

R1/6

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FRV Clupea

Cruise 1093C

## Report

17-24 May 1993

## Personnel

T Howell	HSO
S Thain (Miss)	SO
F Armstrong	SO
M Kelly (Miss)	(Visitor)

## Objectives

1. To carry out a survey of the scallop stocks on the east coast of Scotland.
2. To compare sonar information from the Roxann system with the results of scallop dredging and grab samples.
3. To collect scallop shells for study on comparative growth areas.

## Out turn days per project

FBA1 - 8 days

## Narrative

The scientific staff joined FRV "Clupea" at Fraserburgh at 1000 on the 17 May. Departure was delayed until 18 May because of fuelling and scientific equipment problems. Dredge hauls in statistical rectangles 44E7, 45E7, 44E6, and 45E6 were completed between 18 and 21 May. It was necessary to go into Wick for water on 21 May and Clupea was fog bound until 1200 the following day. Rectangles 46E7, 46E8, 45E8, and 44E8 were completed before Clupea returned to Fraserburgh on 24 May.

## Results

The positions of the 30 dredge hauls made during the trip are shown in Figure 1. The results of the dredge sampling within each square are shown in Figure 2 including the number of hauls, the number of scallops caught along with their length and age frequencies. Also shown are the mean catch rates for each square which ranged from 4/hr to 162/hr.

Data was collected throughout the cruise using the "ROXANN" system which gave information on bottom type, in particular whether the bottom consisted of silt, mud, sand, gravel, rock or a mixture of these. Problems with the system were experienced in depths greater than 60 metres and were attributed to the use of the ship's echo-sounder. Useful data were gathered in the shallower parts of the survey and these are being compared with grab sample data.

During the cruise scallop shells were retained from each statistical rectangle for a study on growth rates. Figure 3 shows the Von Bertalanffy growth curves for scallops from each rectangle.

