

Oceanographic Services

Lars Edler

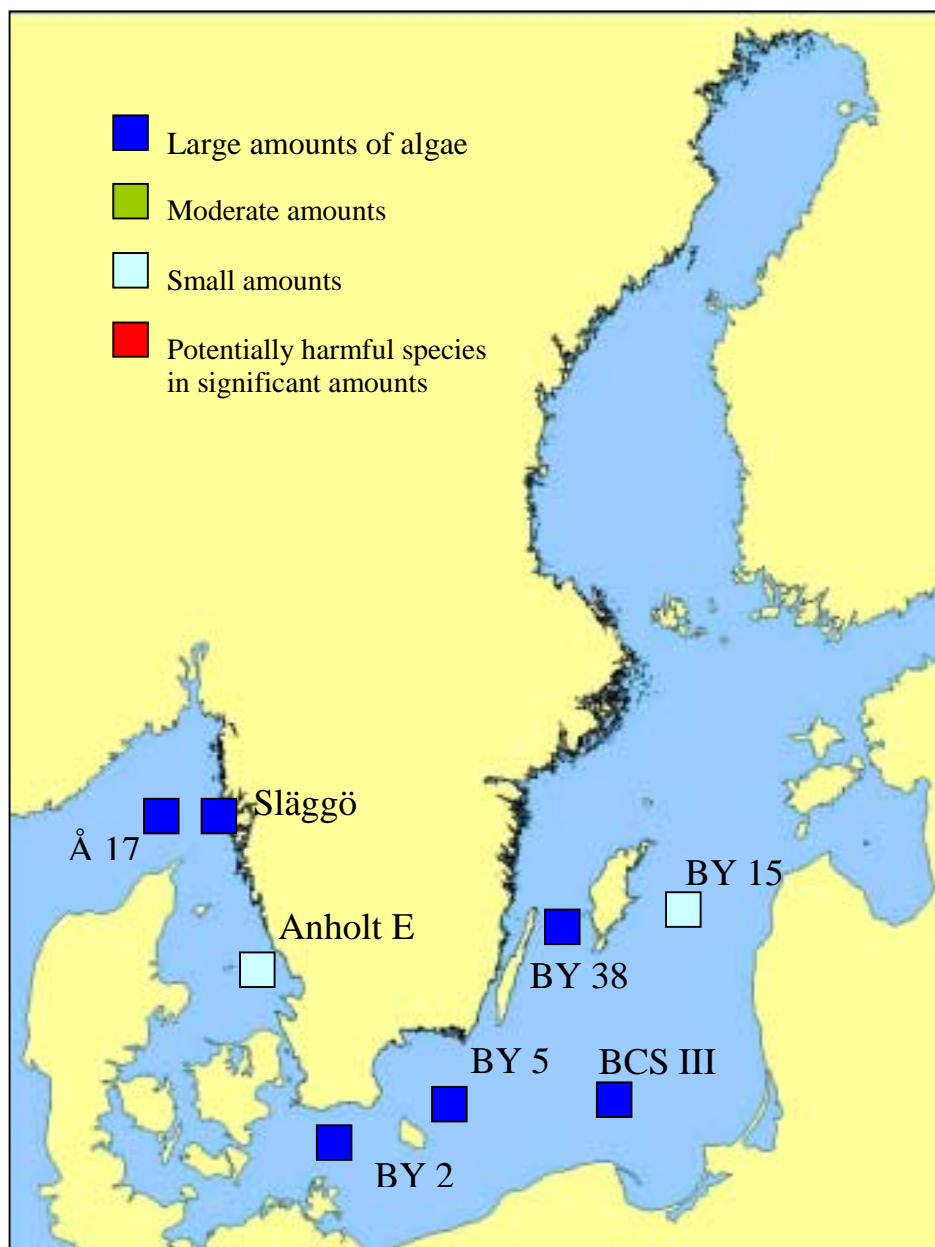
ALGAL SITUATION IN SWEDISH MARINE WATERS

No 3, 2003, 24 - 27 March

OVERVIEW

In the Skagerrak the spring bloom is going on, although in a late state near the coast. In the Kattegat the spring bloom is passed and the plankton flora poor.

In the south and west part of the Baltic the spring bloom is in different stages. In the east part of the Baltic proper the spring bloom has not started yet.





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DETAILS

Sampling in the Skagerrak, Kattegat and the Baltic Sea

SKAGERRAK

Station Å17, 27 March

Very rich plankton flora, with a high diversity of diatoms was found. Several species of *Chaetoceros* present, as well as large amounts of *Thalassiosira nordenskieoldii*. The large diatom *Coscinodiscus wailesii* was present with few cells. The rich presence of *Protoperidinium* species and the state of certain diatoms indicate that the peak of the spring bloom was passed. Single cells of *Dinophysis acuminata* and *Dinophysis norvegica* were observed.

Station Släggö, 27 March

Also here there was a very rich plankton flora, despite the late stage of the spring bloom. Diatoms made up the largest part of the biomass, with *Chaetoceros socialis*, *Chaetoceros socialis* and *Thalassiosira nordenskieoldii* as the dominating species. Among dinoflagellates small *Gymnodinium* spp. and *Heterocapsa rotundata* were of importance. Among small flagellates *Chrysochromulina* spp.*, *Teleaulax* spp. and *Dinobryon balticum* were the most common. Small numbers of a species which may be *Heterosigma* sp.* were also observed.

