

**CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE
SCIENCE
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33 0HT**

2008 RESEARCH VESSEL PROGRAMME

REPORT: RV CEFAS ENDEAVOUR: SURVEY 5

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DURATION: 4 March – 17 March

LOCATION: North Sea

AIMS:

To support the Data Collection Regulations using the PHHT or 4m beam trawl depending on tow information to sample the following species in priority order:-

Megrim (10 per cm per ICES Division)
Anglers (all fish due to low catch rates)
Mackerel (10 per cm survey total)
Cod (all fish due to low catch rates)
Hake (10 per cm survey total)
Rays (10 per cm survey total)
Sole (10 per cm by stock)
Plaice (10 per cm by stock)

NARRATIVE: (All times GMT)

Cefas Endeavour sailed from Swansea at 1500h on 4 March and a shakedown tow was successfully carried out in Cardigan Bay, using the PHHT before steaming west to start the collection of survey data. On 5 March, 4 tows were fished successfully but on the second tow on 6 March, the trawl was hauled and was damaged from the belly through to the codend and the tow was deemed invalid. There was no obvious sign from the Scanmar readings to suggest when this occurred. The net was repaired by 1600h but the weather had deteriorated and no more fishing could occur that day. At daybreak the weather had moderated enough for the vessel to turn east and steamed

back towards a previously clear station. At 1311h the net was shot but when hauled 30 minutes later the net was torn from the belly and both wings and the fishing line had parted. The catch was worked up for biological samples but was entered into the fishing survey system as an additional tow. Given the still marginal weather, the decision was taken to swap over to the 4m-beam trawl. In order to do this safely, the vessel steamed to shelter and the beam was rigged ready to deploy the next morning. On 8 March, 7 successful beam trawl tows were fished before lunch, on the 8th tow of the day, survey station 16, the catch seemed small in comparison to the previous ones that day, so the beam was brought onboard and two holes were found in the belly of the net. These were repaired and the beam was successfully redeployed for a further five tows that day. Overnight the vessel steamed southwards and at daybreak fished successfully on the WCGFS prime station 3 for five valid tows. At lunchtime we steamed northwest to a clear station used on the quarter 4 IBTS survey, and deployed the 4m beam trawl gear for a further six valid tows. With a forecast of severe storm force winds, Cefas Endeavour steamed North East to a safe anchorage in Bullen's Bay in the South of Ireland. The vessel anchored there until the morning of 12 March when, with the forecast giving no moderation to the West and South Westerly gales, the decision was taken to move the vessel to the South West Irish Sea and with PHHT on, fish in more sheltered waters in this area. On 12 March, during the steam to the Irish Sea, four more PHHT stations were fished within the primary survey area. At 0600h on 13 March the PHHT was deployed and a successful tow was completed by 0700h. However, the outlook for the next 3 days had changed and given the now good forecast, the decision to return to the primary survey area was taken and the vessel steamed back into the South Western approaches, ready to deploy the gear on the shelf edge early on 14 March. The gear was deployed as planned and four valid tows were fished during the day, with the third of the day being deployed in 500m. During this station the warps from the net drums were run off to 2350m in order to respool them after they were end-to-ended in Aberdeen. Throughout the day, catch rates were not as hoped for the target species and the PHHT was swapped out overnight and the 4m beam trawl was used for the last day of fishing. On Saturday 15 March, ten valid beam trawl stations were fished and the last survey station was hauled at 1809h and the vessel headed for Swansea to dock at 0100h on Monday 17 March.

RESULTS:

One shakedown, one invalid and 48 valid tows were carried out in the primary target area (ICES Division VIIg and j). Of the valid tows, 14 were with the PHHT and 33 were with the 4m-beam trawl (see table 1). One PHHT station was fished in ICES Division VIIa Figure 1 shows a plot of the station positions for the survey. The table below (table 2) details the number of each species for which length, weight, sex, maturity and (where appropriate) age data were collected.