T Howell

15 March 1994

Figure 1 Haul Positions during East Coast Scallop Survey

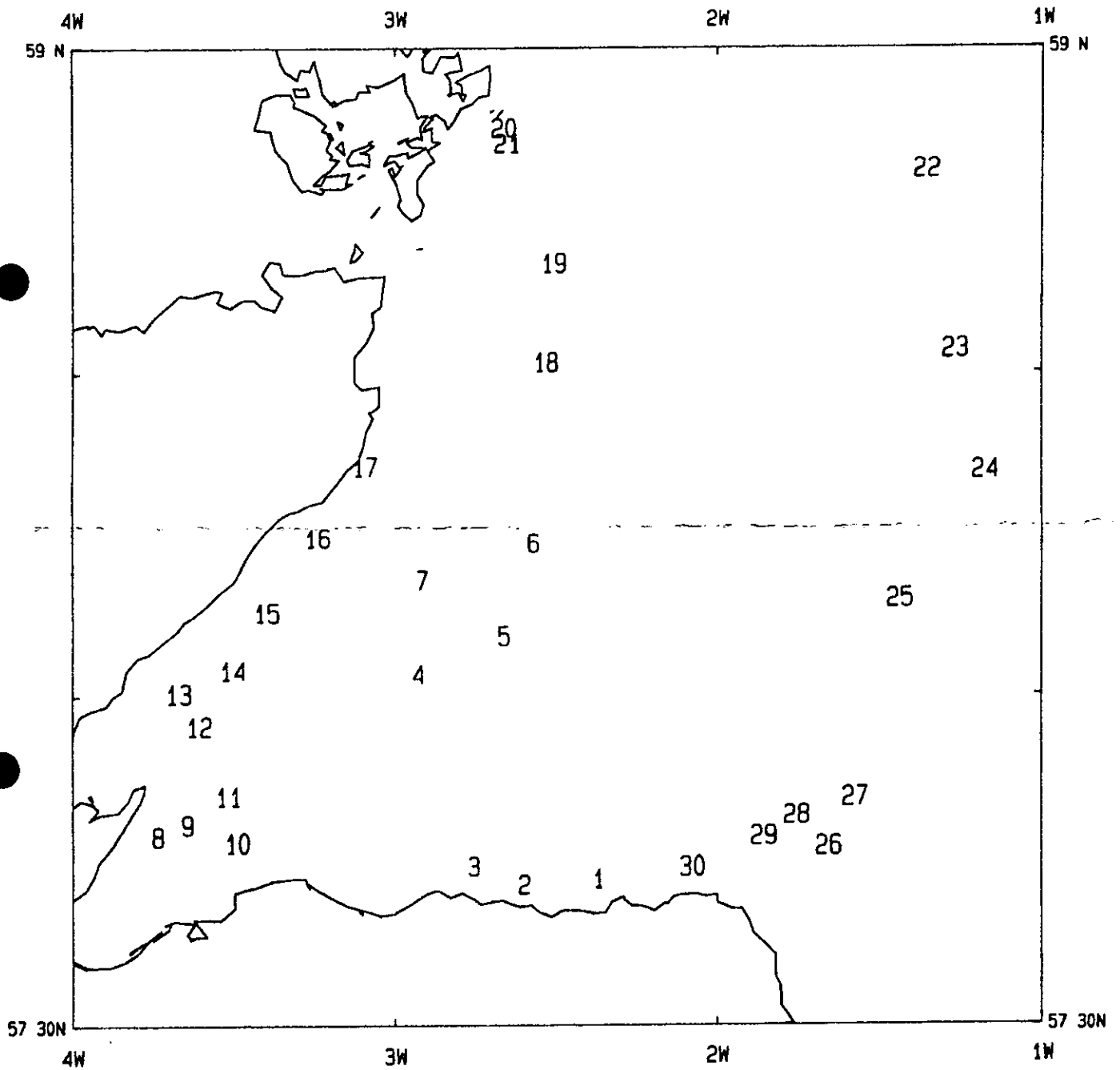
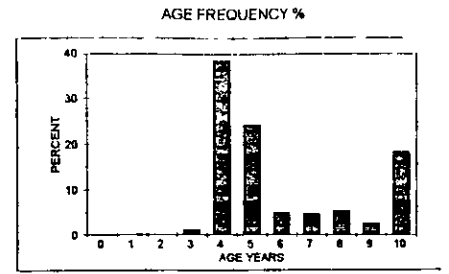
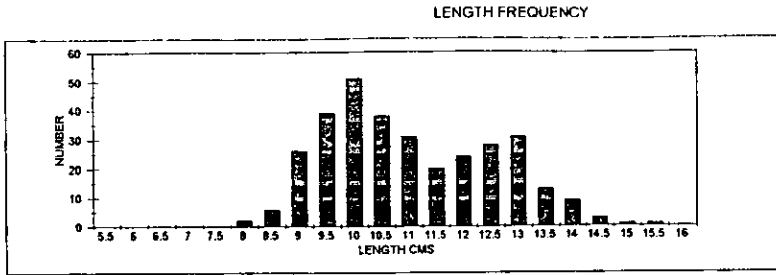
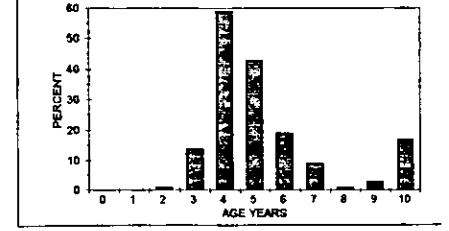
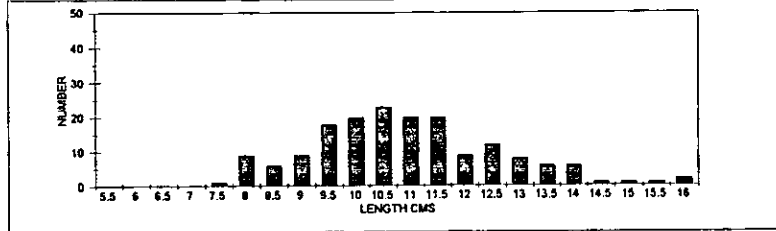