KATTEGAT

Station Anholt E, 27 March

In the Kattegat the spring bloom peaked unusually early, already in February. Small flagellates, as well as heterotrophic species of *Protoperidinium* thus dominated the phytoplankton composition. Flagellates *Chrysochromulina* spp.*, *Teleaulax* spp. and *Pseudopedinella* spp. were the most common.



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	Å17	Släggö	Anholt E
Chaetoceros danicus		1 200	present
Chaetoceros debilis	dominating	51 600	
Chaetoceros decipiens	small amounts	2 000	present
Chaetoceros socialis f. socialis	very common	1 500 000	
Chaetoceros tenuissimus			common
Coscinodiscus centralis	present		
Coscinodiscus concinnus	present		
Coscinodiscus wailesii	present		
Coscinodiscus sp.	present		
Cylindrotheca closterium	small amounts		
Guinardia delicatula	small amounts		
Guinardia flaccida	small amounts		present
Leptocylindrus danicus	small amounts		
Pseudo-nitzschia delicatissima-group*	present	1 200	
Pseudo-nitzschia seriata*		present	present
Rhizolenia setigera	small amounts	small amounts	present
Skeletonema costatum	small amounts	13 600	18 700
Striatella unipunctata	present		
Thalassionema nitzschioides	small amounts	6 000	present
Thalassiosira anguste-lineata	small amounts		
Thalassiosira nordenskioeldii	very common	230 400	
Thalassiosira sp. (15-20 µm)	small amounts		
Ceratium longipes	present		
Ceratium tripos	present	present	
Dinophysis acuminata*	present		
Dinophysis norvegica*	present		
Gymnodinium spp.		common	small amounts
Gyrodinium spirale	small amounts	1 600	small amounts
Heterocapsa rotundata		18 700	
Katodinium glaucum		small amounts	small amounts
Protoperidinium bipes	small amounts		
Protoperidinium crassipes			present
Protoperidinium depressum	present	present	present
Protoperidinium pallidum			present
Protoperidinium pellucidum	small amounts	small amounts	small amounts
Protoperidinium steinii	present		
Protoperidinium subinerme			small amounts
Protoperidinium spp.	small amounts		
Scrippsiella sp.	common	small amounts	common
Apedinella radians		15 300	
Dichtyocha fibula		6 800	6 800
Dichtyocha speculum*	small amounts		
Dinobryon balticum	common	25 500	
Pseudopedinella spp.			20 400
Plagioselmis prolonga		common	common
Teleaulax sp.		very common	very common
Chrysochromulina sp. (6-10 µm) *		23 800	18 700
Chattonella sp. (10-15 µm)*			5 100
Heterosigma sp. cf. *		6 800	

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BALTIC SEA

Arkona basin. Station BY2, 26 March

The spring bloom was at a late stage. Diatoms were still abundant and the dominating species were *Skeletonema costatum*, *Chaetoceros wighamii* and *Thalassiosira levanderi*. Small flagellates, such as *Plagioselmis* sp. and *Teleaulax* spp. were common

Bornholm basin. Station BY5, 24 March

The spring bloom was still going on with a high abundance of typical spring species; *Skeletonema costatum*, *Chaetoceros wighamii* and *Thalassiosira levanderi*. The dinoflagellate *Scrippsiella hangoei* was also very common.

Southeast Baltic. Station BCS III 10, 24 March

The spring bloom was developing and had still not reached the peak, despite very high numbers of *Skeletonema costatum*, *Chaetoceros wighamii* and *Thalassiosira levanderi*. Also here the dinoflagellate *Scrippsiella hangoei* was present.

Eastern Gotland basin, Station BY15, 24 March

The spring bloom had not yet started to develop here. There were no diatoms present. *Scrippsiella hangoei* was present, which indicates that the spring bloom is about to begin.

Western Gotland basin, Station BY38, 25 March

The spring bloom had started, but here with a dominance of *Chaetoceros wighamii* and *Scrippsiella hangoei*. There was also a number of *Eutreptiella* sp.

	BY2	BY5	BCS III 10	BY15	BY38
<i>Chaetoceros ceratosporum</i>	common		common		common
<i>Chaetoceros wighamii</i>	54 400	30 600	40 800		272 000
<i>Melosira arctica</i>	present	present			
<i>Skeletonema costatum</i>	462 400	680 000	816 000	present	8 000
<i>Thalassiosira levanderi</i>	20 400	34 000	258 400		8 000
<i>Gymnodinium</i> spp. (10-15µm)	small amounts				
<i>Heterocapsa rotundata</i>	6 800				
<i>Peridiniella catenata</i>					3 200
<i>Scrippsiella hangoei</i>		30 600	13 600	18 900	170 000
<i>Eutreptiella</i> sp.					13 600
<i>Plagioselmis</i> sp.	20 400	common	6 800	small amounts	
<i>Teleaulax</i> spp.	13 600	common	27 200	small amounts	small amounts