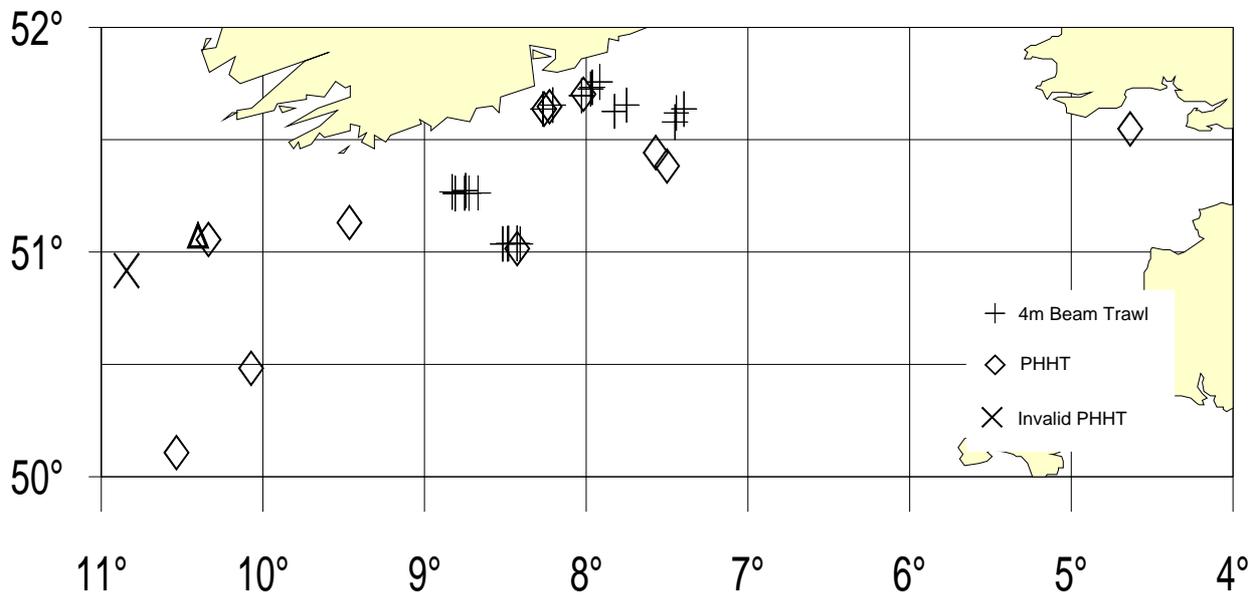
Table 1.

Gear	Valid	Additional	Invalid	Total
PHHT	14	2	1	17
4m Beam Trawl	33	0	0	33

Table 2.

Species code	Latin name	Total
BLL	<i>Scophthalmus rhombus</i>	1
COD	<i>Gadus morhua</i>	21
CUR	<i>Raja naevus</i>	3
HAD	<i>Melanogrammus aeglefinus</i>	273
HKE	<i>Merluccius merluccius</i>	285
LEM	<i>Microstomus kitt</i>	123
MAC	<i>Scombus scombus</i>	209
MEG	<i>Lepidorhombus whiffiagonis</i>	564
MON	<i>Lophius piscatorius</i>	53
PLE	<i>Pleuronectes platessa</i>	225
SDR	<i>Raja montagui</i>	14
SKT	<i>Raja batis</i>	1
SOL	<i>Solea solea</i>	18
THR	<i>Raja clavata</i>	3
TUR	<i>Scophthalmus maximus</i>	1
WAF	<i>Lophius budegasa</i>	161
WHG	<i>Merlangius merlangus</i>	348
Total		2303

Figure 1. Plot of stations fished



Length distribution for the target species are given in figures 2.1-2.9.

