidea	present		present	present	
Leucocryptus marina	present		present	present	
Telonema subtile	present	present			
Ciliophora	present		present	present	present
Mesodinium rubrum	present	present	present	present	present

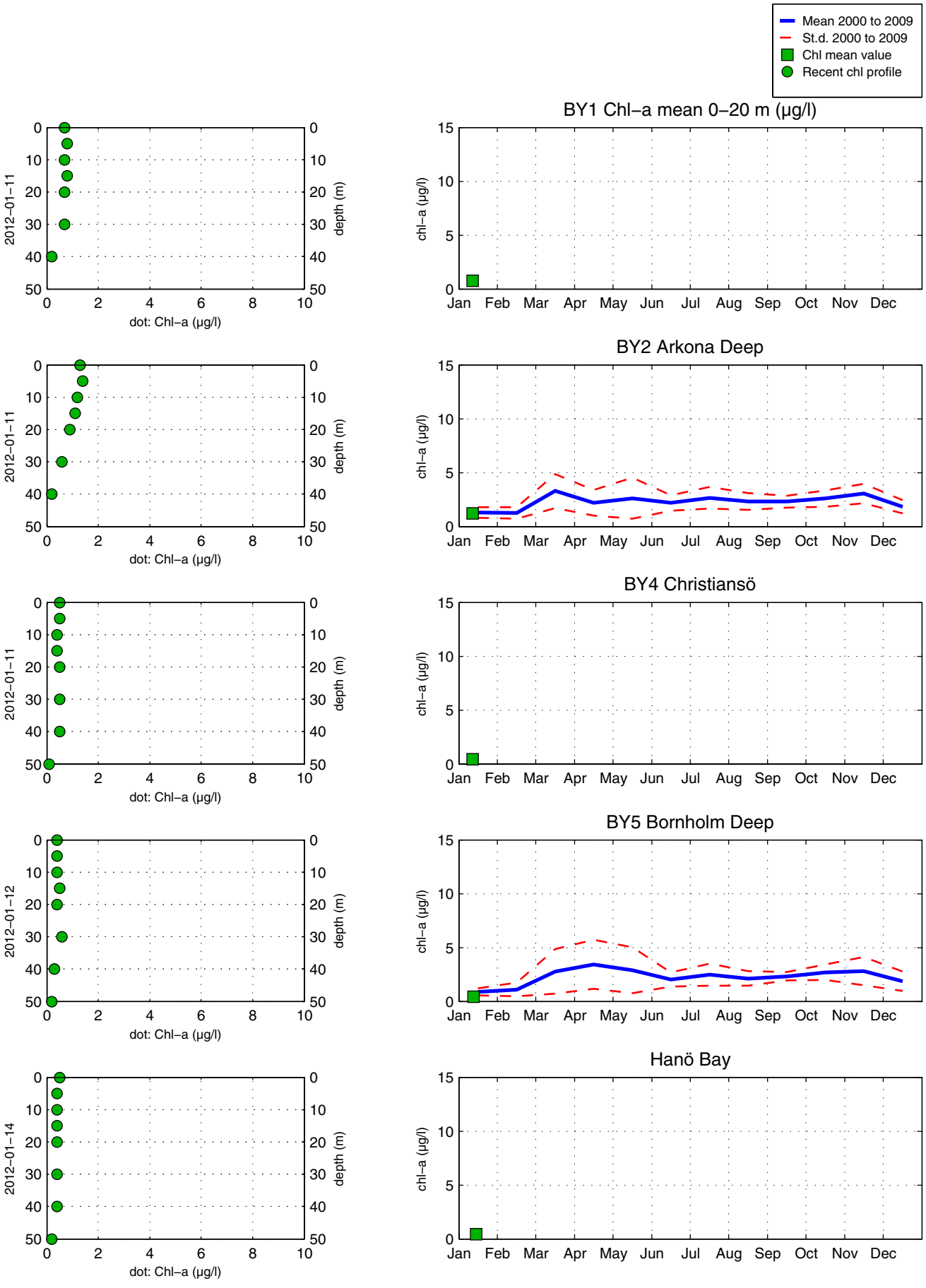
The Skagerrak



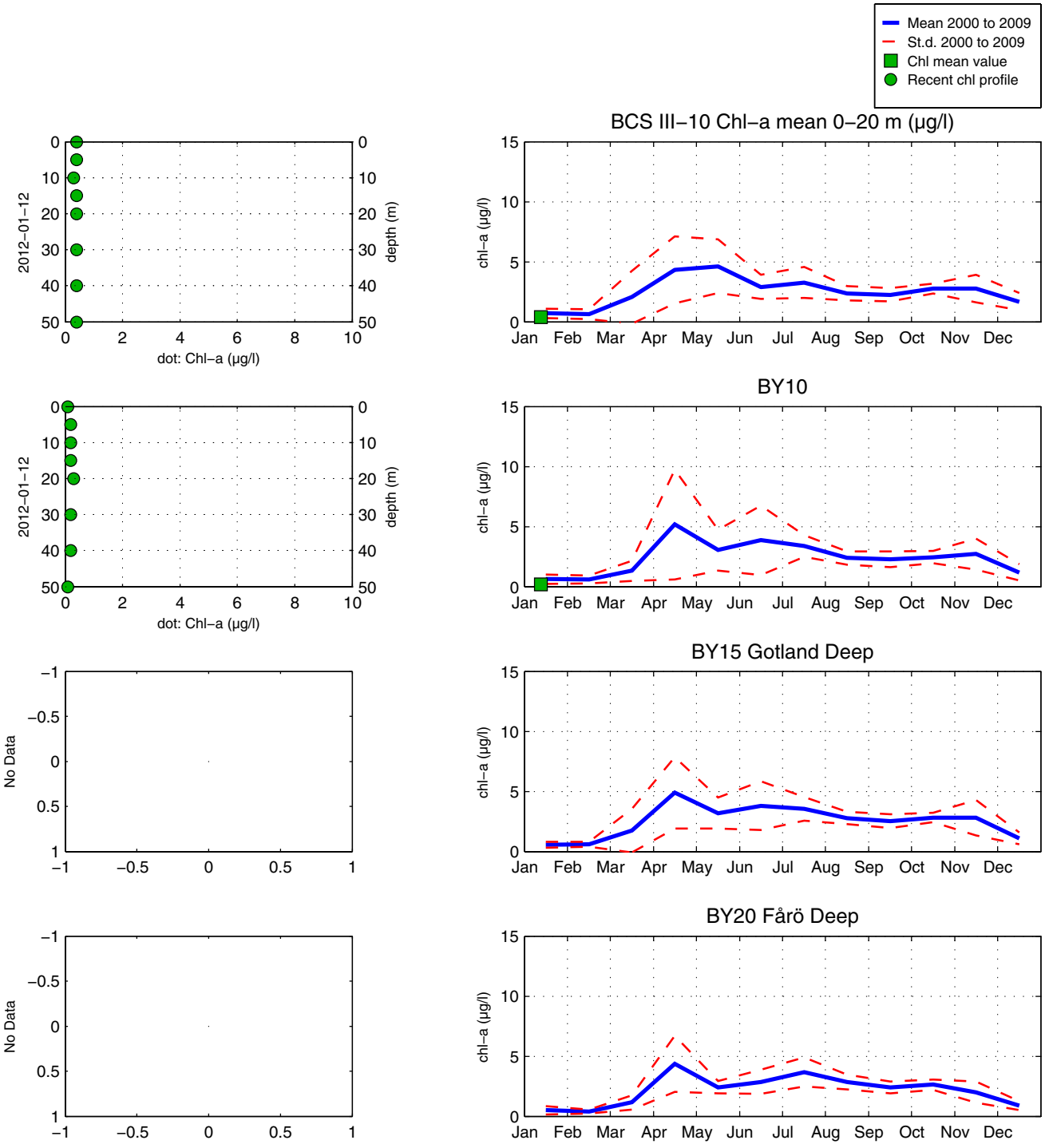
The Kattegat and the Sound



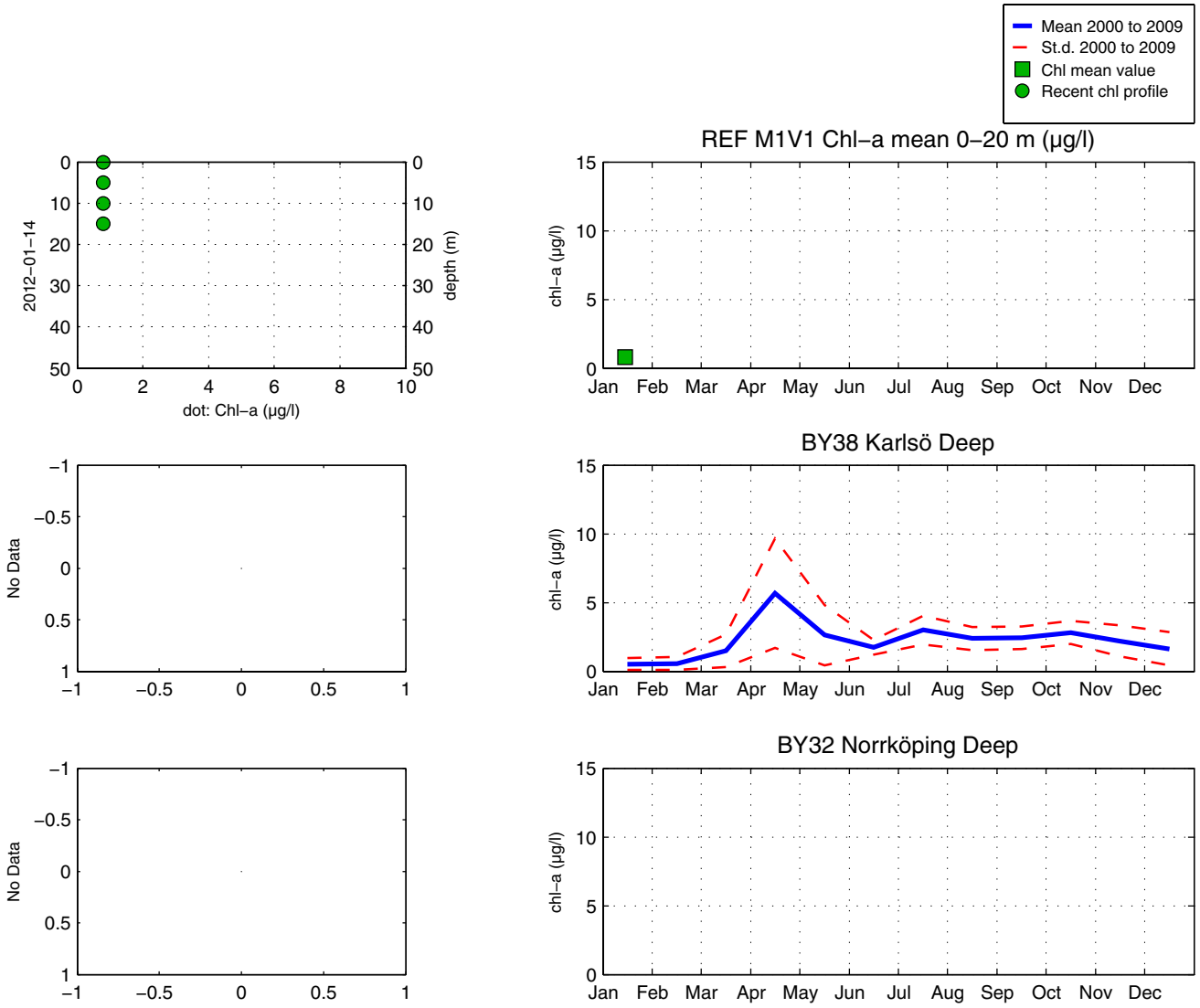
The Southern Baltic



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. Tekniska problem med fluorescensmätaren har orsakat den senare tidens brist på data, dessa data läggs till i diagrammen igen så fort det är åtgärdat.

Oförsedda omständigheter under januariprovtagningen gjorde så att ett fåtal stationer i Östersjön fick strykas under expeditionen i januari, därför saknas också klorofylldata från dessa.

About the chlorophyll graphs

