

**THE CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE
SCIENCE LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33
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2007 CHARTER VESSEL PROGRAMME

REPORT: CARHELMAR 2/2007

STAFF: T Woods
G Burt

DURATION: 9-16 October 2007

LOCATION: Western English Channel (VIIe)

AIMS:

1. To carry out a beam trawl survey for plaice and sole using the standard grid of station positions (see Figure 1).
2. To collect length distributions and otolith samples of cod, plaice, sole, anglerfish and lemon sole.
3. To collect details of all crab (*Cancer pagurus*), lobster and scallop caught.

NARRATIVE:

Gear (fishing gear, CTD and 5kg POLS balance) was loaded onboard on the 8th October having been transported from Swansea following the completion of Cory2/07. Beams were taken aboard the Carhelmar and checked and made ready for sea. Two 4m beam trawls (Cefas numbers 2 and 3) were rigged on port and starboard sides respectively; both were fitted with 40mm liners.

After sailing from Plymouth on the morning of the 9th October, three inshore stations were sampled to the west of Start Point before heading into Lyme Bay to start sampling inshore stations on the second day. An invalid tow was recorded at the first station (B1) on day two when both nets filled with gravel and shell, resulting in the gear being towed to Lyme Regis for a diver to release the cod ends before the gear could be safely raised clear of the water and checked for damage. Over the course of two days, stations were sampled in the eastern portion of Lyme Bay. On the 12th October inshore stations in the western part of Lyme Bay were completed before the vessel turned south and Carhelmar continued to sample the offshore stations during the course of the next day. For the following two days stations were sampled to the south of Start Point before the survey concluded on the 16th October when the final station was sampled to the south east of Plymouth Sound.

The weather remained good for most of the survey apart from the final day when strengthening winds resulted in rough seas and difficult working conditions.

RESULTS:

A total of 59 stations were fished, comprising of 58 valid stations and one invalid station. The standard survey positions are shown in Figure 1. All commercial species were measured and the numbers of brown crab, lobster and scallop were taken at all stations. Figures 2 to 4 show the distribution and relative abundance of plaice, sole and monkfish. Plaice and sole were caught in similar numbers predominantly at inshore stations compared to monkfish that were caught in much smaller numbers at offshore locations. A comparison of the average annual catch rates for these species is provided in Figure 5. The catch rates for 2007 were relatively similar to averages for the survey, although the number of plaice was down slightly but remained similar to the previous two years. A total of 629 otoliths were collected by stratum for age determination purposes, together with the sex and maturity for the main commercial species namely; plaice, sole, monkfish, lemon sole and cod (Table 1).

CEFAS would like to thank the skipper and crew of the Carhelmar as well as Interfish Ltd. for their help and co-operation in the successful completion of this year's survey.

Tom Woods & Gary Burt
22 October 2007

INITIALLED: B Harley

DISTRIBUTION:

Basic list +
Tom Woods
B F M Harley
G Burt
Andrew Pillar Interfish Plymouth
J Lovell Brixham
Mr D Murphy, Skipper FV Carhelmar
Devon Sea Fisheries Committee
J Portus South Western Fish Producers Organisation Ltd.

Table 1 . The number of biological samples taken during the survey.

Species	Male	Female	Unsexed	Total
Plaice	97	183		280
Sole			298	298
Monkfish			29	29
Black-bellied monkfish			1	1
Lemon sole			17	17
Cod			4	4
Total				629

Figure 1. The Carhelmar standard survey positions.