Figure 2.1 Mackerel LD

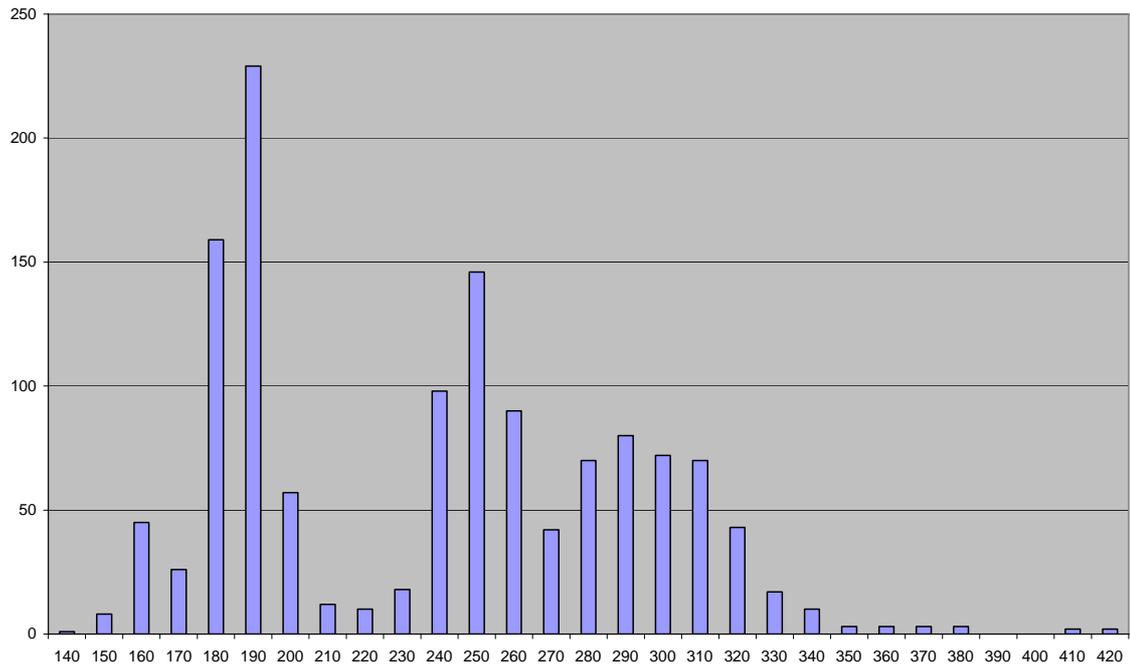


Figure 2.2 Megrim female LD.

