

Provisiona;: Not to be quoted without reference to the writer

R. V. TELLINA

Report for Cruise 6/1967

(The cruise was divided into three parts, a, b and c)

Aims

1. The main aim of the cruise will be to study the recruitment of O-group plaice into Red Wharf Bay and their subsequent mortality. This will be done by regular sampling every few days on standard lines off the beach and parallel to the beach with the 4 metre beam trawl and push net.
2. A study of predation on O-group plaice by the collection of larger fish for stomach content analysis using the otter trawl and beach seine as well as the 4 metre beam trawl.
3. Tank experiments on predation and digestion rates (part a).
4. Trials of air-lift apparatus for sampling benthos and plankton (a).
5. Gear trials to assess the efficiency of the 4 metre and 2 metre beam trawls on the smallest O-group fish (b and c).
6. Comparison of catches of metamorphosing post-larvae with the beam trawl and the sledge net towed by CLIONE (b) (see also programme of CLIONE Cruise 4).
7. To service the Plessey current meters off Red Wharf Bay as necessary.

Part (a)

Staff:	C. T. Macer)	19-25th May	Duration:	19th-25th May
	M. E. Hurst)			
	B. H. Holford)	23-24th May		
	M. R. Vince)	shore-based - diving		

TELLINA left Falmouth on the morning of 17th May and, after sheltering briefly at Newlyn, arrived at Holyhead at 0800/19th where the scientific staff joined. She remained at Holyhead due to freshening westerly winds until the next day, when she steamed to Red Wharf Bay. Work proceeded here for the next five days and with almost continuous strong to gale S.W. winds, a further 1½ days were lost. Work ended on 25th and the boat docked at Port Dinorwic on 26th.

Results

Aim 1. Standard parallel hauls in 1½, 2 and 4 fathoms. (chart datum) and perpendicular hauls at transects 1, 3 and 5 were made regularly. In the latter tows, about sixty O-group plaice per haul were caught, the length range being 10-15 mm. Three later-marked I-group plaice were caught.

Aim 2. There was insufficient time to use the otter trawl or the beach seine but some stomachs were examined. The most interesting discovery was the occurrence of a I-group plaice (9 cm) in the stomach of an angler fish (22 cm) and a I-group dab (9 cm) in the stomach of another angler (20 cm).

Aim 3. These experiments were hampered by the fact that it was very difficult to keep the O-group plaice alive, since they were so small and fragile. In the only successful experiment, Carcinus and Portunus readily ate dead plaice (10-15 mm) but none that were still alive were seen to be eaten.

Aim 4. Tests on the Barnett Air-lift apparatus showed it to be a very useful instrument for benthos sampling. A flow rate of 180 gallons/minute up the 3" pipe was achieved. It was not tried on plankton.

Additional aim. Tests with the new magnet-operated beam trawl speed and distance measurer were completely satisfactory.

and three on 28th and on Transect 4 seven depths were sampled on 23rd. Push netting was done at low water on the 26th at Benllech (Transect 1). It is not possible yet to give any indication of the numbers of O-group fish in the tows. O-group plaice were common in all tows in less than three fathoms and small, newly-metamorphosed dabs were abundant in most tows between 2 and 6 fathoms.

The maximum numbers of I-group plaice were caught in tows between about $4\frac{1}{2}$ and $7\frac{1}{2}$ fathoms. From the beam trawl and push-net catches 1,540 I-group plaice were examined and three of these were latex-marked fish from last September's releases.

Aim 2. The otter trawl was used on 24th and on the second haul in 7 fathoms (about $4\frac{1}{2}$ fth. C.D.) about 8 baskets of plaice and other fish were caught in forty minutes. Many of the plaice were I-group and II-group fish. From this haul stomachs from seven species of fish were preserved for subsequent examination. Some I-group fish from various depths inshore were also preserved.

Aim 5. On one occasion a series of two 4 metre beam trawls, two 2 metre beam trawls and a push net were towed off the beach at Benllech, one fastened behind the other. Some O-group dabs and plaice were caught in all the nets but I-group fish were caught only in the two 4 metre nets: plaice - 81 in the first and 12 in the second and dabs - 67 and 4.

J. Corlett
6th July 1967

Seen in draft: W. B.

Initialled: A. J. L.

Distribution:

Dr. Cole	Mr. Wollaston
Mr. Lee	Mr. W. Baird, D.A.F.S.
Captain Aldiss	Mr. Glover
Dr. Cushing	Hydrographic Dept.
Mr. Burd	Dr. Lucas
Mr. Bolster	Director, N.I.O.
Mr. Cattley	Dr. Peachey
Mr. Corlett	Mr. Shelbourne
Mr. Garrod	W.F.A.
Dr. Harden Jones	Mr. Macer
Mr. Iles	Mr. Hurst
Dr. Jamieson	Mr. Holford
Mr. Margetts	Mr. Vince
Mr. Trout	Mr. Riley
Mr. Holden	Mr. Walker
Dr. Purdom	Mr. Blacknell
Mr. Bridger	Fishery Officer, Conway
Mr. Mitson	Mr. Hepper, Conway
Mr. Tungate	Dr. Crisp } Menai Bridge
Mr. Williams	Mr. Rees }
Mr. Wood	Mr. Colman } Port Erin
Mr. Adams	Mr. Bowers }
Mr. Mills	Mr. Craven (2)
Mr. Kay	Harbourmaster, Menai Bridge
Miss Conolly	Mr. Jones, Port Dinorwic
General Lab.	Mr. McIntyre, Aberdeen
Lab. Registry	Mr. Birkett
Library (2)	Mr. Harding
Mr. Whiting	Mr. A. Jones
Mr. Simpson	
Dr. Reynolds	
Chief Inspector	
All District Inspectors	
Fisheries Registry	
Skipper Burroughs	