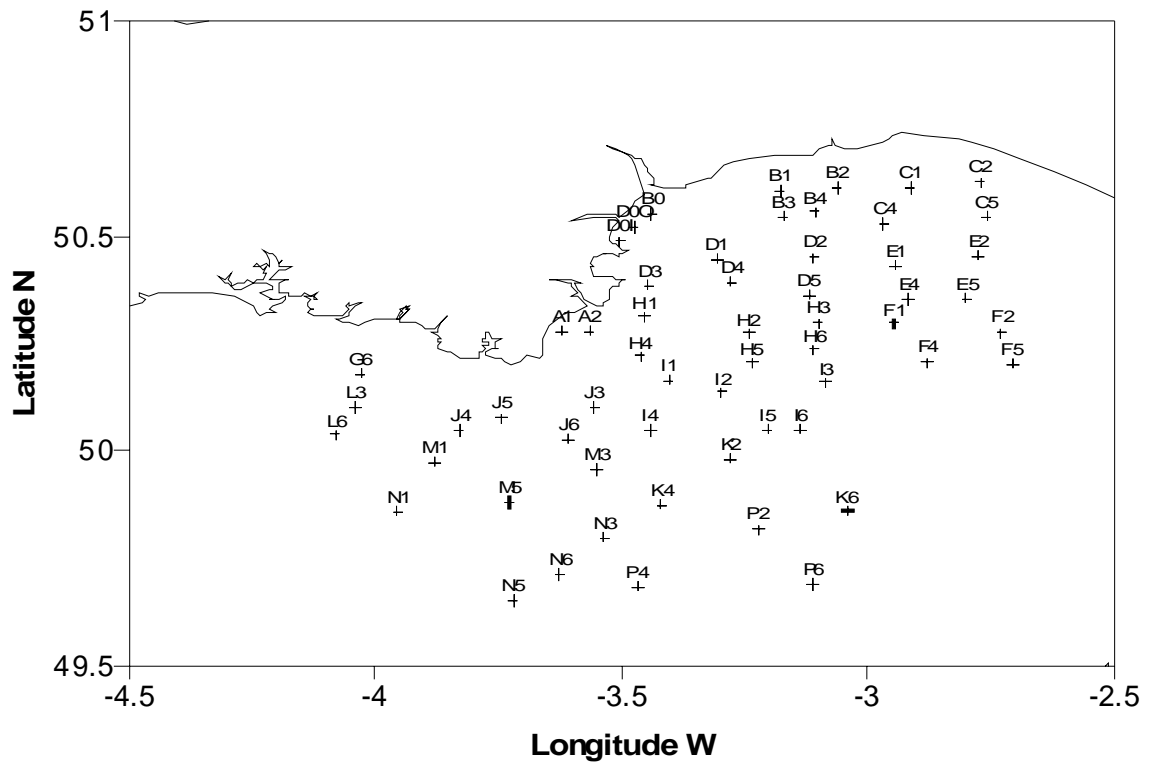


Figure 2. Distribution and relative abundance of plaice (number per tow). The maximum bubble size represents 38 fish.

