

Oceanographic Services

Lars Edler, Ann-Turi Skejvik

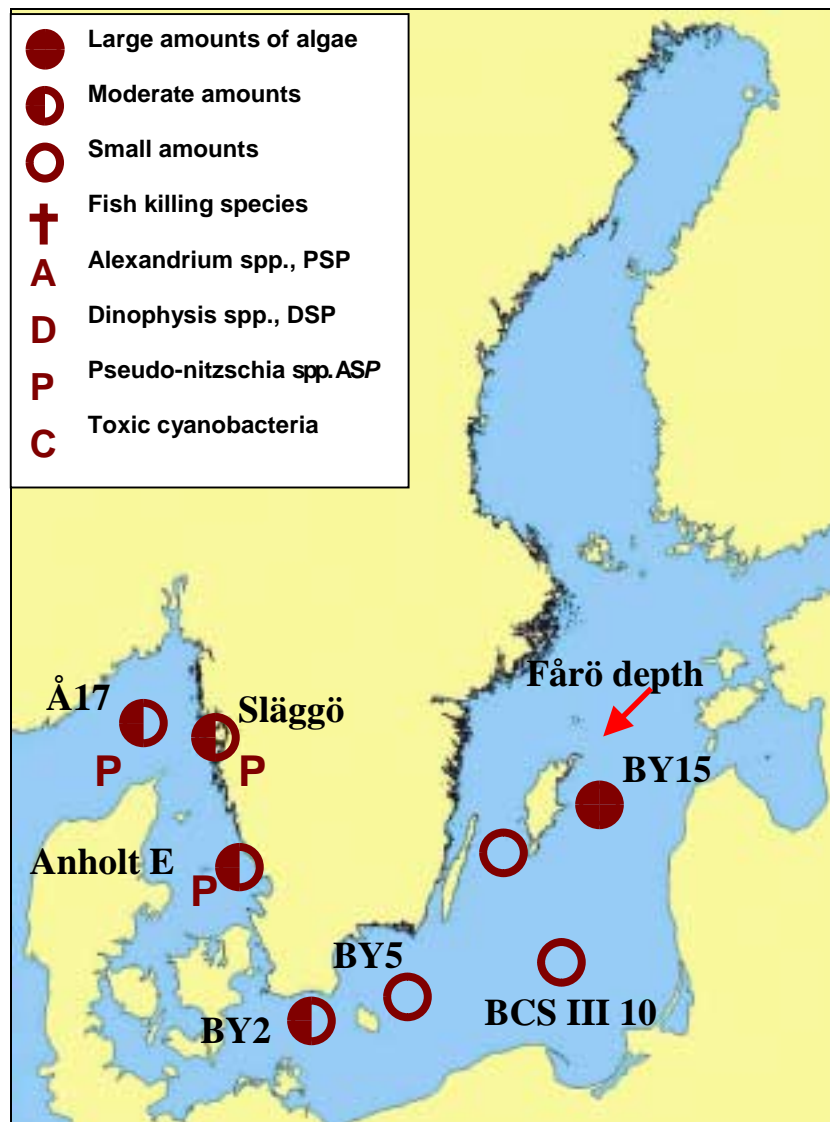
ALGAL SITUATION IN SWEDISH MARINE WATERS

No 10, 2003, 22 - 26 September

OVERVIEW

In the Skagerrak and the Kattegat the autumn bloom, dominated by diatoms, was developing. Large amounts of *Chaetoceros* and *Pseudo-nitzschia** species were present. Dinoflagellates were also common.

In the Baltic cyanobacteria had almost disappeared and large diatoms, some dinoflagellates and small flagellates dominated. In the Arkona and Bornholm basins diatoms normally belonging to more saline water was present. East of Gotland there was a *Prorocentrum minimum** bloom with peaks also in the deep water. One such peak was found at 130 m depth.