FIGURE 2 LENGTH AND AGE OF SCALLOPS SUMMARISED BY STATISTICAL RECTANGLE

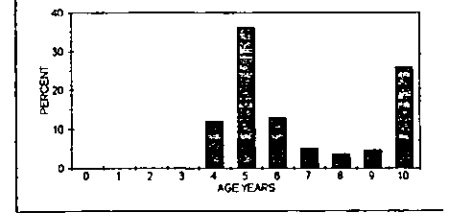
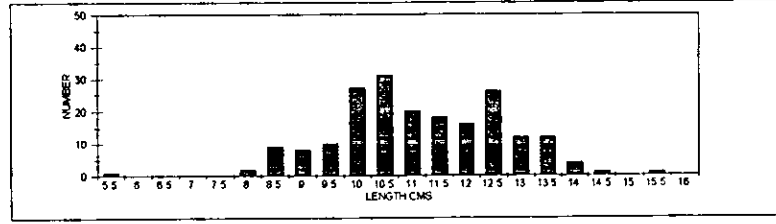
Stat square 44E7  
 No of hauls 4  
 No caught 323  
 - Port 186  
 - Starboard 137  
 No/Hr 162



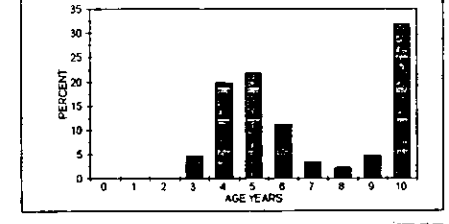
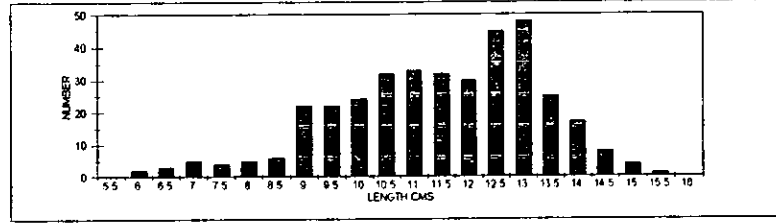
Stat square 45E7  
 No of hauls 4  
 No caught 172  
 - Port 109  
 - Starboard 63  
 No/Hr 86



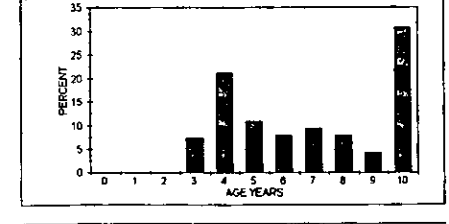
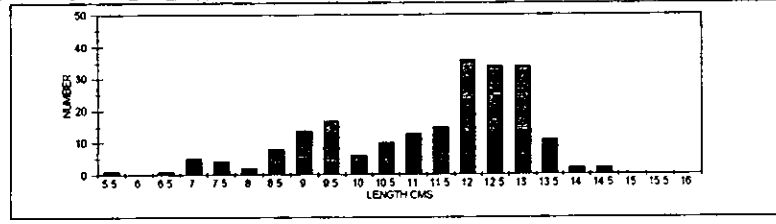
Stat square 44E6  
 No of hauls 5  
 No caught 198  
 - Port 124  
 - Starboard 74  
 No/Hr 79



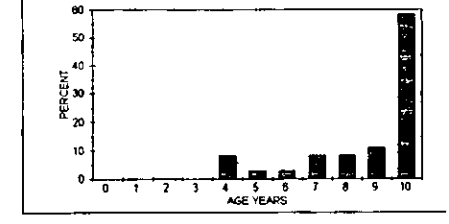
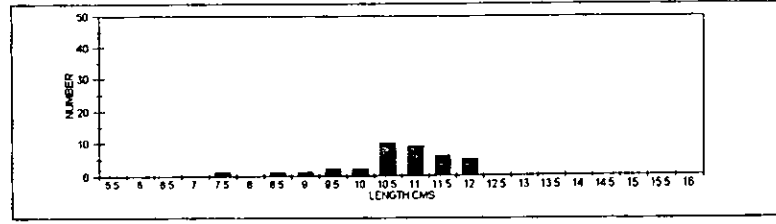
Stat square 45E6  
 No of hauls 5  
 No caught 368  
 - Port 224  
 - Starboard 144  
 No/Hr 147