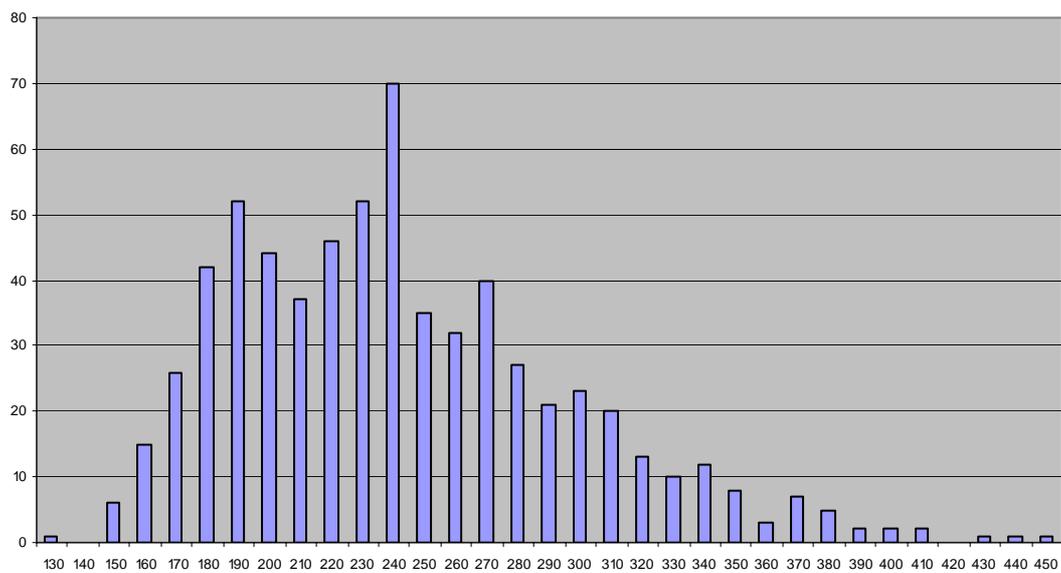


Figure 2.3 Megrin male LD

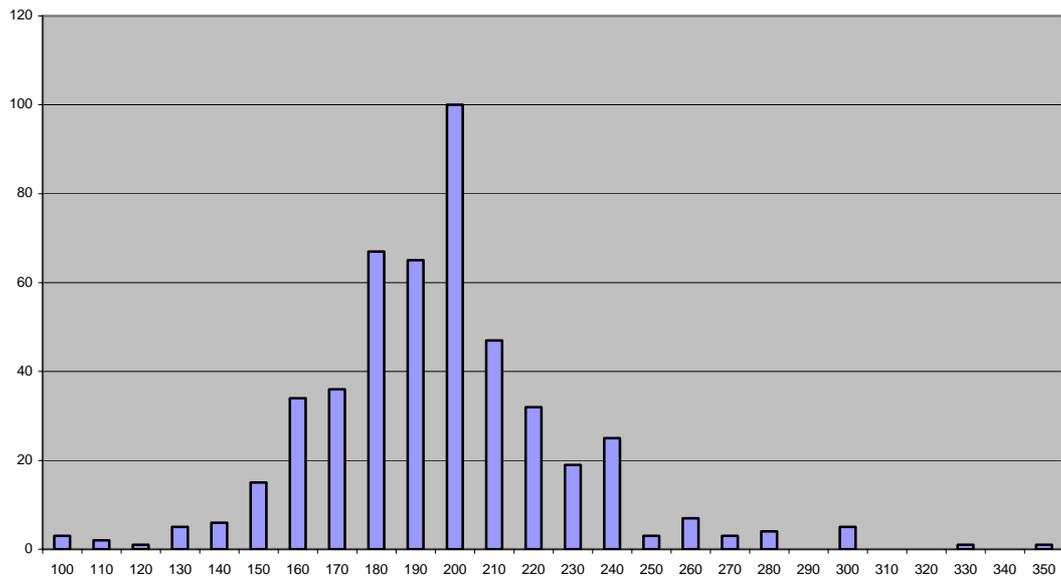


Figure 2.4 Plaice female LD

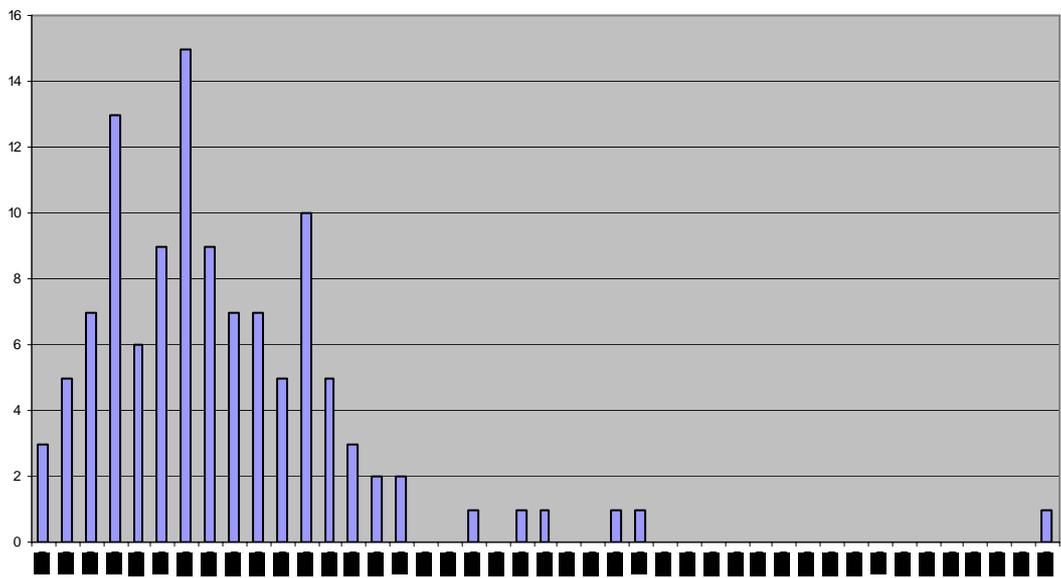


Figure 2.5 Plaice male LD

