Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 8, 26– 30 September 2005

Sammanfattning

I **Skagerrak** var planktonfloran rik. *Chaetoceros subtilis* blommade i utsjön och *Asterionellopsis glacialis* vid kusten.

I **Kattegatt** saknades diatoméer, medan dinoflagellater var vanliga. De potentiellt toxiska *Protoperidinium crassipes/curtipes** och *Dinophysis acuta** förekom i koncentrationer over den rekommenderade gränsen.

I **Östersjön** fanns *Aphanizomenon* sp. vid alla stationer, men i varierande mängder. I övrigt dominerade små flagellater, varav *Pyramimonas* spp. var vanligast.

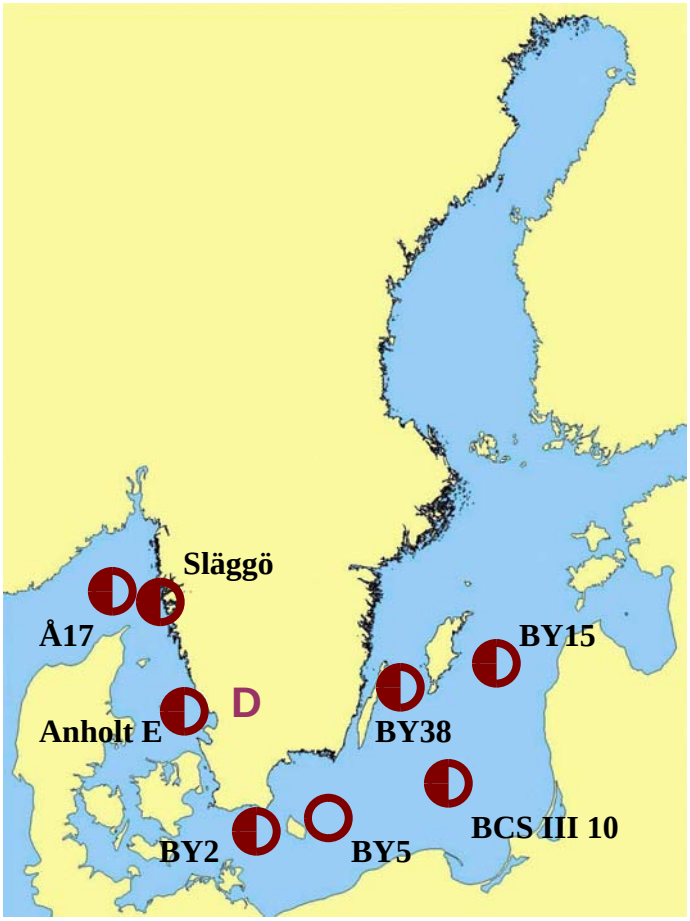
Summary

In the **Skagerrak** the plankton flora was rich with blooms of *Chaetoceros subtilis* in the open sea and *Asterionellopsis glacialis* in the fjord entrance.

In the **Kattegat** there were no diatoms. The potentially toxic dinoflagellates *Protoperidinium crassipes/curtipes** and *Dinophysis acuta** were above recommended limits.

In **Baltic** *Aphanizomenon* sp. was present at all stations, but with varying densities. Small flagellates, with *Pyramimonas* spp. as the most common dominated the plankton flora.

- 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



SMHI
Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 8, 26– 30 September 2005

DETAILS

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

SKAGERRAK

Å17 26 September

The diversity of phytoplankton was large, but cell densities were low. Among the dinoflagellates *Gymnodiniales* were most abundant, but some *Karenia mikimotoi**, *Dinophysis norvegica**, *Amphidinium* spp. and *Ceratium furca* were also present. The diatom *Chaetoceros subtilis* bloomed with 100 000 cells per litre, which is unusual this time of the year. Also *Chaetoceros throndsenii, Dactyliosolen fragilissimus, Asterionellopsis glacialis* and *Pseudo-nitzschia delicatissima*-group* were present.

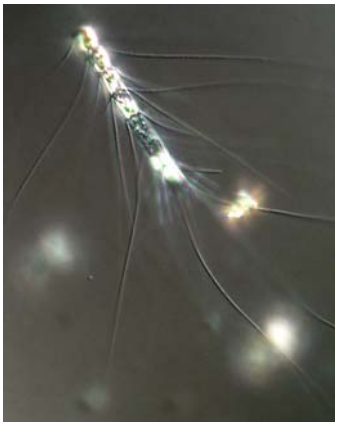
Släggö 26 September

A very rich plankton flora was present at Släggö with more than 25 dinoflagellate and 30 diatom species. *Alexandrium* spp.* and *Protoperidinium crassipes/curtipes** were found in low numbers, whereas *Dinophysis acuminata** and *D. acuta** had cell densities above the recommended limit. Among *Ceratium* species *C. furca* was most abundant. The dominating diatom was *Asterionellopsis glacialis* with 1 million cells per litre, followed by *Pseudo-nitzschia delicatissima*-group* and *Skeletonema costatum*. At least 10 *Chaetoceros* species were observed, with *C. affinis* as the dominant.

KATTEGAT

Anholt E 27 September

At this time there were hardly any diatoms in the water. Dinoflagellates, however, were common even if cell densities were low. *Heterocapsa rotundata* was most abundant, followed by *Ceratium* species and *Protoperidinium crassipes/curtipes**. *Dinophysis acuta** was above the recommended limit. The cyanobacterium *Nodularia spumigena** was observed in low numbers.