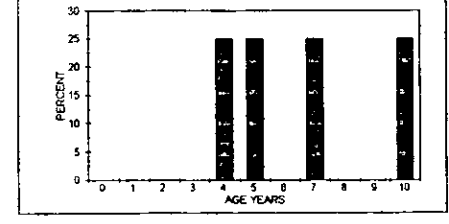
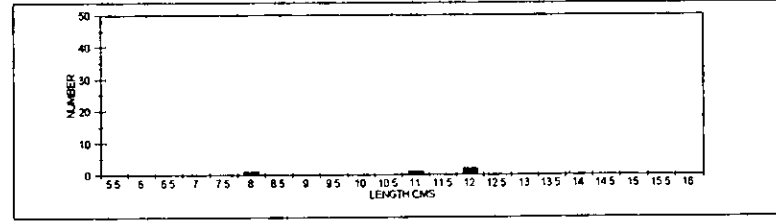
Stat square 46E7  
 No of hauls 4  
 No caught 215  
 - Port 135  
 - Starboard 80  
 No/Hr 108



Stat square 48E8  
 No of hauls 2  
 No caught 37  
 - Port 29  
 - Starboard 8  
 No/Hr 37



Stat square 45E8  
 No of hauls 2  
 No caught 4  
 - Port 3  
 - Starboard 1  
 No/Hr 4



Stat square 44E8  
 No of hauls 5  
 No caught 250  
 - Port 110  
 - Starboard 140  
 No/Hr 100

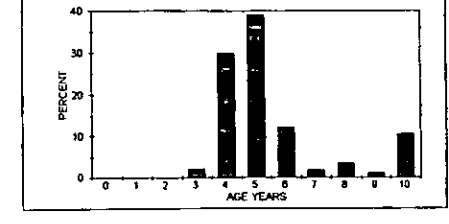
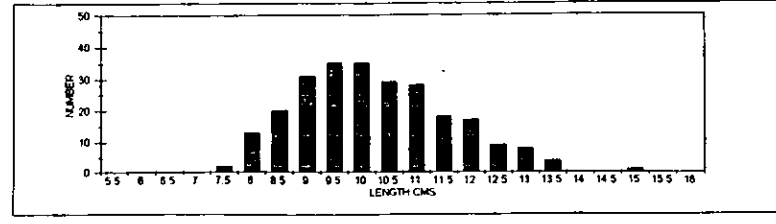
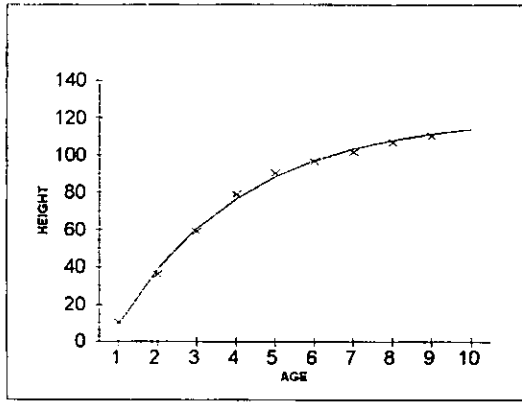
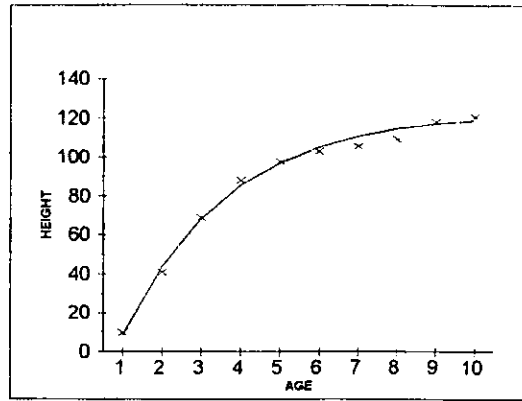


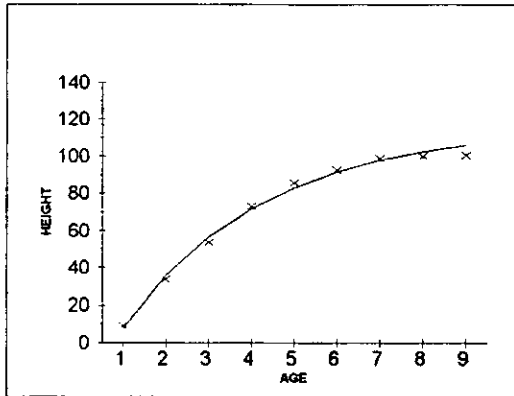
FIGURE 3. VON BERTALANFFY GROWTH CURVES.



