Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 7, 29 August – 2 September 2005

Sammanfattning

I öppna **Skagerrak** dominerade små dinoflagellater, medan det i kustområdet var en dominans av diatoméer, med *Pseudo-nitzschia* spp.*. Dinoflagellater var också vanliga här.

I **Kattegatt** fanns mer än en miljon *Pseudo-nitzschia* spp.* vid första besöket, men betydligt mindre vid andra. En del *Nodularia spumigena** påträffades också.

I **Östersjön** hade det mesta av cyanobacteriblomningarna försvunnit, men *Aphanizomenon* sp. fanns i stora mängder i södra Östersjön, där man också kunde se mycket av *Dactyliosolen fragilissimus*, som är en mer salin art. Öster om Gotland fanns rikligt med små cyanobakterier.

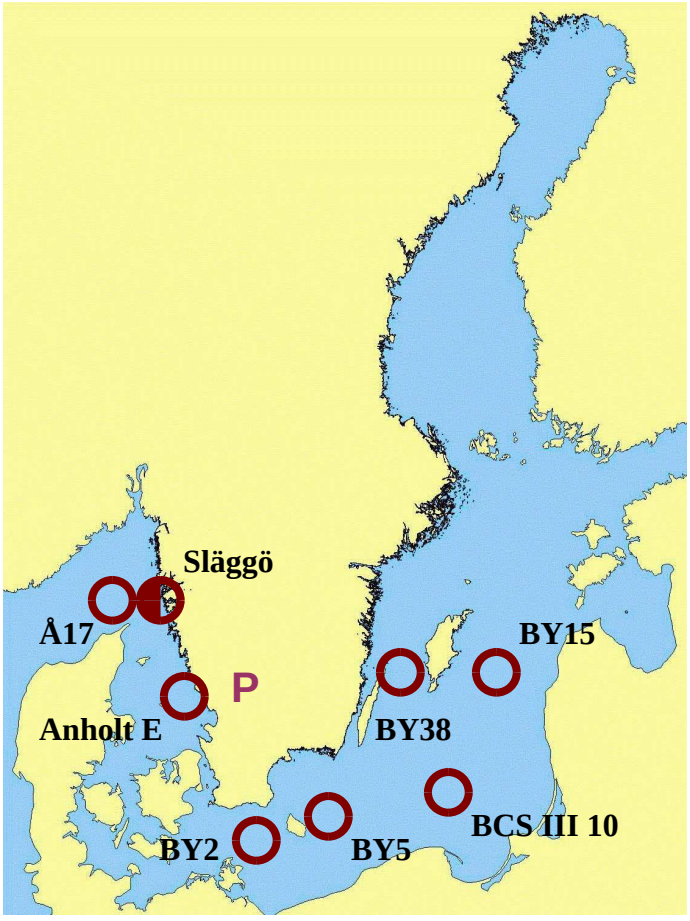
Summary

In the open **Skagerrak** small dinoflagellates dominated, whereas the coastal area was dominated by diatoms with *Pseudo-nitzschia* spp.*. Dinoflagellates were also common here

In the **Kattegat** there was more than one million *Pseudo-nitzschia* spp.* at the first visit, but considerably fewer at the next. Some *Nodularia spumigena** were also seen.

In **Baltic** most of the cyanobacteria blooms had disappeared but , *Aphanizomenon* sp. was very common I the south Baltic, where the saline *Dactyliosolen fragilissimus* was also common. East of Gotland there were lots of small cyanobacteria.

- Large amounts of algae
- Moderate amounts
- Small amounts
- Fish killing species
- A Alexandrium spp., PSP
- D Dinophysis spp., DSP
- P Pseudo-nitzschia spp. ASP
- C Toxic cyanobacteria



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DETAILS Based on quantitative samples 0-10 m depth and net samples *POTENTIALLY HARMFUL SPECIES

SKAGERRAK

Å17 29 August

The diversity of dinoflagellates was large, but cell densities were low. *Gyrodinium spirale* and a *Scrippsiella* species very the most common. Diatoms were rare. *Proboscia alata* and *Dactyliosolen fragilissimus* were the most common. A few chains of the uncommon *Chaetoceros convolutus* were also seen.
An obvious chlorophyll maximum was situated at 20-25 m depth.

Släggö 29 August

Diatoms with the genus *Pseudo-nitzschia** dominated with more than 400 000 cells per litre. *Dactyliosolen fragilissimus* and *Cerataulina pelagica* were also common. The diversity of dinoflagellates was large. *Heterocapsa rotundata* dominated, but there was also *Ceratium*-species and *Protoceratium reticulatum**.

