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

1972 RESEARCH VESSEL PROGRAMME

REPORT: RV TELLINA: CRUISE 4b

STAFF

M S Rolfe
P A Hardiman (until 4 May)
D Mills (Sandwich Student - after 4 May)

DURATION

Left Lowestoft 0830 h 26 April 1972

Arrived Lowestoft 0600 h 11 May 1972

All times are Greenwich Mean Time

LOCALITY

English Channel - Eastern End

AIMS

1. To examine, by diving and grabbing, the benthos in and around suction dredge workings in the gravel dredging area off Hastings.

2. To collect a fish sample, by trawling for Dr J Portmann.

3. To survey the queen stocks off Newhaven.

NARRATIVE

TELLINA left Lowestoft at 0830 h 26 April and arrived at Newhaven on the following morning where Messrs Rolfe and Hardiman went aboard.

On 28 April and 1 May searches were made for queens off Newhaven using a 6 ft queen dredge, but no stocks were found. In addition, two hauls were made with a 5 ft escallop dredge on a small area where a local vessel was fishing commercially. Four further hauls were made on grounds to the west but no escallops were caught.

29 and 30 April were lost due to bad weather.

On 2 May TELLINA made a rendezvous with CLIONE at 1130 h off Hastings. The weather was too poor for grabbing and the divers were not available.

At 0700 h 3 May TELLINA commenced grabbing over the cloverleaf hole, which had been marked by a dahn on the previous day. Considerable time was lost relocating the hole as the anchor had dragged overnight. Despite optimum weather conditions, good samples from within the hole could not be obtained with either a $1/10m^2$ Smith McIntyre grab or a $1/10m^2$ Van Veen grab. After $2\frac{1}{2}$ hours an anchor dredge was deployed and an excellent sample obtained. However, none of the 6 further attempts yielded good results. At 1130 h a conical dredge was used and 7 samples were obtained though only one was without gravel from the sides of the hole. From 1245 h to 1430 h, 4 samples were collected from the cloverleaf hole by the Diving Team, but further dives were prevented by the increased tide.

On 4 May, two diver collected samples were obtained from the Experimental Mark 3 hole before the weather deteriorated. Mr Mills replaced Mr Hardiman at Newhaven at 2130 h.

On 5 May a bucket dredge survey was made in the area surrounding the holes; quantitative sampling was not possible due to the hardness of the substrate.

On 6 May four large samples were obtained from the Main Experimental hole by diving and an underwater recording made of the topography of the hole and the nature of the infill. Deteriorating weather and increased tide prevented further grabbing or dredging.

Following the difficulties experienced in obtaining satisfactory samples of infill material by grabbing, it was suggested that TELLINA might anchor up-tide and upwind and then drift back until over the hole to be worked. On 7 May, in ideal conditions, 7 hours were spent attempting this operation, grabbing firstly with a Smith McIntyre grab and then with a Van Veen grab, but the venture was fruitless.

Arrangements had been made to receive fuel on 8 May and although the tanker failed to arrive, TELLINA had to remain at Newhaven as she had less than a day's fuel available and bad weather was forecast.

On 9 May TELLINA was again weatherbound and took on fuel while in port. Mr Rolfe and Mr Mills went ashore at 1330 h and TELLINA sailed for Lowestoft at 0600 h, 10 May arriving at 0600 h 11 May.

RESULTS

a. No queens were obtained.

b. Two hauls of 27 and 39 escallops per 30 minute haul were made on a small commercially worked ground off Rottingdean. 76% of the catch was over 128 mm (5 in) in length; 20% were over 153 mm (6 in) in length.

c. A sample of escallops was sent to Dr Portmann, but no trawling was done.

d. A subsample for sediment analysis was taken from each of the benthic samples obtained. The remainder was sieved underwater through 2 mm and 0.5 mm meshes. Fauna picked out of the 2 mm sievings was added to the 0.5 mm sievings and retained for later analysis.

The following notes have been made after a superficial examination of the collected samples:-

1. The sea bed surrounding the holes

   Sediment: Consistently stony gravel aggregate.

   Fauna: Typical hard bottom community, including Alcyonium digitatum, Ebalia tuberosa, Eupagurus bernhardus, Porcellana longicornis, Galathea spp., Ophiothrix fragilis, Pomatoceros triqueter and attached Hydroids and Polyzoans.

2. Main Experimental hole

   Sediment: Fine silty sand and fine shell with compacted fines from exposed seams. Black stones and gravel on the screes.

   Fauna: Very sparse: Ophiura albida, Nucula hanleyi and Abra alba present in small numbers. No worms.

3. 'Cloverleaf' hole

Sediment: Fine sand and shell, some gravel on edges.

Fauna: Sandy bottom community with additional gravel-dwelling fauna, presumably from settled scree material; Cphiura albida, Psammechinus miliaris, Echinocyamus pusillus, Nucula hanleyi, Glycera sp., Nephtys sp, Ophelia sp. also fauna listed under 1.

4. Experimental Mark 3 hole

Basically similar to Cloverleaf hole in sediment and fauna.

M S Rolfe
19 July 1972

SEEN IN DRAFT: W Burroughs (Master)

INITIALLED: AJL

DISTRIBUTION:

Basic List

R R Dickson
M S Rolfe
P A Hardiman
D Mills