Chlorophyll *a* is sampled from several depths. Data is 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 layes of phytoplankton occuring below the surface. Due to technical problems with the fluorescence measuring device, data have not been available lately. These data will be added to the diagrams as soon as the problems are solved.

Due to unforeseen circumstances during the January expedition, some stations in the Baltic were not sampled, why chlorophyll data are missing.

Om AlgAware

SMHI genomför ca en gång per månad expeditioner i Östersjön och Västerhavet. Resultat baserade på semikvantitativ mikroskopanalys av planktonprover samt klorofyllmätningar presenteras kortfattat i denna rapport. Information från SMHI:s satellitövervakning av algblomningar finns 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 SMHI:s satellite monitoring of algal blooms is found on www.smhi.se.

Art / Species	Gift / Toxin	Eventuella symptom	Clinical symptoms
Alexandrium 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; headake, dizziness, nausea, vomiting, diarrhoea. **Extreme case** Muscular paralysis; pronounced respiratory difficulty; choking sensation; death trough respiratory paralysis may occur within 2-24 hours after ingestion.
Dinophysis spp.	Diarrehetic 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.
Pseudo- niztschia spp.	Amnesic shellfish poisoning (ASP)	**Milda symptom:** Efter 3-5 timmar: yrsel, illamående, kräkningar, diarré, magkramper **Extrema symptom:** Yrsel, hallucinationationer, 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.
Chaetoceros concavicornis/ C.convolutus	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.
Pseudochattonella 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. Då cirkeln är tom innebär detta att stationen inte provtagits.

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 An empty cirkel indicates that there has been no sampling at that station.