

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1991 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES : CRUISE 8

STAFF:

J D Riley, SIC  
C L Whiting  
R Ayers  
K Ramsay  
B F M Harley  
P M Hudson  
A W K Emery ) 16-20 August only  
T Egan, ROXANNE Ltd )

DURATION:

Left Lowestoft 1300 hrs 16 August 1991  
Docked Lowestoft 1230 hrs 31 August 1991

All times are Greenwich Mean Time

LOCALITY:

Southern Bight, English Channel

AIMS:

1. To measure the distribution and abundance of commercial flatfish species by means of a beam trawl survey as part of an ICES coordinated programme covering parts of Divisions IVa-c and VII d&e.
2. To collect additional biological data on sole, plaice, dab, turbot, brill and *Cancer pagurus*.
3. To describe the seabed sediments and epibenthos using photographic and trawl bycatch data.
4. To test the ROXANN acoustic seabed discrimination system against photographic and grabbing methods.
5. To add to the 1990 data on comparative gear efficiency indices between the standard heavy 4 m DFR beam trawl and the 8 m beam trawl used by the Belgian and Netherlands Fishery Institutes, pulled by the RV BELGICA, if the priority of the surveys for both cruises allow.
6. To bring back to the laboratory alive:-
  - a) adult sole for fecundity experiments
  - b) spider crabs and other benthic organisms for UEA.

**NARRATIVE:**

During the steam down to the first beam trawl survey station off the North Foreland, the ROXANN acoustic system was tested and a start was made on its calibration against Day grab samples. This continued during the survey of the English coast in Division VIId until Mr Emery and Mr Egan were put ashore at Bournemouth on 20 August. On completing the English part of the survey that day, a steam overnight allowed for a start on the French coast early on 21 August. With most of the routine French stations samples taken by late on 24 August the CORYSTES sailed to the Baie de Mt St Michel where during the following two days 15 stations were surveyed and sampled using the heavy 4 m beam trawl. During the steam back through the Channel the remaining 4 stations in VIId were sampled en route to a rendezvous with RV BELGICA in the outer Thames early on 28 August. During that day 10 simultaneous parallel tows were made with the BELGICA on mainly soft grounds yielding a predominance of sole amongst the flatfish. Histological samples and live fish were collected in Rye Bay on 29 August before the beam trawl survey was resumed in IVc west of 2°E on the steam back to Lowestoft. No time was lost for weather or gear damage.

**RESULTS:**

1. The stations shown in the attached cruise plot were sampled in the routine way. Modification of the positions to be sampled in 1992 will involve one station being deleted in rectangle 27E9 and one in 27E7; additional stations will be added in E7 27 & 26. In VIId 90% of the sole and 63% of the plaice in corrected catches were 1-3 gp fish (excluding 0 groups).

Sole were caught in all stations in VIIe (Baie de Mt St Michel) though in low numbers. No plaice were taken there.

2. a) Otoliths were taken from all sole, turbot and brill caught in VIId and from a sample of plaice and dabs. Sole otoliths were also taken from sole caught in VIIe as tabulated below.

		Sole	Plaice	Dab	Brill	Turbot
VIId	English side	372	216)			
			)	82	3	1
VIId	French side	456	272)			
VIIe	French side	59				
		Total 1461				

These were all aged at sea, allowing for the ALD's to be prepared before the end of the cruise.

b) The sole otoliths were, in addition, measured as part of the study on the value of the otolith as an indicator of overall fish size.

c) A total of 136 liver/gonad samples were taken from sole in VIId in a study of condition in relation to fecundity.

d) All crab caught on the cruise were measured and some from VIId frozen and returned to the laboratory. Catches of crab were, however, well below last years levels.

3. The non-fish trawl catch was evaluated by estimating the abundance of key species and by a photographic record. The routine photography from the beam trawl appeared to work satisfactorily when deployed in the English Channel stations.

4. The ROXANN acoustic system was calibrated and demonstrated. It was decided to refer the decision whether to purchase the system to a meeting of prospective users and RSG2, to be held soon.

5. Only one day's comparative fishing was possible with RV BELGICA due to other demands on the ship's time. First indications are that on softer grounds the heavier CORYSTES beam trawl out-fishes the lighter BELGICA gear/metre beam length.

6. Adult sole, spider crabs and other benthic organisms were returned alive to the laboratory in line with the cruise aim.