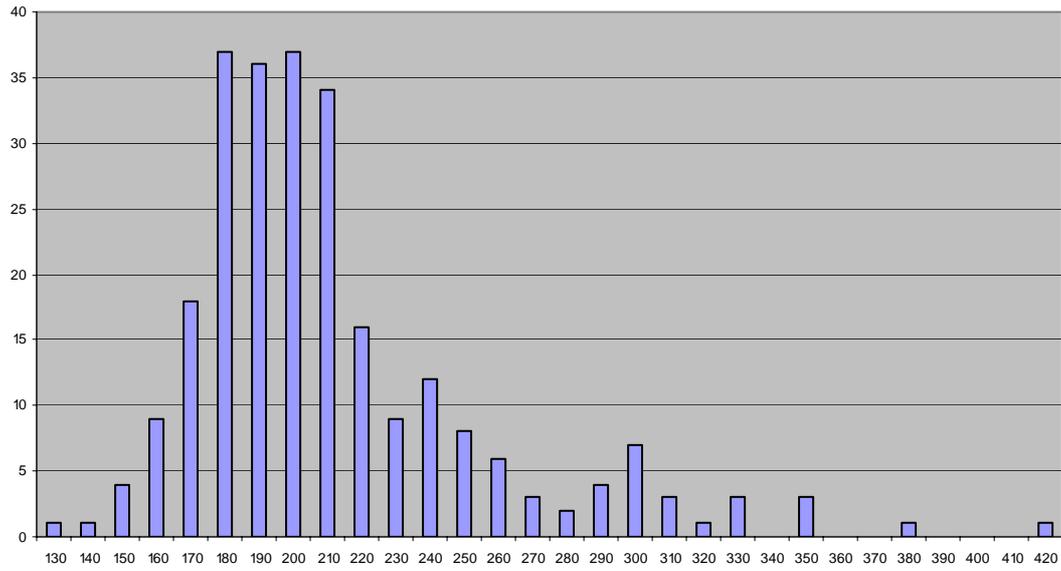


Figure 2.6 Hake LD

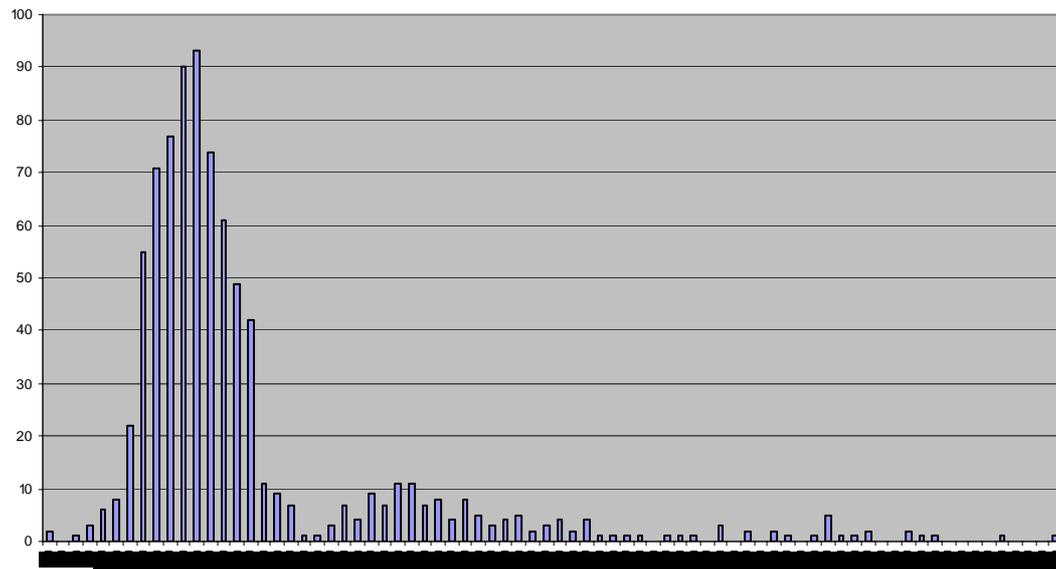


Figure 2.7 Whiting LD

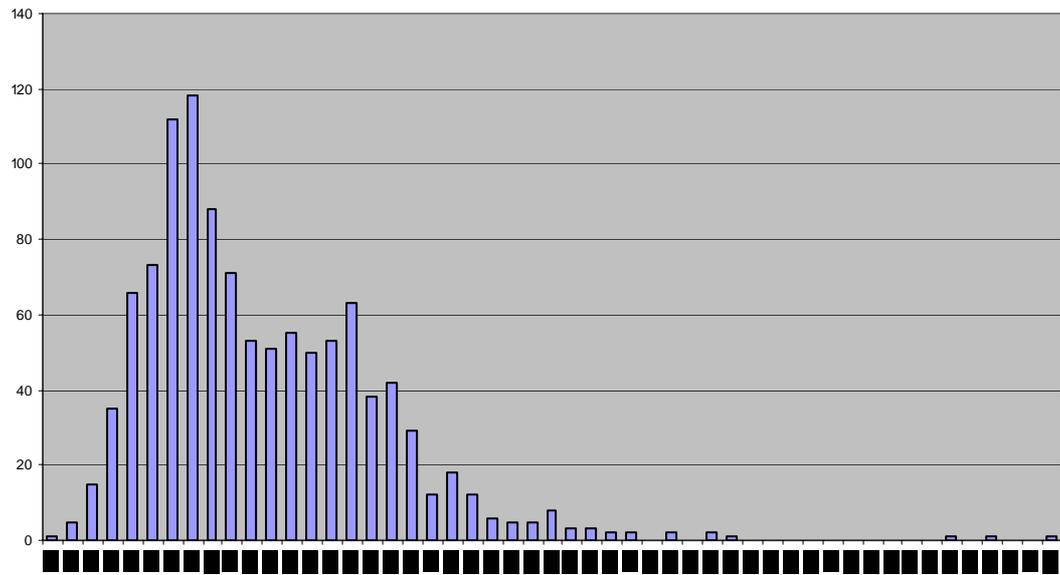


Figure 2.8 Monkfish LD

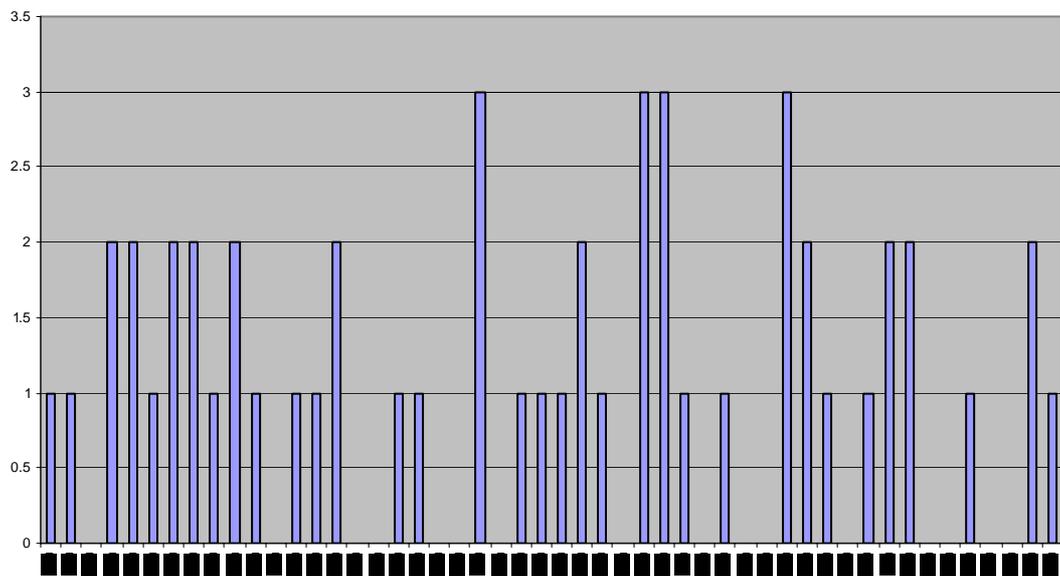