KATTEGAT

Anholt E 30 August and 2 September

At the first sampling the ASP-producing diatom genus *Pseudo-nitzschia** dominated completely with about 1.5 million cells per litre, which is above the critical value. At the second sampling 4 days later *Pseudo-nitzschia** had decreased considerably and other diatoms had become more important. Dinoflagellates were not very common, but a few potentially harmful species, e.g *Dinophysis acuminata**, *D. norvegica**, *Protoceratium reticulatum** and *Protoperidinium crassipes/curtipes**, were present. At the first sampling the cyanobacterium *Nodularia spumigena** was observed.

	Recommended limit	Å17 2005-08-29 cells/L	Släggö 2005-08-29 cells/L	Anholt E 2005-08-30 cells/L	Anholt E 2005-09-02 cells/L
Cerataulina pelagica			common	present	
Chaetoceros curvisetus					present
Dactyliosolen fragilissimus		present	common	present	present
Leptocylindrus danicus			present	present	present
Proboscia alata		common			
Pseudo-nitzschia delicatissima-group	1 million cells/liter	present	very common	250 000	present
Pseudo-nitzschia seriata-group	1 million cells/liter		350 000	1.2 million	35 000
Alexandrium spp.	300 cells/liter	present			present
Ceratium tripos			present	common	common
Dinophysis acuminata	300 cells/liter				present
Dinophysis norvegica	2000 cells/liter	present	present	present	present
Heterocapsa rotundata			75 000		
Gyrodinium spirale		common			
Karenia mikimotoi		present			
Phalacroma rotundatum		present			
Prorocentrum micans		present	present	present	present
Protoceratium reticulatum			present	present	present
Protoperidinium crassipes/curtipes				present	present
Scrippsiella spp		very common	present		
Emiliania huxleyi		present			

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BALTIC SEA

Arkona basin BY2 30 August

Cyanobacteria, dominated by *Aphanizomenon* sp. with 10 meter per litre, were common. There was also an element of saline species with *Dactyliosolen fragilissimus* and *Ceratium tripos* present in high numbers. *Chrysochromulina* spp.* were seen in moderate densities.

Bornholm basin BY5 31 August

The plankton flora was poor at this station. *Aphanizomenon* sp. dominated, followed by small flagellates with *Chrysochromulina* spp.*, *Pyramimonas* spp. and *Heterocapsa rotundata*.

South East Baltic BCS III 10 31 August

The situation at this station was quite similar to BY5, with *Aphanizomenon* sp., *Chrysochromulina* spp.*, *Pyramimonas* spp. and *Heterocapsa rotundata*. However, there were also some cells of the diatoms *Chaetoceros affinis* and *C. impressus*.

Eastern Gotland basin BY15 1 September

The net sample was rich in the diatoms *Coscinodiscus granii*, *Coscinodiscus* sp. and the cyanobacteria *Snowella/Woronichinia* spp. In the quantitative samples, however, *Aphanizomenon* sp., *Pseudoanabaena* sp., *Chrysochromulina* spp.* and *Pyramimonas* spp. dominated.

Western Gotland basin BY38 1 September

The plankton flora was poor. *Aphanizomenon* sp., *Nodularia spumigena** *and Anabaena spp.** were seen in the net sample. Small flagellates with *Chrysochromulina* spp.* and *Pyramimonas* spp. dominated. *Chaetoceros danicus* and *C. impressus* were rather common.

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	BY2 2005-08-30 cells/L	BY5 2005-08-30 cells/L	BCS III 10 2005-08-30 cells/L	BY15 2005-09-01 cells/L	BY38 2005-09-01 cells/L
Actinocyclus octonarius		present	present	present	present
Chaetoceros danicus		present		present	commom
Chaetoceros impressus		present	present	common	commom
Coscinodiscus spp.				present	present
Dactyliosolen fragilissimus	60 000				
Ceratium tripos	common				
Dinophysis norvegica		present	present	present	present
Gymnodinium spp.		present	present		
Heterocapsa rotundata		common	common		
Scrippsiella			present	present	
Ebria tripartita	present	present	present	present	present
Chrysochromulina spp.	common	common	common	common	commom
Anabaena sp.		present			present
Aphanizomenon sp.	10 meter/L	common	very common	common	present
Aphanothece sp.		present		present	
Nodularia spumigena	present	present	present	present	present
Pseudoanabaena sp.				common	present
Snowella/Woronichinia spp.				common	