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DETAILS

* POTENTIALLY HARMFUL SPECIES

SKAGERRAK

Station Å17, 22 September

An autumn situation with a rich diversity of diatoms was at hand. The typical autumn species *Ditylum brightwellii* and *Pseudo-nitzschia pungens** were common. Several species of *Chaetoceros* were seen together with *Asterionellopsis glacialis*. The most common dinoflagellates were *Ceratium furca* and *C. tripos*, but also small amounts of *Alexandrium tamarense** were seen.

Station Släggö, 22 September

Here the autumn bloom, dominated by diatoms, was more pronounced than in the open Skagerrak. Diatoms were very common both in species numbers and quantities. *Asterionellopsis glacialis*, which is usually not present in autumn, but rather a rare guest during the spring bloom, was now very common. As typical for the diatom autumn bloom several *Chaetoceros* species, *Rhizosolenia* spp., *Pseudo-nitzschia pungens** and *Pseudo-nitzschia delicatissima-group** were present. Dinoflagellates were also common and several *Ceratium* species were seen together with a number of *Protoperdinium* species. A few *Dinophysis acuta** were observed.

KATTEGAT

Station Anholt E, 23 September

The autumn bloom was also very obvious at this station and the species composition and cell densities were very similar to the Släggö station.



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	2003-09-22	2003-09-22	2003-09-23
	Å17	Släggö	Anholt E
<i>Asterionellopsis glacialis</i>	common	very common	very common
<i>Chaetoceros affinis</i>		present	
<i>Chaetoceros constrictus</i>	present		
<i>Chaetoceros contortus</i>	common	common	common
<i>Chaetoceros curvisetus</i>	common	very common	very common
<i>Chaetoceros decipiens</i>	present	present	present
<i>Chaetoceros laciniosus</i>	present	present	present
<i>Chaetoceros similis</i>			present
<i>Chaetoceros socialis</i> f. <i>radians</i>			common
<i>Dactyliosolen fragilissimus</i>	present	present	present
<i>Ditylum brightwellii</i>	common	common	common
<i>Guinardia flaccida</i>	present		present
<i>Leptocylindrus danicus</i>	present	present	
<i>Proboscia alata</i>		present	present
<i>Pseudo-nitzschia delicatissima</i> -group	common	very common	very common
<i>Pseudo-nitzschia pungens</i>	common	very common	very common
<i>Rhizosolenia hebetata</i>	present	present	present
<i>Rhizosolenia styliformis</i>	present	present	
<i>Skeletonema costatum</i>	present	present	present
<i>Thalassionema nitzschioides</i>		present	present
<i>Alexandrium tamarense</i>	present		
<i>Ceratium furca</i>	common	common	common
<i>Ceratium fusus</i>		present	present
<i>Ceratium lineatum</i>		present	present
<i>Ceratium longipes</i>		present	present
<i>Ceratium tripos</i>	common	common	common
<i>Dinophysis acuta</i>		present	present
<i>Dinophysis norvegica</i>			present
<i>Heterocapsa triquetra</i>		present	
<i>Prorocentrum micans</i>	present	present	present
<i>Protoperdinium brevipes</i>			present
<i>Protoperdinium crassipes</i>			present
<i>Protoperdinium depressum</i>	present	present	
<i>Protoperdinium divergens</i>		present	present
<i>Protoperdinium oblongum</i>			present
<i>Protoperdinium steinii</i>			present
<i>Scrippsiella trochoidea</i>	present		present

BALTIC SEA

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Arkona basin. Station BY2, , 24 September

Remains of the summer cyanobacteria were still present, but in small amounts. Diatoms were rather common. *Dactyliosolen fragilissimus*, *Proboscia alata* and *Pseudo-nitzschia pungens**, which actually belong to more saline water, were not uncommon. *Dinophysis acuminata** and *Prorocentrum minimum** were present and the net sample showed a lot of *Ebria tripartita*. Small flagellates like *Chrysochromulina* spp.*, *Hemiselmis virescens*, *Plagioselmis prolunga*, *Teleaulax* spp. and *Pyramimonas* spp. were relatively common.