John D Riley SIC  
4 September 1991

SEEN IN DRAFT :

M J W  
R J G

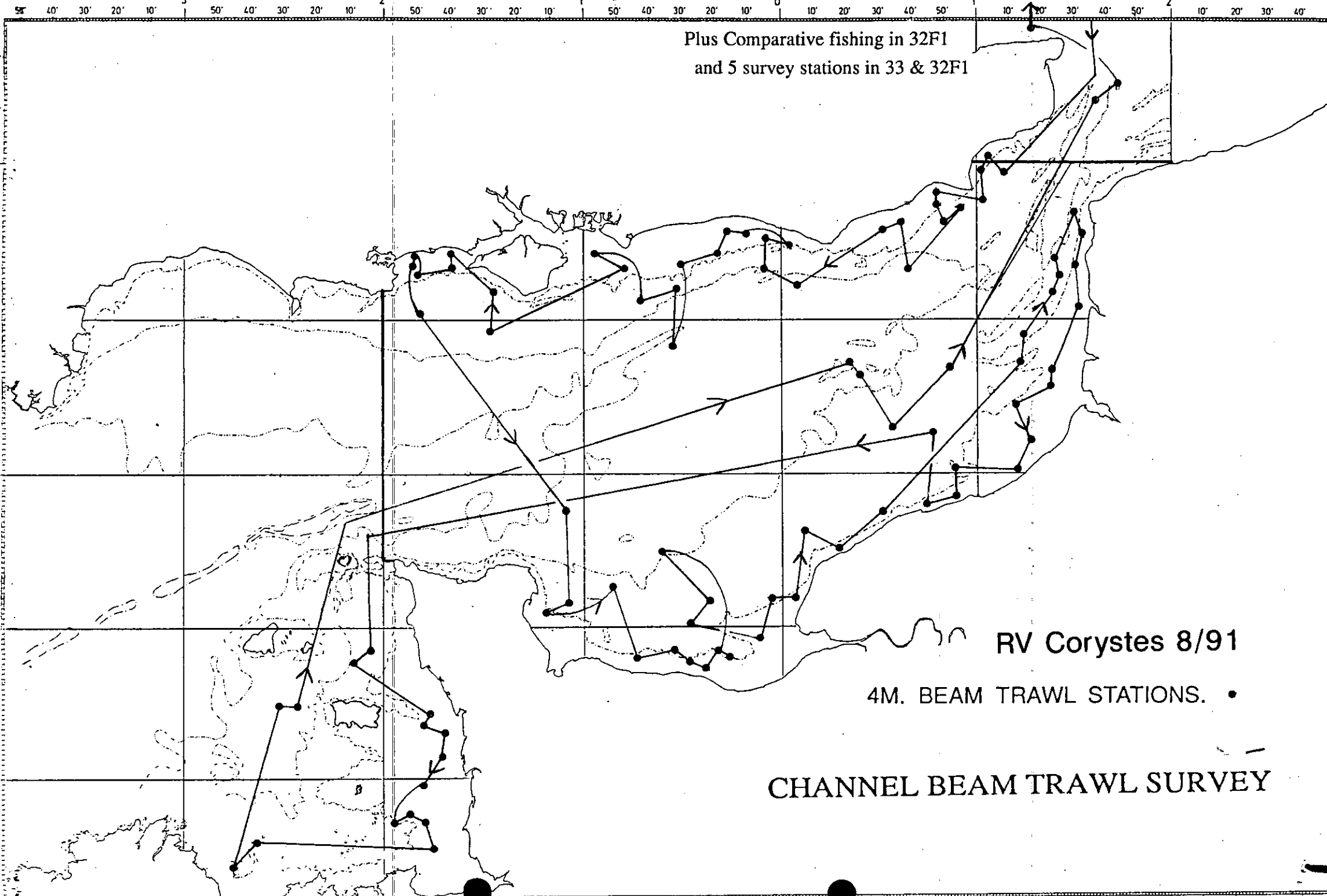
INITIALLED :

J G S

DISTRIBUTION :

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Plus Comparative fishing in 32F1  
and 5 survey stations in 33 & 32F1



RV Corystes 8/91

4M. BEAM TRAWL STATIONS. •

CHANNEL BEAM TRAWL SURVEY

E6

E7

E8

E9

F0

F1

F2