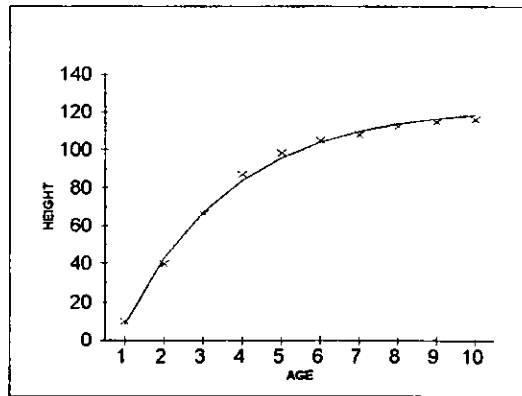
44E7



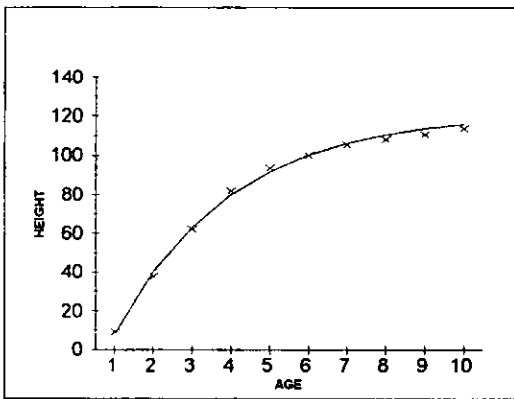
45E7



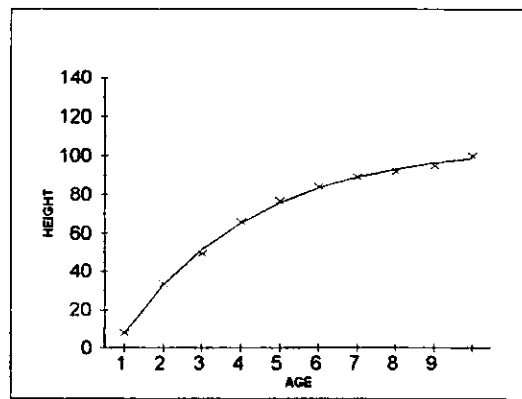
44E6



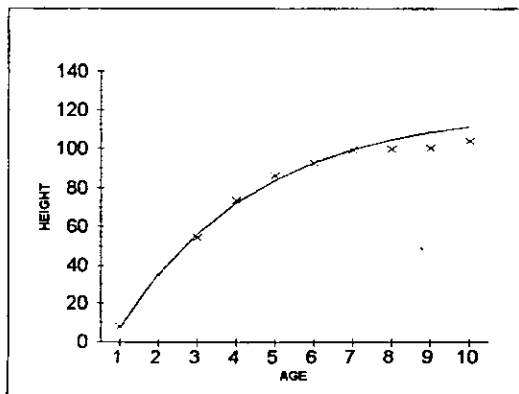
45E6



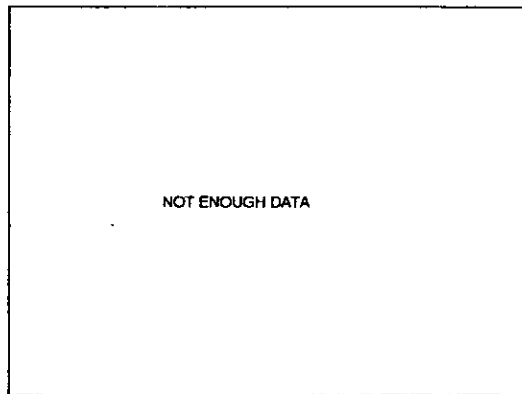
46E7



46E8



44E8



45E8