

The Swedish West coast and the southern Baltic Sea

The AlgAware report No 6 is divided in PART 1 and PART 2 because the expedition in June was divided in two cruises. This report present phytoplankton analyses from the southern Baltic Sea and the Swedish West coast.

The Skagerrak

Å17 (open Skagerrak) 26th of June

The species diversity was low. Small flagellates of different sorts were most common such as cells belonging to prymnesiophyceae. The Coccolithophore *Emiliana huxleyi* was also found in small amounts.

Släggö (Skagerrak coast) 26th of June

The species diversity was quite high at this station. Mainly small cells were found in the sample. The dominating group was diatoms where for exemple *Chaetoceros socialis* was found in high cell numbers. Small flagellates belonging to the cryptomonadales were also common.

The Kattegat

N14 Falkenberg and Anholt E 27th of June and Anholt E 29th of june

The diatom *Dactyliosolen fragilissimus* dominated at both stations with over 200 000 cells per litre. Some cells of the diatom *Skeletonema marinoi* was also found at both stations but in lower cell numbers.

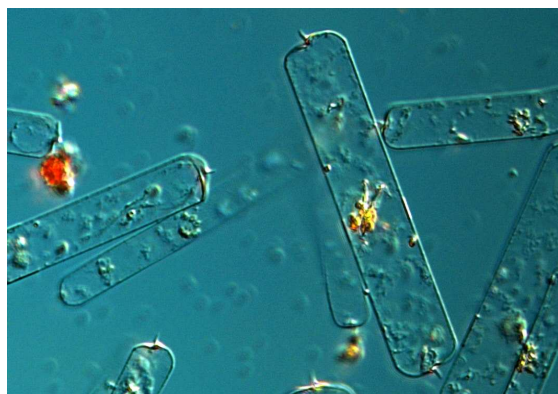


Fig.1. The diatom *Dactyliosolen fragilissimus* was common in the Kattegat. This species is commonly found along the Swedish west coast during summer.

The Southern Baltic Sea

BY2 Arkona and BY5 28th of June

Quite high cell numbers of larger species were found in the southern part of the Baltic Sea. Small amounts of the filamentous cyanobacteria *Aphanizomenon flos-aquae* were found at both stations. The diatoms *Chaetoceros impressus* and *C. danicus* were also common. Small colony forming cyanobacteria of different genus was also found in quite high cell numbers.



Fig.2. Small amounts of the filamentous cyanobacteria *Aphanizomenon flos-aquae* were found in the southern part of the Baltic Sea.

Analyses, text and layout
Marie Johansen

Selection of observed species	Å17	Släggö	N14	Anholt E	Anholt E
Red=potentially toxic species	2013-06-26	2013-06-26	2013-06-27	2013-06-27	2013-06-29
Hose 0-10 m	cells/l	cells/l	cells/l	cells/l	cells/l
<i>Cylindrotheca closterium</i>	present				
<i>Pseudo-nitzschia</i> spp		present			
<i>Thalassionema nitzschioides</i>				present	present
<i>Dactyliosolen fragilissimus</i>		present	very common	very common	very common
<i>Guinardia delicatula</i>	present	present	present	present	present
<i>Guinardia flaccida</i>	present	present		present	
<i>Leptocylindrus danicus</i>	present	present	present		
<i>Leptocylindrus minimus</i>		present			
<i>Proboscia alata</i>	present	present			
<i>Rhizosolenia imbricata</i>		present			
<i>Skeletonema marinoi</i>		present	present	common	present
<i>Cerataulina pelagica</i>		present			
<i>Chaetoceros</i> spp				present	
<i>Chaetoceros contortus</i>				present	
<i>Chaetoceros danicus</i>			present	present	
<i>Chaetoceros debilis</i>				present	
<i>Chaetoceros socialis</i>		common			
<i>Ceratium lineatum</i>		present			
<i>Ceratium longipes</i>		present			
<i>Ceratium macroceros</i>		present			
<i>Ceratium tripos</i>	present	present	present	present	present
<i>Cladopyxis claytonii</i>	present				
<i>Dinophysis acuminata</i>		present			
<i>Dinophysis norvegica</i>		present			
<i>Dinophysis rotundata</i>		present			
Gymnodiniales	present	present	present		present
<i>Karenia mikimotoi</i>			present		
<i>Katodinium glaucum</i>		present		present	
Peridinales				present	present
<i>Protoperidinium</i> spp		present			
<i>Protoperidinium bipes</i>		present			
<i>Protoperidinium conicum</i>					present
<i>Protoperidinium depressum</i>		present			
<i>Scrippsiella</i> CPX	present				
<i>Dinobryon faculiferum</i>					present
Prymnesiales	common	common	common	common	common
<i>Emiliana huxleyi</i>	present				
Craspedophyceae		present			
Chlorodendrales		present			
<i>Pyramimonas</i> spp		common			present
Cryptomonadales		common	present		
<i>Leucocryptos marina</i>			present	present	present
<i>Plagioselmis prolonga</i>		common	present	common	common
<i>Teleaulax</i> spp	present	common			
<i>Telonema subtile</i>				present	present
<i>Mesodinium rubrum</i>		present	present		
Ciliophora	present	present	present	present	present

Selection of observed species	BY2	BY5
Red=potentially toxic species	2013-06-28	2013-06-28
Hose 0-10 m	cells/l	cells/l
<i>Thalassiosira</i> spp	present	
<i>Chaetoceros danicus</i>	present	present
<i>Chaetoceros impressus</i>	common	common
<i>Dinophysis norvegica</i>		present
<i>Gymnodiniales</i>	present	present
<i>Heterocapsa rotundata</i>	present	present
<i>Peridinales</i>		present
<i>Oocystis</i> spp		present
<i>Cryptomonadales</i>	present	
<i>Plagioselmis prolunga</i>	common	common
<i>Teleaulax</i> spp	present	present
<i>Planctonema lauterbornii</i>	present	present
<i>Prymnesiales</i>	common	common
<i>Pyramimonas</i> spp	common	common
<i>Ebria tripartita</i>		present
<i>Mesodinium rubrum</i>		present
<i>Ciliophora</i> spp	present	present
<i>Lemmermanniella</i> spp		present
<i>Aphanothece</i> spp	common	common
<i>Nodularia spumigena</i>	present	present
<i>Aphanizomenon flos-aquae</i>	present	present

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.