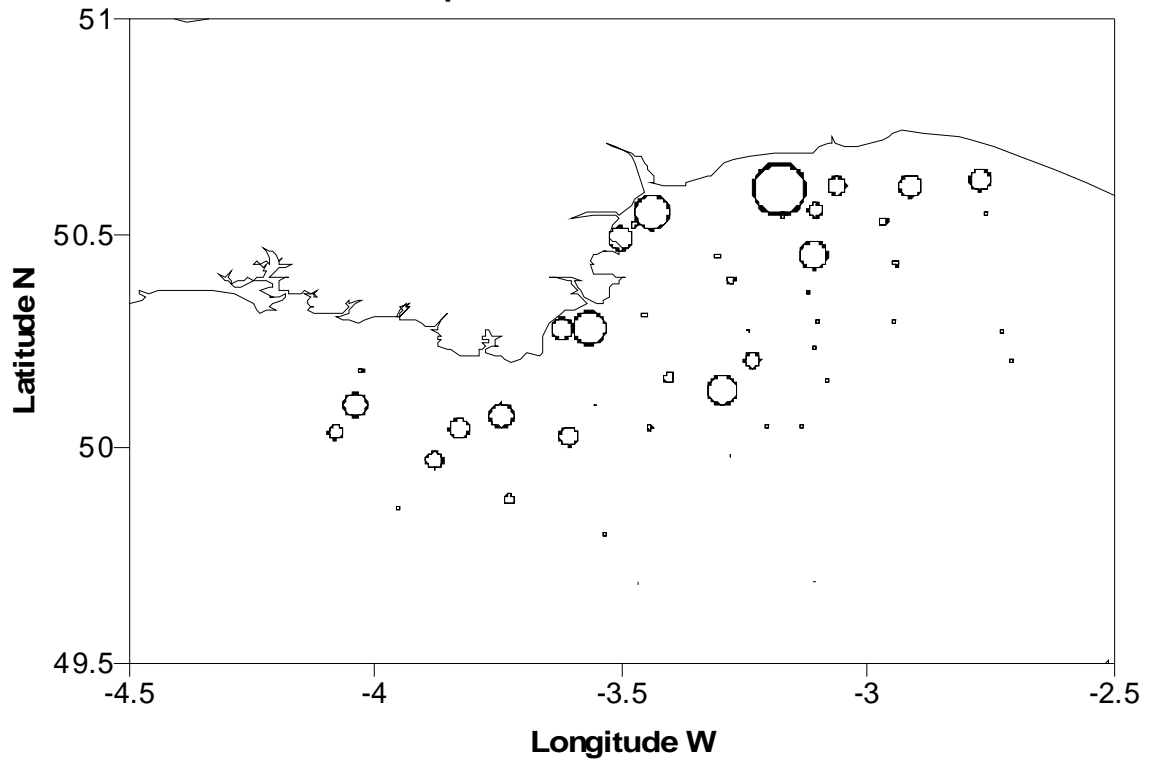


Figure 3. Distribution and relative abundance of sole (number per tow). The maximum bubble size represents 38 fish.

