

## **Fish egg- and larvae survey in the North Sea during March 2003**

### **Introduction**

A survey for ichthyoplankton was performed in the North Sea during 5-19 March 2003, with the Norwegian research vessel "Haakon Mosby". On board were Roald Sætre (cruise leader), K. Hansen, L. Rey and M. Johannessen. The coverage was carried out between 54-59<sup>0</sup>N and 121 stations were taken. On each station the watermasses were profiled with CTD, and vertical sampling was performed with VP-2 nets from the bottom to the surface. A total of 10222 eggs and 2145 fish larvae were caught and 17 different species were identified. All fish larvae were sorted out of the samples, measured and identified onboard the ship, while the rest of the samples were fixed in formaldehyde. In the lab the fish eggs were sorted out, they were measured and staged to one out of six different substages dependent on the embryonic development of the egg. Eggs were identified to species based on size (egg diameter), oil globules, colour or pigmentation of the embryo. If eggs could not be identified they were categorised to with or without oil globule and put into 0.2 mm size groups (e.g. 1.0-1.19, 1.2- 1.39, 1.4-1.59 mm).

One of the main problems is to separate young stages of cod and haddock eggs. Close to hatching their species specific pigmentation makes them separable. The present results are based on the older stages. The abundance of these are heavily reduced compared to newly spawned eggs due to high natural mortality. In this report the results on abundance of cod-, haddock-, plaice- and unidentified eggs in size group 1.4-1.59 mm are presented.

### **Results**

Very few cod eggs were found during the survey. The few eggs that were positively identified as cod were found in low concentrations in scattered areas as shown in figure. 1.

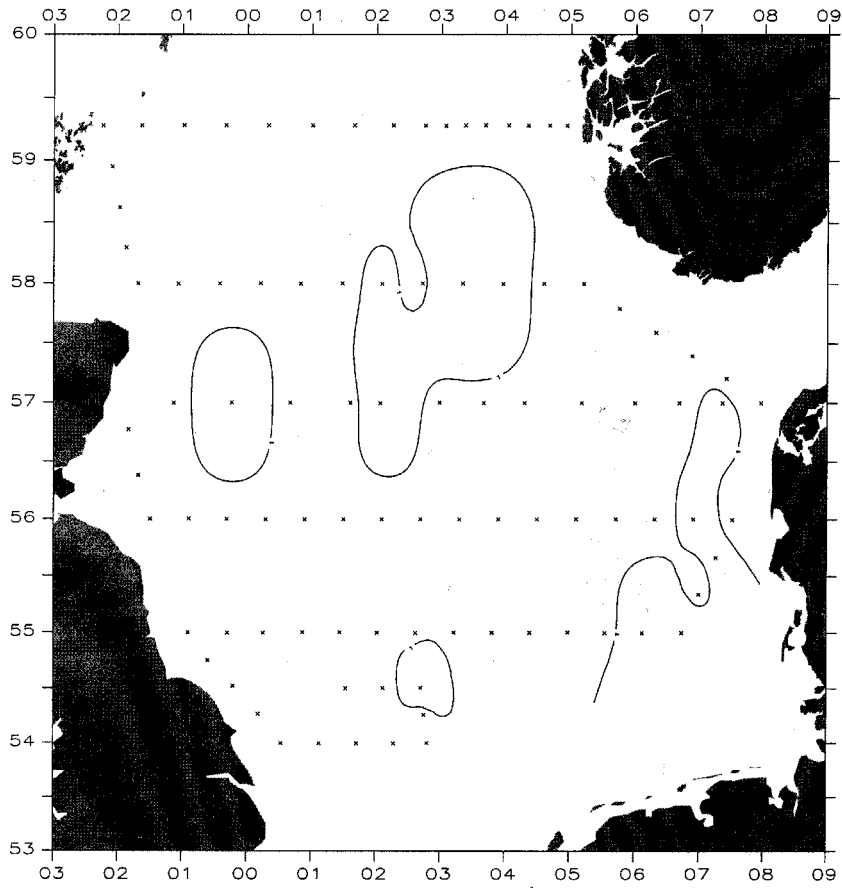


Figure 1. Distribution of cod eggs in numbers per m<sup>2</sup> observed during a survey with RV “Haakon Mosby”, 05-19 March 2003.

