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Lars Edler, Ann-Turi Skejvik

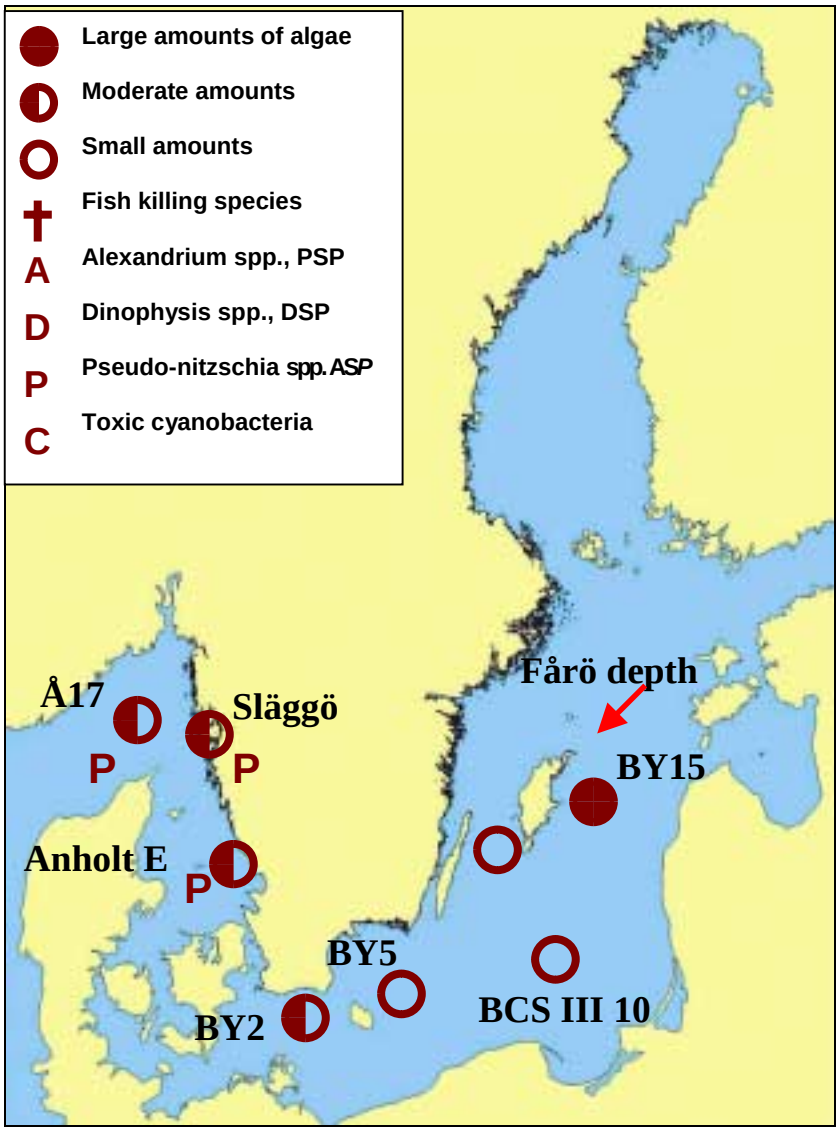
ALGAL SITUATION IN SWEDISH MARINE WATERS

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 *Protoperidinium* 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**
Asterionellopsis glacialis	common	very common	very common
Chaetoceros affinis		present	
Chaetoceros constrictus	present		
Chaetoceros contortus	common	common	common
Chaetoceros curvisetus	common	very common	very common
Chaetoceros decipiens	present	present	present
Chaetoceros laciniosus	present	present	present
Chaetoceros similis			present
Chaetoceros socialis f. radians			common
Dactyliosolen fragilissimus	present	present	present
Ditylum brightwellii	common	common	common
Guinardia flaccida	present		present
Leptocylindrus danicus	present	present	
Proboscia alata		present	present
Pseudo-nitzschia delicatissima-group	common	very common	very common
Pseudo-nitzschia pungens	common	very common	very common
Rhizosolenia hebetata	present	present	present
Rhizosolenia styliformis	present	present	
Skeletonema costatum	present	present	present
Thalassionema nitzschioides		present	present
Alexandrium tamarense	present		
Ceratium furca	common	common	common
Ceratium fusus		present	present
Ceratium lineatum		present	present
Ceratium longipes		present	present
Ceratium tripos	common	common	common
Dinophysis acuta		present	present
Dinophysis norvegica			present
Heterocapsa triquetra		present	
Prorocentrum micans	present	present	present
Protoperidinium brevipes			present
Protoperidinium crassipes			present
Protoperidinium depressum	present	present	
Protoperidinium divergens		present	present
Protoperidinium oblongum			present
Protoperidinium steinii			present
Scrippsiella trochoidea	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 prolonga*, *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

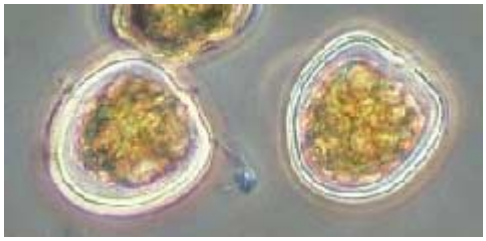
Cyanobacteria were almost absent at this station and the saline diatoms had not reached this far into the Baltic. The large diatoms as *Chaetoceros danicus* and *C. impressus* were more common than at the previous station, as were D. *acuminata**, *D. norvegica** and *Prorocentrum minimum**.

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