Chaetoceros subtilis

Asterionellopsis glacialis

SMHI
Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 8, 26– 30 September 2005

	Recommended limit	Å17 2005-09-26 cells/L	Släggö 2005-09-26 cells/L	Anholt E 2005-09-27 cells/L
Astrionellopsis glacialis		present	1 milllion	
Cerataulina pelagica		present	present	
Chaetoceros affinis			common	
Chaetoceros curvisetus			present	
Chaetoceros subtilis		100 000		
Chaetoceros throndsenii		common		
Dactyliosolen fragilissimus		present	present	
Leptocylindrus danicus		present	present	
Proboscia alata		present	present	
Pseudo-nitzschia delicatissima-group	1 million cells/liter	present	175 000	
Skeletonema costatum		present	present	
Alexandrium spp.	300 cells/liter		200	
Ceratium furca		present	2 000	
Ceratium linatum			450	1 100
Ceratium longipes			present	present
Ceratium macroceros			present	
Ceratium tripos			350	2 500
Dinophysis acuminata	300 cells/liter		350	200
Dinophysis acuta	300 cells/liter		600	450
Dinophysis norvegica	2000 cells/liter	present		100
Heterocapsa rotundata		present	common	common
Gymnodinium spp.		common		1 000
Karenia mikimotoi		present		
Phalacroma rotundatum			present	present
Prorocentrum micans			present	common
Protoceratium reticulatum				present
Protoperidinium crassipes/curtipes			100	1 000
Nodularia spumigena				present

SMHI

Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 8, 26– 30 September 2005

BALTIC SEA

Arkona basin BY2 28 September

Both *Aphanizomenon* sp. and *Anabaena* sp.* were common. A few *Ceratium tripos*, *Prorocentrum minimum** and some more *Heterocapsa rotundata* were also present. The small flagellates were dominated by *Pyramimonas* spp., followed by *Chrysochromulina* spp.*. *Chaetoceros impressus* was relatively common.

Bornholm basin BY5 28 September

The plankton flora was poor at this station. *Aphanizomenon* sp. reached 1.5 m per litre and *Ebria tripartita* was relatively common. Small flagellates - *Teleaulax* spp., *Pyramimonas* spp. and *Heterocapsa rotundata* - were also seen.

South East Baltic BCS III 10 28 September

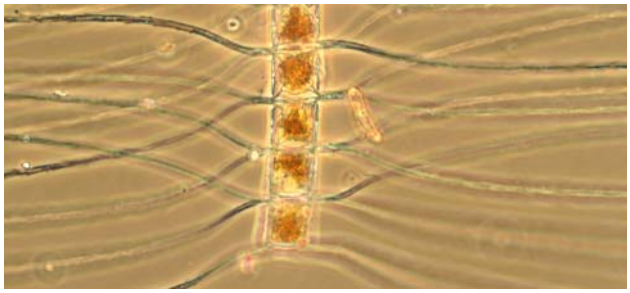
Small flagellates dominated with *Pyramimonas* spp., *Plagioselmis prolonga*, *Chrysochromulina* spp.* and *Eutreptiella* sp.. Solitary *Choanoflagellates* were very common. *Aphanizomenon* sp. was present with 0.5 m per litre. Two diatoms, *Chaetoceros impressus* and *Coscinodiscus granii* were common and *Cyclotella choctawhatcheeana* was found in small amounts.

Eastern Gotland basin BY15 29 September

Small flagellates dominated with *Pyramimonas* spp. and *Plagioselmis prolonga* as the most abundant. *Chrysochromulina* spp.* and *Eutreptiella* sp. were also common. *Aphanizomenon* sp. was present with about 3 m per litre. Diatoms were rare with *Chaetoceros impressus* as one of the few representatives.

Western Gotland basin BY38 30 September

Aphanizomenon sp. was very common with more than 10 m per litre. *Chaetoceros impressus* was present in small amounts. Small flagellates dominated with *Pyramimonas* spp., *Chrysochromulina* spp.*, *Teleaulax* spp. and *Eutreptiella* sp. Single cells of *Dinophysis norvegica** were also seen.



Chaetoceros impressus

Oceanographic Services
Lars Edler

AlgAware

ALGAL SITUATION IN SWEDISH MARINE WATERS

No 8, 26– 30 September 2005

	BY2 2005-09-28 cells/L	BY5 2005-09-28 cells/L	BCS III 10 2005-09-28 cells/L	BY15 2005-09-29 cells/L	BY38 2005-09-30 cells/L
Chaetoceros danicus			present	present	
Chaetoceros impressus	2 200	present	2 500	common	present
Coscinodiscus granii			present		
Cyclotella choctawhatcheeana	present	present	present		
Ceratium tripos	present				
Dinophysis norvegica					present
Heterocapsa rotundata	common	present			
Heterocapsa triquetra				present	
Prorocentrum minimum	present				
Ebria tripartita		common			
Chrysochromulina spp.	present		50 000	50 000	50 000
Eutreptiella sp.			50 000	50 000	70 000
Pyramimonas spp.	100 000	common	common	200 000	100 000
Plagioselmis prolonga	present		common	90 000	
Teleaulax spp.		present	common	common	60 000
Anabaena sp.	1 meter/L				
Aphanizomenon sp.	5 meter/L	1 meter/L	0.5 meter/L	3 meter/L	13 meter/L
Pseudoanabaena sp.					common
Choanoflagellates			250 000		