Bornholm basin. Station BY5, 24 September

The plankton flora at this station was very similar to BY2. Also here the more saline diatoms *Dactyliosolen fragilissimus*, *Proboscia alata* and *Pseudo-nitzschia pungens** were present, although in smaller numbers. Large diatoms as *Chaetoceros danicus* and *C. impressus* were relatively common. *Dinophysis acuminata**, *D. norvegica** and *Prorocentrum minimum** were present together with low numbers of other dinoflagellates.

Southeast Baltic. Station BCS III 10, 24 September

Cyanobacteria were almost absent at this station and the saline diatoms had not reached this far into the Baltic. The large diatoms as *Chaetoceros danicus* and *C. impressus* were more common than at the previous station, as were *D. acuminata**, *D. norvegica** and *Prorocentrum minimum**.

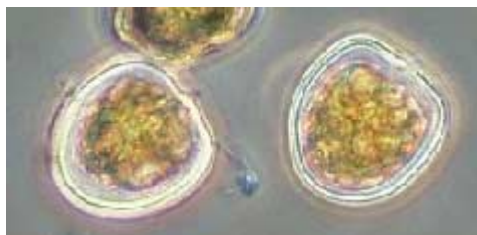
Eastern Gotland basin, Station BY15, 25 September

Remains of the summer cyanobacteria were still present in low densities. A few diatoms were found in the net samples, as well as some dinoflagellates.

*Prorocentrum minimum** was very common and bloomed in this area. In a 20 m thick layer at 130 m depth, localized by echo-sound, we found 16 600 cells/l of *Prorocentrum minimum** and at the station north of Gotland, Fårö depth, about 90 000 cells/l of *Prorocentrum minimum** were found at 20-30 m depth in the thermocline.

Western Gotland basin, Station BY38, 26 September

Very small amounts of *Aphanizomenon* sp. were present. A few diatoms were also seen, with *Coscinodiscus* sp. as the most common. *D. acuminata** and *D. norvegica** were present in low numbers, whereas *Prorocentrum minimum** was quite common. The small flagellates seen at the other stations were here as well.



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	2003-09-24 BY2	2003-09-24 BY5	2003-09-24 BCS III 10	2003-09-25 BY15	2003-09-26 BY38
<i>Actinocyclus octonarius</i>	present	present	present	present	present
<i>Chaetoceros danicus</i>	present	common	common	present	common
<i>Chaetoceros impressus</i>		common	common		common
<i>Coscinodiscus granii</i>					present
<i>Coscinodiscus</i> sp.		present			
<i>Dactyliosolen fragilissimus</i>	present	present			
<i>Proboscia alata</i>	present	present			
<i>Pseudo-nitzschia pungens</i>	present	present			
<i>Amylax triacantha</i>					
<i>Dinophysis acuminata</i>	present	present		present	present
<i>Dinophysis norvegica</i>			present	present	present
<i>Gymnodinium</i> cf. <i>vestificii</i>	common		present		
<i>Heterocapsa rotundata</i>	common	present	present		present
<i>Katodinium glaucum</i>				present	
<i>Prorocentrum minimum</i>	present	present	present	dominant	present
<i>Ebria tripartita</i>	very common	present			present
<i>Hemiselmis virescens</i>	common	common	common	common	common
<i>Plagioselmis prolonga</i>	common	common	common	common	common
<i>Teleaulax</i> spp.	common	common	common	common	common
<i>Pyramimonas</i> spp.	common	common	common	common	common
<i>Chrysochromulina</i> spp.	common	common	common	common	present
<i>Anabaena</i> sp.				present	
<i>Aphanizomenon</i> sp.	present	present	present	present	present
<i>Nodularia spumigena</i>		present		present	present
Choanoflagellates			very common		