

Cruise reports 2001- RV Cirolana
CRUISE: CIRO 7_01

STAFF: C.G.BROWN
J.M.ELSON
M.SMITH
S.R.LOVEWELL
A.LAWLER
T.LOCKE

DURATION: Left Lowestoft 10.24 h 4 October.
Arrived Lowestoft 09.30 h 17 October.

LOCALITY: North Sea (English NE Coast)

AIMS:

1. To conduct surveys of Nephrops burrow densities on the Farn Deep Nephrops grounds, 55° 35' - 54° 45' N and 1° 30' - 0° 40' W, by underwater TV to :
 - Examine spatial patterns in the distribution of burrows at different spatial scales and to measure variance for replicated counts, by replicating three times ten different clusters of six stations each.
 - **Evaluate Nephrops abundance for comparison with previous years by surveying the remaining main stations used to evaluate the fishery on an annual basis.**
 - To sample all remaining stations previously sampled in any Nephrops TV survey
1. **To backup the TV survey with a QTC survey to establish the ground type.**
2. Possible collection of sediment samples by Day grab at selected stations to establish ground proofing for QTC.

NARRATIVE:

CIROLANA departed from Lowestoft on 4 October at 10.24 h but developed engine problems that necessitated her returning to Lowestoft on the evening tide. Repairs were completed overnight, she then departed from Lowestoft on 5 October at 10.30 and sailed to the northern part of the survey area. Work commenced the following morning at 06.30 h. A further 24 h were lost because of bad weather on 7/8 October. The video camera fitted to the sledge was found to be faulty before deployment and had to be replaced. The video recorder was also not working from the outset and the spare had to be used. However these problems were soon rectified.

The sledge was initially deployed over the side as directed by SIGs but because it could not be towed there was not sufficient control over the movement of the sledge. The SIG representative was consulted as to the best and safest way to work the sledge down the ramp. The appropriate gear was rigged and trials were run. Care was taken when retrieving the sledge and a member of the crew and a member of the scientific staff were present at the ramp, to direct the winch operator, so that the sledge would not foul the edge of the ramp. There were no problems throughout the survey. The cable was checked at the end of the survey and no damage was sustained, there was no damage to the sledge or attached equipment resulting from the method of deployment. A total of 284 TV tows was completed resulting in all 269 stations being sampled and preliminary Nephrops burrow counts were made over a ten minute part of the tow which was recorded on videotape for further detailed analysis at the laboratory.

RESULTS:

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1. All three priorities of aim one were completed :

- The cluster survey where 10 clusters of 6 stations were all towed 3 times each giving a total of 180 tows.
- The survey of the remaining main stations used to evaluate the fishery on an annual basis, 65 stations.
- All remaining stations previously sampled in any survey, 24 stations.

This resulted in a total of 269 stations (Fig. 1). As some of these stations had to be sampled more than once because of poor underwater visibility it resulted in a total of 284 tows with the sledge-mounted TV camera. The full extent of the Nephrops fishing ground was covered and excellent results were obtained for the majority of video recordings. Clear pictures were obtained of the substrate, Nephrops burrows and emergent Nephrops. Preliminary Nephrops burrow counts were made at each TV station. All burrow counts, usually of 10 minutes duration, were recorded for further laboratory analysis. Preliminary results suggest that the highest densities of burrows were found in the areas where high catches of Nephrops are normally made.

No QTC was available for this cruise which meant that aims 2 and 3 were not valid.

CLIVE BROWN
(Scientist-in-Charge)
16 October 2001

INITIALLED:

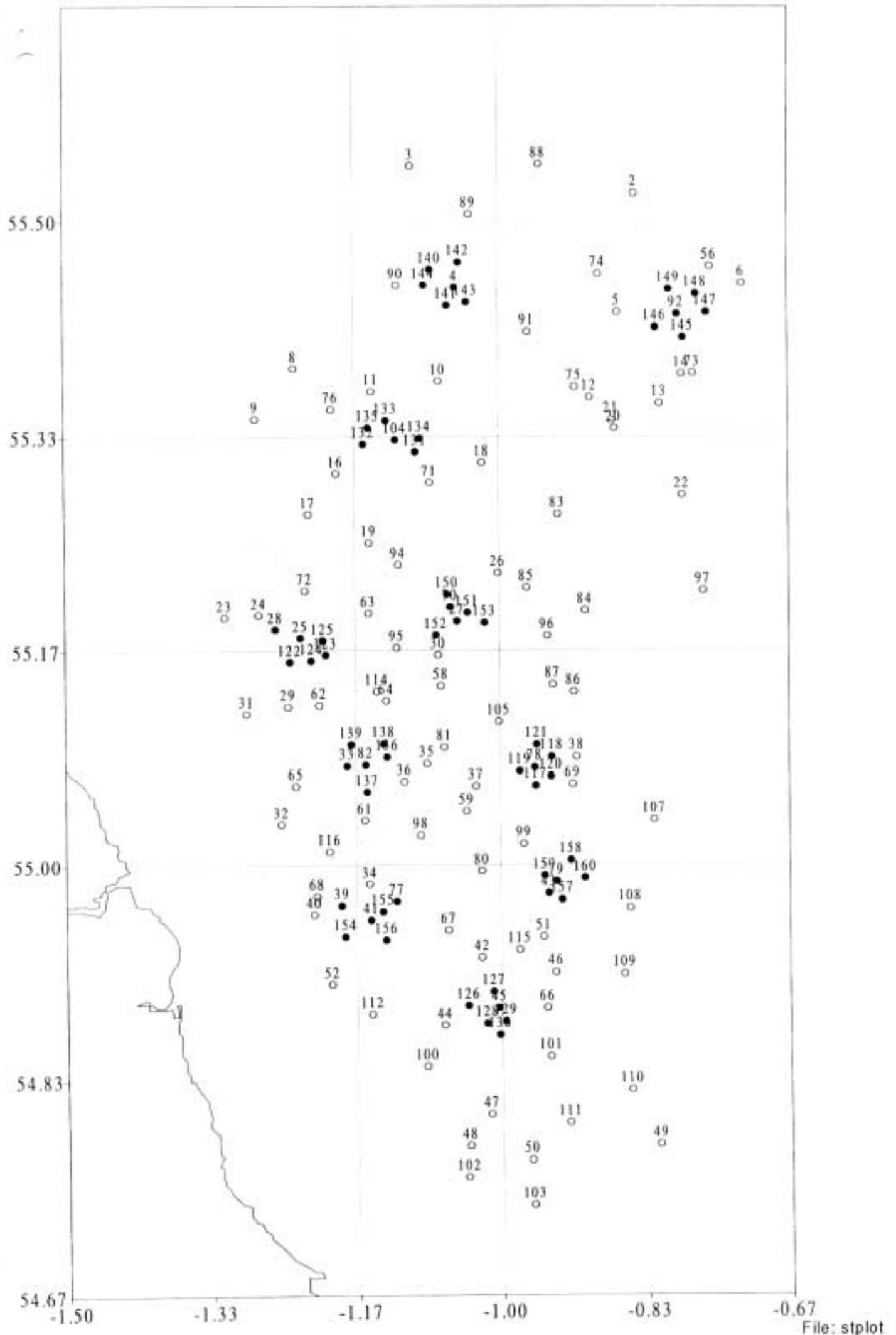


FIG. 1