Much more haddock eggs were found especially in the northern part of the area with peak concentrations along the Scottish coast (figure 2).

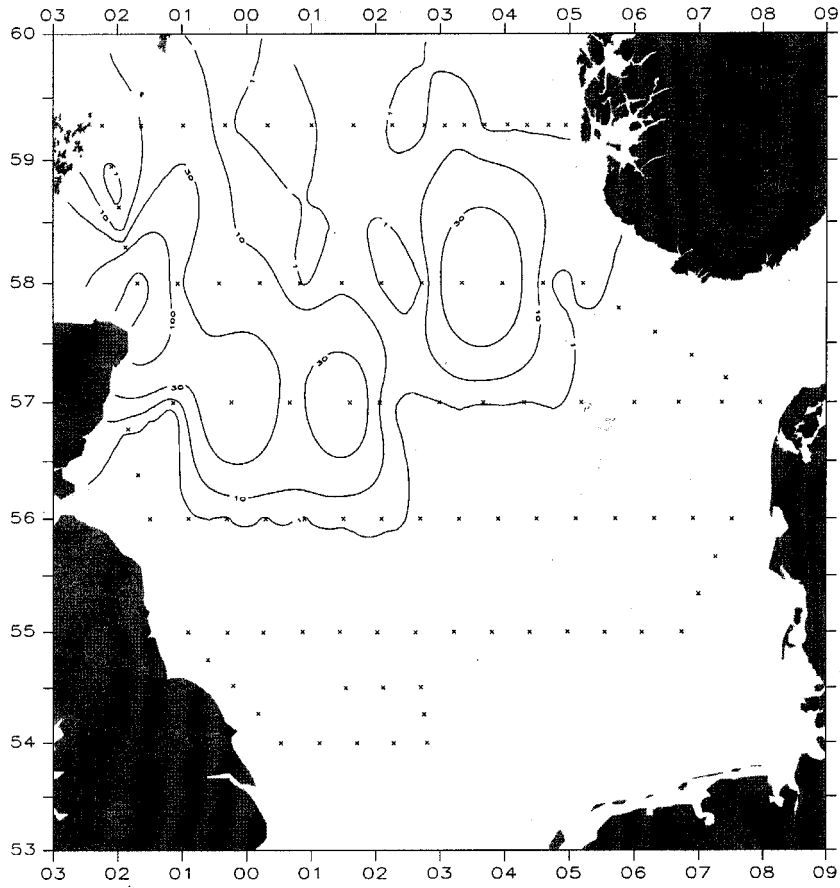


Figure 2. Distribution of haddock eggs in numbers per  $m^2$  observed during a survey with RV "Haakon Mosby", 05-19 March 2003.

Unidentified egg in size group 1.4-1.59 mm were found in the same area and most of them might probably have been haddock (figure 3).

