

Oceanographic Services

Lars Edler

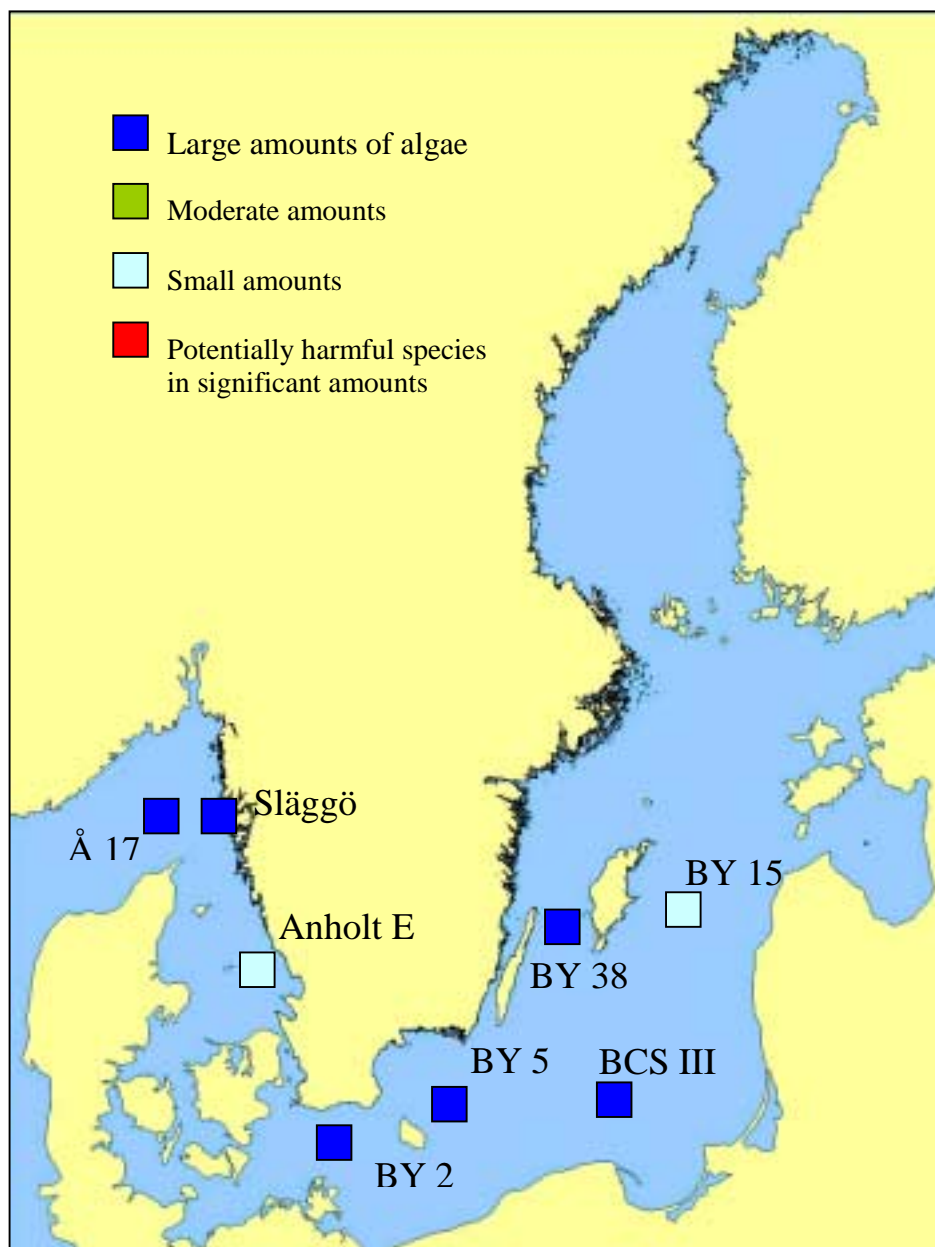
ALGAL SITUATION IN SWEDISH MARINE WATERS

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