

### Sammanfattning

I öppna **Skagerrak** dominerade *Dactyliosolen fragilissimus*, men det fanns också dinoflagellater, med bland annat *Alexandrium* sp.\*, *Karenia mikimotoi*\* och *Dinophysis norvegica*\*. I kustområdet fanns rikligt med dinoflagellater, t.ex. *Heterocapsa rotundata*, *Prorocentrum micans*, *Dinophysis* spp\* and *Protoceratium reticulatum*\*. Diatoméer var också vanliga.

I **Kattegatt** utvecklades planktonfloran mellan de två provtagningarna och dinoflagellater blev allt vanligare.

I **Östersjön** hade det mesta av cyanobacteribloomningarna försvunnit och ersatts av dinoflagellater, diatoméer och små flagellater, med *Chrysochromulina* spp.\* som ett av de vanligaste släktena.

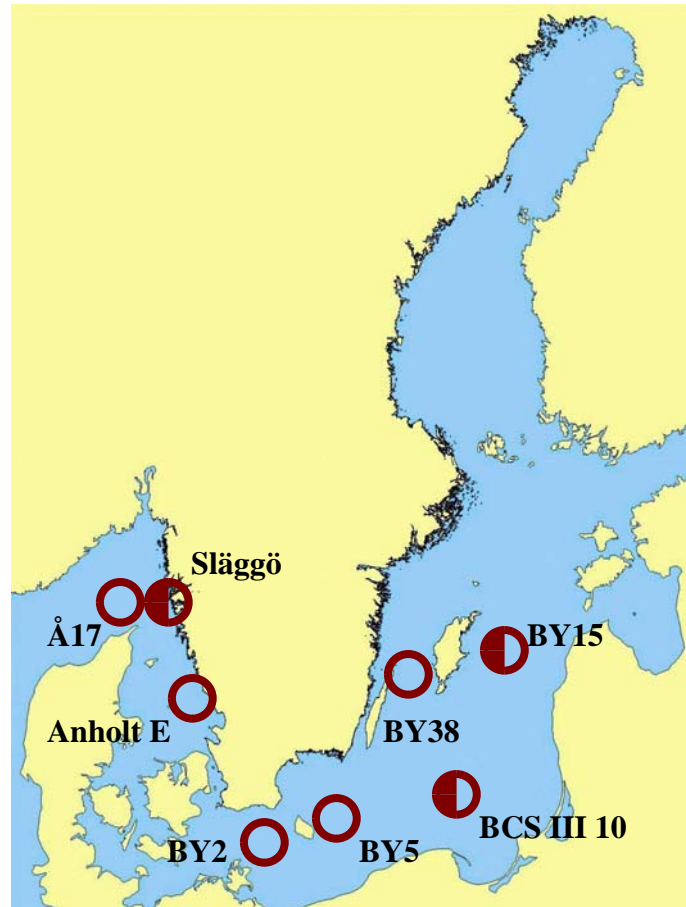
### Summary

In the open **Skagerrak** *Dactyliosolen fragilissimus* dominated, but there was also dinoflagellates with *Alexandrium* sp.\*, *Karenia mikimotoi*\* och *Dinophysis norvegica*\*. In the coastal area dinoflagellates were common with *Heterocapsa rotundata*, *Prorocentrum micans*, *Dinophysis* spp\* and *Protoceratium reticulatum*\*.

In the **Kattegat** the plankton flora developed from poor to relatively rich between the two samplings with several dinoflagellates.

In **Baltic** most of the cyanobacteria blooms had disappeared and been replaced by dinoflagellates, diatoms and small flagellates, with *Chrysochromulina* spp.\* as one of the most common genera.

- 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



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

## SKAGERRAK

### Å17 8 August

The diversity of dinoflagellates was large, but cell densities were low. *Dinophysis norvegica*\*, *Alexandrium sp.*\*, *Karenia mikimotoi*\* and *Heterocapsa rotundata* were the most important species. *Dactyliosolen fragilissimus* was the most important diatom. Chlorophyll in the upper 10 m was about 1.5 µg/L. An obvious chlorophyll maximum was situated at 10-25 m depth.

### Släggö 8 August

Also here the diversity of dinoflagellates was large, and the cell densities low. *Heterocapsa rotundata* and *Prorocentrum micans* dominated, but there was also *Ceratium*-species and *Dinophysis acuta*\*, *D. norvegica*\*, *Protoceratium reticulatum*\* and *Protoperdinium crassipes/curtipes*\*. *Dactyliosolen fragilissimus* and *Leptocylindrus danicus* were the most common diatoms. *Pseudo-nitzschia delicatissima*-group\* was present in low numbers. Chlorophyll in the upper 5 m was about 1.2 µg/L. At 10-12 m depth there was a marked chlorophyll maximum of about 4.2 µg/L.

## KATTEGAT

### Anholt E 9 and 13 August

At the first sampling the plankton flora was poor with only dinoflagellates, dominated by *Heterocapsa rotundata*. Diatoms were virtually not present. At the second sampling 4 days later the situation was different. More saline water, containing a richer plankton flora had come into the Kattegat. Many dinoflagellates were present, but generally in low numbers. *Heterocapsa rotundata* dominated and there were low numbers of *Ceratium*-species, *Dinophysis acuminata*\*, *D. acuta*\*, *D. norvegica*\*, *Protoceratium reticulatum*\* and *Prorocentrum micans*. *Cerataulina pelagica*, *Dactyliosolen fragilissimus* and *Pseudo-nitzschia delicatissima*-group\* were the most common diatoms. Surface chlorophyll increased from 0.8 to 1.4 between the two samplings.