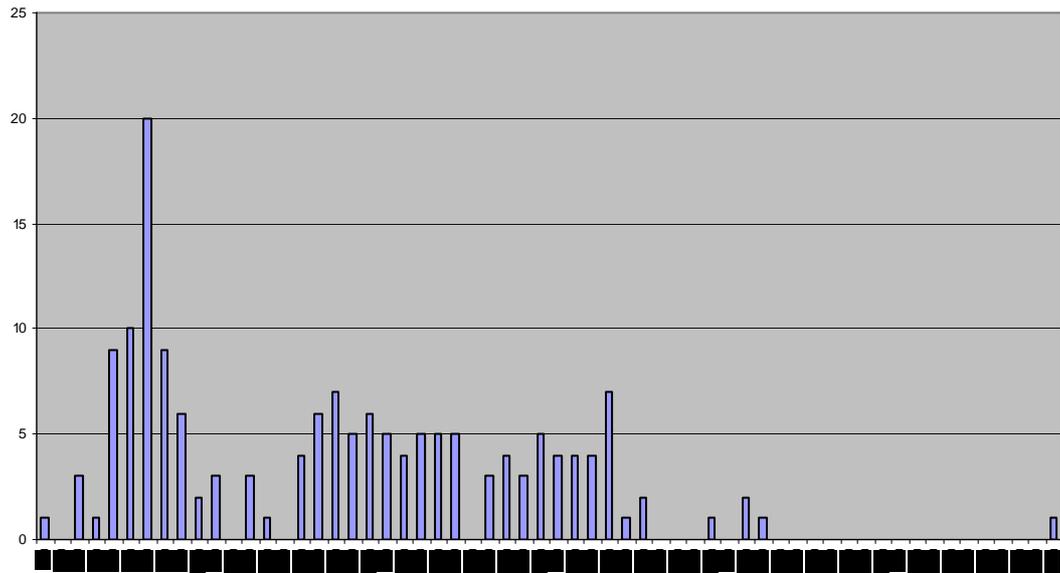


Figure 2.9 Black Bellied Anglerfish LD



The following figures show the length weight relationships of the biological samples taken from the target species.