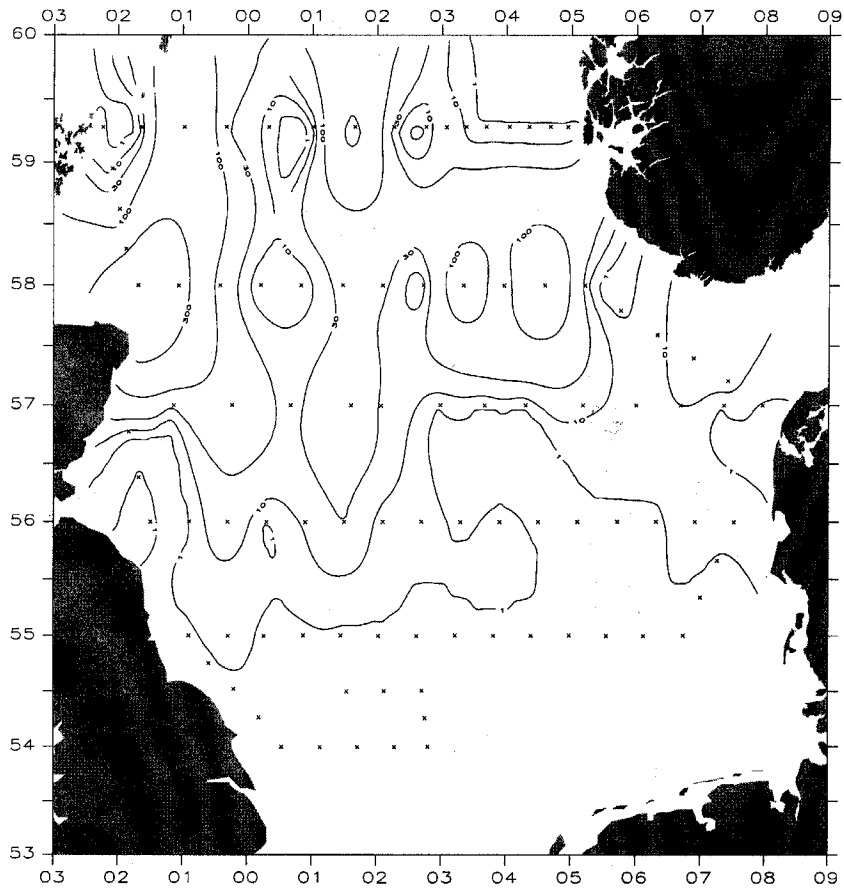


Figure 3. Distribution of cod like eggs in the size group 1.4-1.59 mm in numbers per m<sup>2</sup> observed during a survey with RV “Haakon Mosby”, 05-19 March 2003.

There were only found a few plaice eggs. They were found in scattered concentrations along the Danish coast, in the central part of the North sea and up along the coast of UK and Scotland (figure 4).

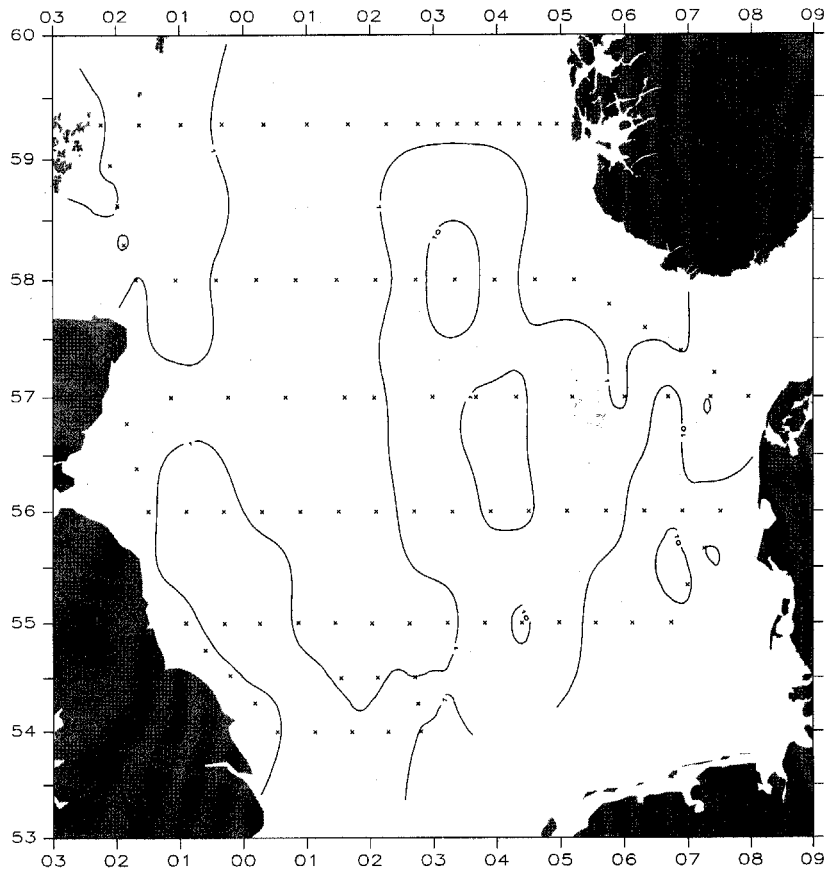


Figure 4. Distribution of plaice eggs in numbers per m<sup>2</sup> observed during a survey with RV “ Haakon Mosby”, 05-19 March 2003.

For more information about this set of data contact K. Bakkeplass, P. Fossum or R. Saetre

25.06.03  
Petter Fossum