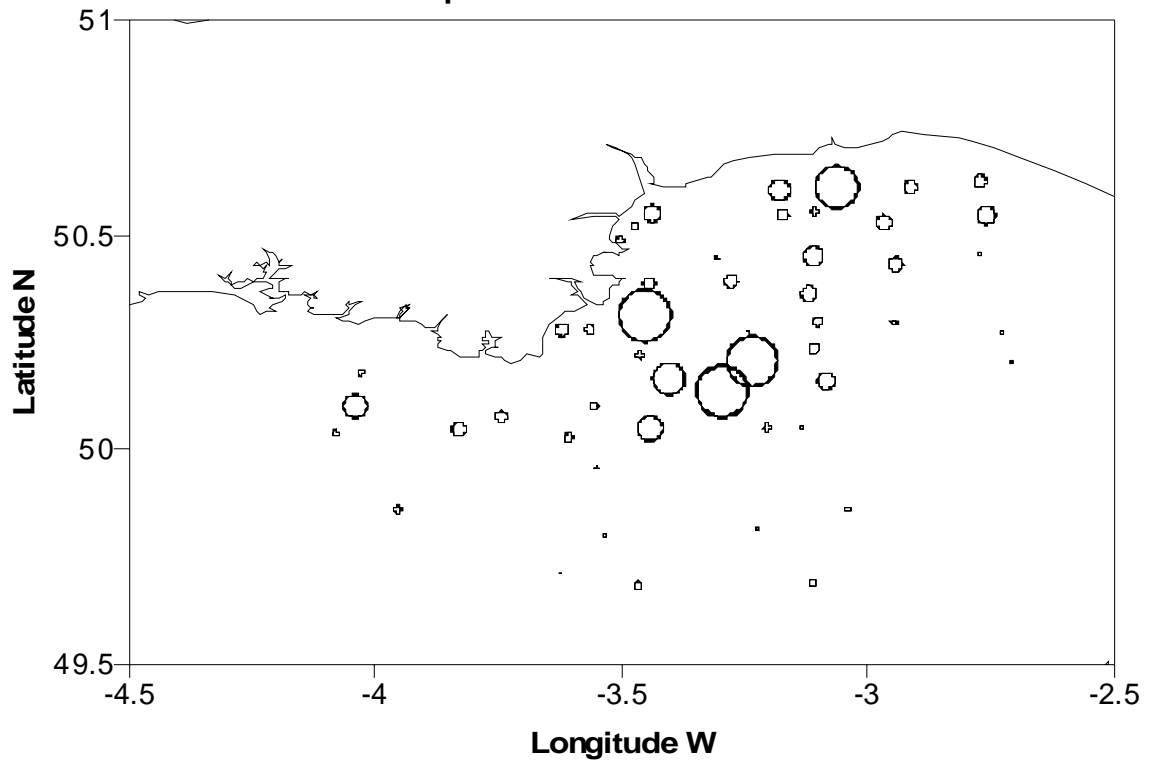


Figure 4. Distribution and relative abundance of monkfish (number per tow). The maximum bubble size represents 5 fish.

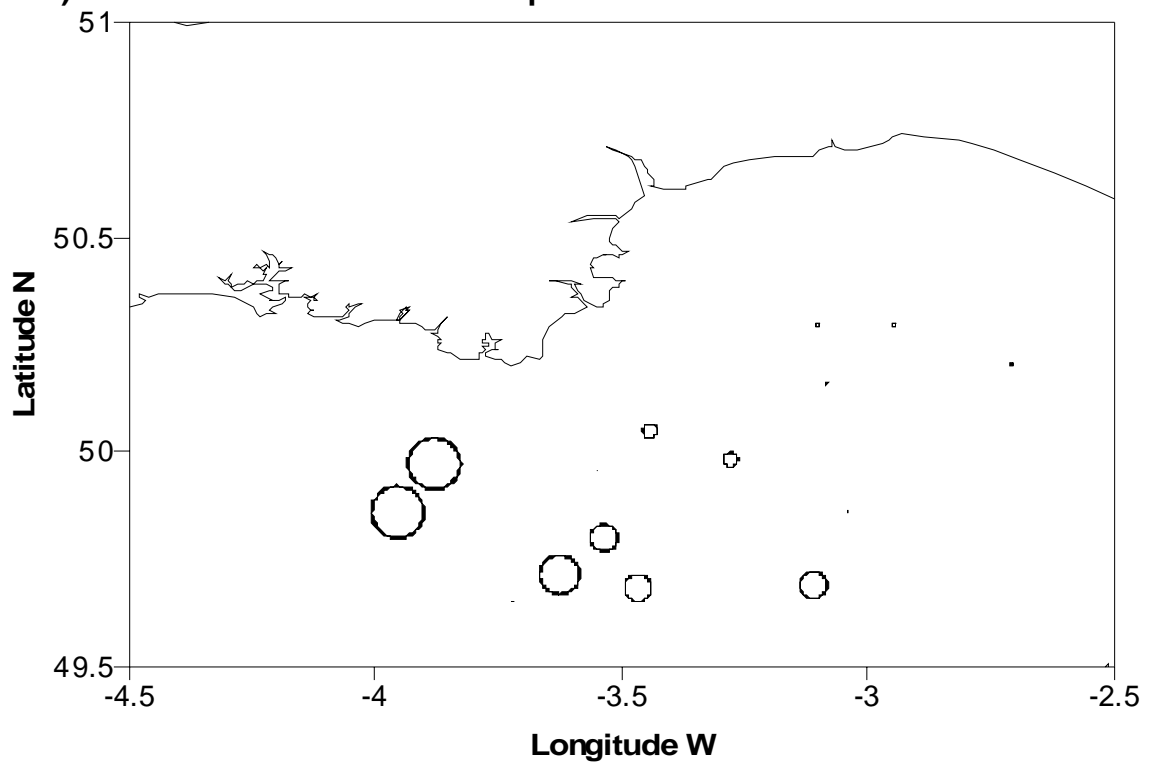


Figure 5. Relative annual abundance (average number per tow) of the major commercial species. No survey data available for 2002 and 2004.

