

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

1972 RESEARCH VESSEL PROGRAMME

REPORT: R V TELLINA : CRUISE 9a

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF: P J Warren  
P F Millican

DURATION: Left Lowestoft 0900 h 20 September  
Arrived Hartlepool 1000 h 2 October

All times are British Standard Time

LOCALITY: Farn Deep

- AIMS:
- 1 Survey of the abundance and distribution of Pandalus and Nephrops stocks.
  - 2 Trials of a new shrimp trawl based on a "Gulf of Mexico" design.
  - 3 To continue trials with the experimental double codend Nephrops trawl.
  - 4 Examination of Nephrops catches for size composition, sex ratio and reproductive condition.
  - 5 Collection of shrimp samples for size composition, sex ratio and reproductive condition. Collection of samples for Dr Boddeke, IJmuiden, for study of gonad development as recommended by the Pandalus Working Group.

Narrative:

After a short delay due to strong winds, TELLINA left Lowestoft at 0900 h 20 September and arrived at North Shields 0800 h 21 September, where scientific staff joined the ship. In fine conditions good progress was made on the survey work, and aims 1, 4 and 5 were substantially completed by 27 September. Mr Millican went ashore at North Shields in the evening of 25 September and returned to Conway. Two days, 28-29 September, were devoted to trials with the Gulf of Mexico trawl, but on 30 September and 1 October, the weather deteriorated and offshore work was not possible. At 0500 h 2 October the ship sailed to test the double codend trawl but met commercial vessels returning to port and after a further poor weather forecast, the cruise was terminated.

TELLINA steamed south and docked at Hartlepool at 1000 h 2 October. Staff and crew returned to Burnham and Lowestoft respectively.

RESULTS:

- 1 Twenty five trawl stations were completed to determine the distribution and abundance of Pandalus and Nephrops. Pandalus were found to be in low concentrations over a wide area of the Farn Deep. The best catch was made in deep water (50 fathoms) and was calculated to be about 35 kg per trawling hour.

There was no commercial fishing activity during the period of the survey. In contrast, the Nephrops stocks were being heavily fished by English and Scottish vessels. Commercial landings and survey results indicated that Nephrops are abundant in the area and the population contains a high proportion of large individuals.

2 Preliminary results from two days' work with the Gulf of Mexico trawl suggested that it might be valuable in the Pandalus and Nephrops fisheries. While it had only a 40 foot headline, this Gulf trawl took catches of Pandalus and Nephrops which compared favourably with those taken with the 16 fathom wing trawl of similar mesh size. The bycatch of small whitefish appeared to be less when the Gulf trawl was used.

3 Bad weather precluded further work with the double codend Nephrops trawl.

4 A total of 9,100 Nephrops were taken with the wing trawl and the Gulf trawl. Of these, 1704 were measured and sexed. Sex ratio was calculated to be:

Males 60.4 per cent, females 39.6 per cent. Berried females accounted for only 1.5 per cent of those sexed.

5 Samples of P borealis were collected over a wide area for Dr R Boddeke, Ijmuiden. Pandalus were also sampled for an examination of size composition, sex ratio, and reproductive condition at the Burnham Laboratory.

P Warren  
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SEEN IN DRAFT: WB

INITIALLED: A J L

DISTRIBUTION:

Basic List

Mr Warren  
Mr Millican