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

1988 RESEARCH VESSEL PROGRAMME

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

REPORT : Charter Double-Beam Trawler (Brixham)

STAFF : M R Vince  
B F M Harley

DURATION : 21-25 November

LOCALITY : Western English Channel

AIMS:

1. To compare catch rates of 6m and 4m beam trawls.
2. To measure all sole, plaice, 'monk' and lemon sole caught and take stratified otolith samples from those species.
3. To collect samples of Byzoa and Hydrozoa from any hauls on which they occur.
4. To record details of any crab (Cancer pagurus) caught.

NARRATIVE :

Staff travelled to Brixham by van on 20 November and the 4 metre beam trawls were transported by lorry the same day. All gear was loaded at the shipyard of Philip and Son on the river Dart the next morning. The BOGEY ONE sailed for fishing grounds situated about 7 miles off Bridport at 1145 hours. Fishing commenced at 1620hrs and continued until midnight. A total of 37 one hour tows were made by 1400hrs 25 November when the vessel returned to the river Dart to unload. Staff returned to Lowestoft the following day.

VESSEL, GEAR AND FISHING AREA

The vessel was the same as used a month earlier for the annual western English Channel sole survey. The gear was the same port side 6 metre beam trawl used for the survey. The starboard side gear was a MAFF owned 4 metre beam trawl. Both gears were rigged with similar chain mats, flip-up ropes and 40mm cod-end liners. The latter were removed from both after haul 21. Tows were made in areas where sole and plaice were more numerous in depths of water ranging from 14 to 38 fathoms.

RESULTS.

1. The comparison of 6m and 4m beam-trawl catch rates was a continuation of the work started at the end of the earlier sole survey. This latest trial covered a greater range of bottom substrate and depth of water. The first 21 hauls carried out in an average depth of 17 fms resulted in the 4m gear catching 33% more sole than the 6m. Only on four occasions did the larger trawl outfish the smaller and then only by one fish per haul. Plaice catches for the same 21 hauls resulted in the 4m outfishing the 6m by 25%, with only three hauls when the 6m caught more.

The remaining 16 hauls were carried out on grounds in an average depth of water of 36 fms. These later tows were fished without the 40mm cod-end liners and the overall mean catch rate for sole was virtually the same for both sets of gear. For plaice, however, the 4m still outfished the 6m gear but reduced to 14%. A considered opinion on the relative efficiency of the gear must await full analysis.

2 All commercial species of fish caught were measured on all hauls. The following otolith samples were taken: sole 74, plaice 105, 'monk' 28, lemon sole 19.

3. A few samples of Bryzoa and Hydrozoa were collected for later examination for scallop spat. A small sample of adult scallop was retained for age analysis.

4. A total of 38 crab (Cancer pagurus) and 2 lobster were measured and sexed.

5. Two pairs of mature female plaice gonads were collected and preserved for Mr J Harwood.

#### FISHING ACTIVITY:

With settled weather most of the Brixham fleet were at sea, however, fishing was generally slack mainly due to the predominating easterly winds. Many beamers were starting to catch the seasonal influx of cuttle fish. The sprat shoals which were moving progressively west were becoming more difficult to locate.

M R Vince  
7 December 1988

INITIALED : D J G

#### DISTRIBUTION :

Basic list+  
M R Vince  
E F H Harley  
D Symonds  
Skipper Lovell (BOGEY ONE)