Figure 3.1 Megrin female

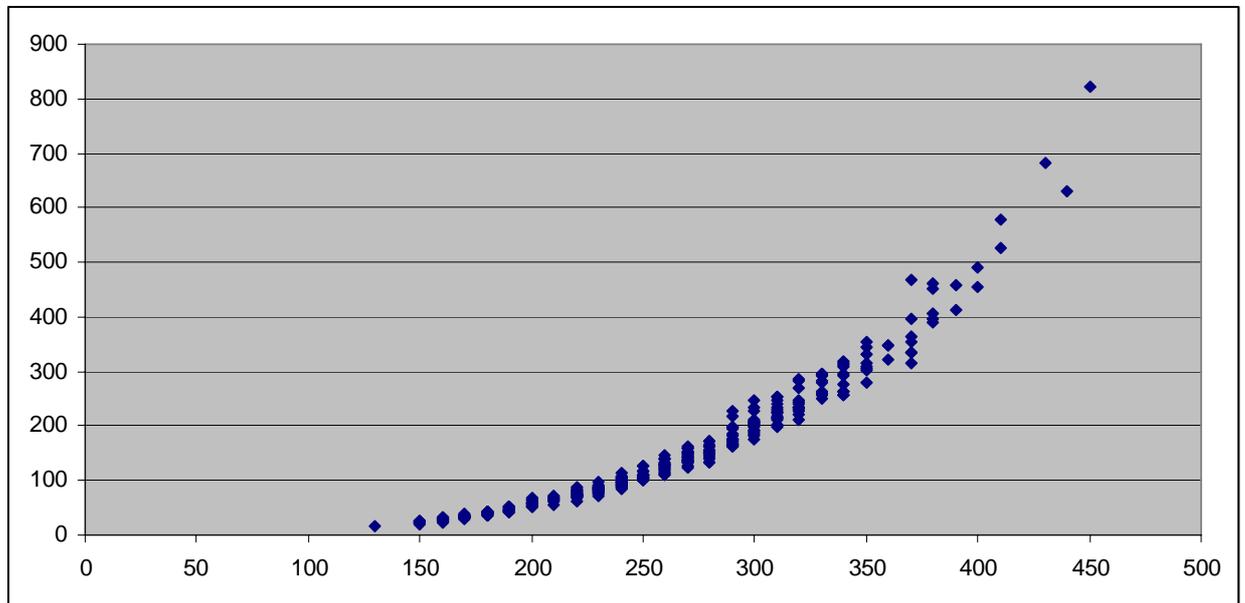


Figure 3.2 Megrim male

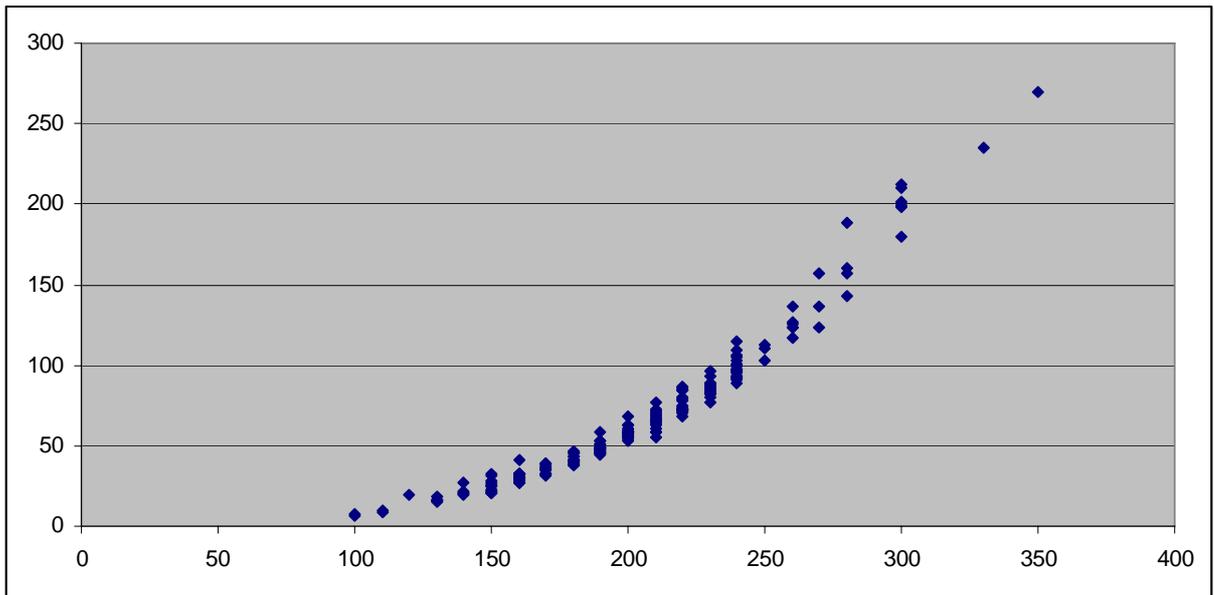