	Recommended limit	Å17 2005-08-08 cells/L	Släggö 2005-08-08 cells/L	Anholt E 2005-08-09 cells/L	Anholt E 2005-08-13 cells/L
<i>Cerataulina pelagica</i>					10 000
<i>Dactyliosolen fragilissimus</i>		35 000	present		present
<i>Leptocylindrus danicus</i>			common		
<i>Proboscia alata</i>		present	present	present	present
<i>Pseudo-nitzschia delicatissima</i> -group	1 million cells/liter		present		5 000
<i>Pseudo-nitzschia seriata</i> -group	1 million cells/liter				
<i>Alexandrium spp.</i>	300 cells/liter	200			100
<i>Dinophysis acuta</i>	300 cells/liter		200		100
<i>Dinophysis norvegica</i>	2000 cells/liter	100	100		100
<i>Heterocapsa rotundata</i>		common	60 000	30 000	present
<i>Karenia mikimotoi</i>		present			present
<i>Prorocentrum micans</i>			10 000	present	2 000
<i>Protoceratium reticulatum</i>			present		present
<i>Protoperdinium crassipes/curtipes</i>			300	100	

**BALTIC SEA****Arkona basin BY2 10 August**

Cyanobacteria were absent at this station. The two diatoms *Chaetoceros impressus* and *Dactyliosolen fragilissimus* dominated. Among dinoflagellates *Heterocapsa triquetra* and *Ceratium tripos* were present, and small flagellates, such as *Plagioselmis* and *Teleaulax* were also seen. Surface layer chlorophyll was about 1.4 µg/L.

**Bornholm basin BY5 10 August**

At this station there were small amounts of several cyanobacteria species. However, *Anabaena* spp.\* was quite common. *Dinophysis norvegica*\* and *Chrysochromulina* spp.\* were present in low numbers, and *Chaetoceros impressus*, *C. danicus*, *Plagioselmis* and *Teleaulax* were present. Surface layer chlorophyll was about 1.7 µg/L.

**South East Baltic BCS III 10 10 August**

Except for *Snowella/Woronichinia* cyanobacteria were absent. *Nitzschia paleacea*, which often occurs during the end of *Aphanizomenon* sp. and *Nodularia spumigena*\* blooms was present. *Chaetoceros impressus* and *Attheya septentrionalis* were the most common diatoms and *Gymnodinium* spp. the most common dinoflagellate. Also *Chrysochromulina* spp.\* were present together with *Plagioselmis* and *Teleaulax*. Surface layer chlorophyll was about 2 µg/L.

**Eastern Gotland basin BY15 11 August**

Cyanobacteria dominated with high amounts of *Aphanothece* sp., *Pseudoanabaena* sp. and *Snowella/Woronichinia*. *Dinophysis norvegica*\* and *Chrysochromulina* spp.\* were common, and *Chaetoceros impressus* was the only diatom observed. Surface layer chlorophyll was about 3.4 µg/L.

**Western Gotland basin BY38 11 August**

*Anabaena* spp.\* and *Chrysochromulina* spp.\* were quite common. *Aphanizomenon* sp., *Pseudoanabaena* sp., *Snowella/Woronichinia* and *Chaetoceros impressus* were also common. Among dinoflagellates *Heterocapsa triquetra*, *H. minima* and *Gymnodinium* spp. were seen. Surface layer chlorophyll was about 1.9 µg/L.

	BY2 2005-08-10 cells/L	BY5 2005-08-10 cells/L	BCS III 10 2005-08-10 cells/L	BY15 2005-08-11 cells/L	BY38 2005-08-11 cells/L
<i>Actinocyclus octonarius</i>	present	present	present		
<i>Attheya septentrionalis</i>			common		
<i>Chaetoceros danicus</i>		present	present		
<i>Chaetoceros impressus</i>	common	present	very common	common	common
<i>Dactyliosolen fragilissimus</i>	30 000				
<i>Nitzschia paleacea</i>			present		
<i>Ceratium tripos</i>	present				
<i>Dinophysis norvegica</i>		present	present	common	
<i>Gymnodinium</i> spp.			common	common	
<i>Heterocapsa triquetra</i>	present			present	common
<i>Phalachroma rotundatum</i>			present	present	
<i>Ebria tripartita</i>	present	present	common	common	common
<i>Chrysochromulina</i> spp.		present	common	common	common
<i>Plagioselmis prolonga</i>	present	present	present		
<i>Teleaulax</i> spp.	present	present	present		
<i>Anabaena</i> sp.		common			common
<i>Aphanizomenon</i> sp.		present		present	common
<i>Aphanothece</i> sp.				very common	
<i>Nodularia spumigena</i>		present			
<i>Pseudoanabaena</i> sp.		present		common	common
<i>Snowella/Woronichinia</i> spp.		present	present	common	common