Figure 3.3 Mackerel

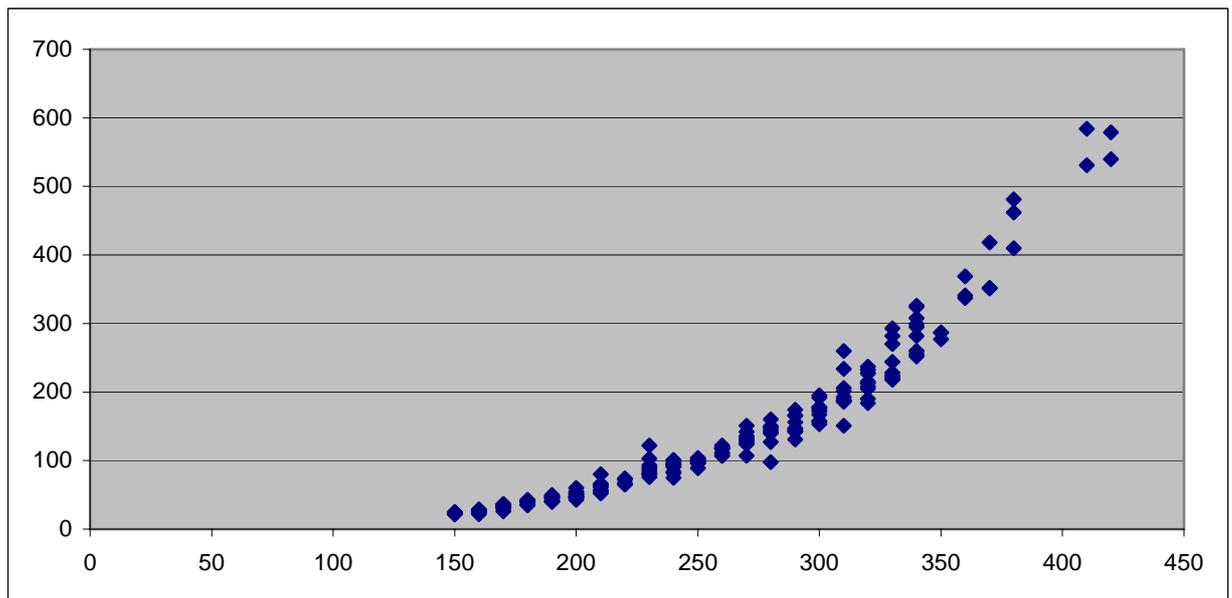


Figure 3.4 Monkfish

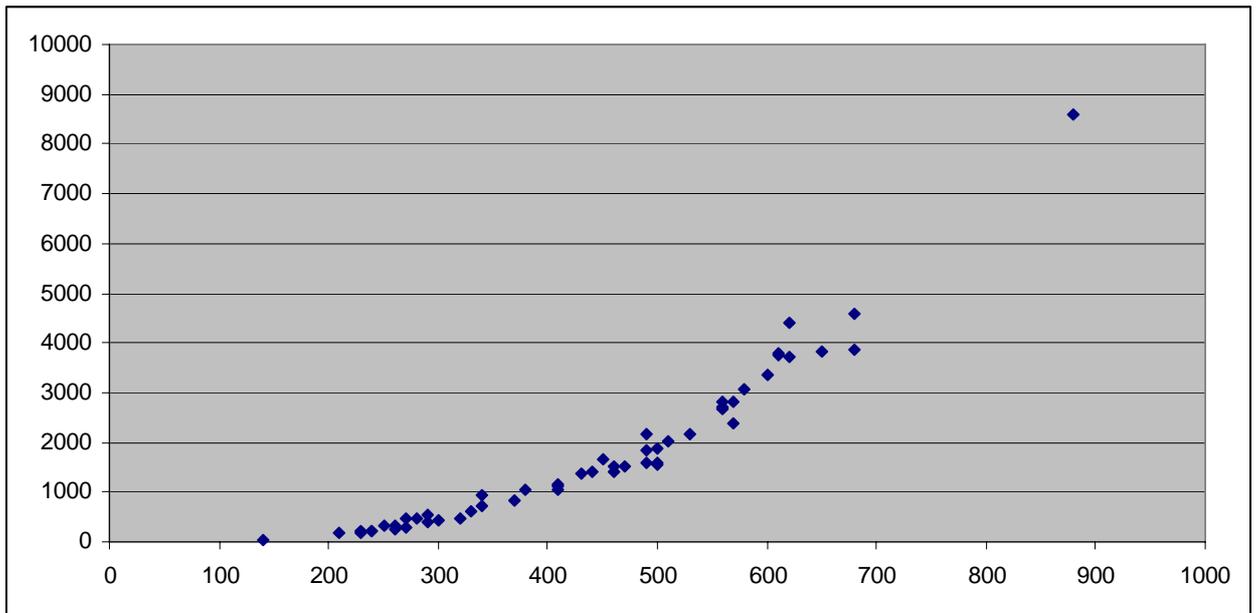


Figure 3.6 Plaice female

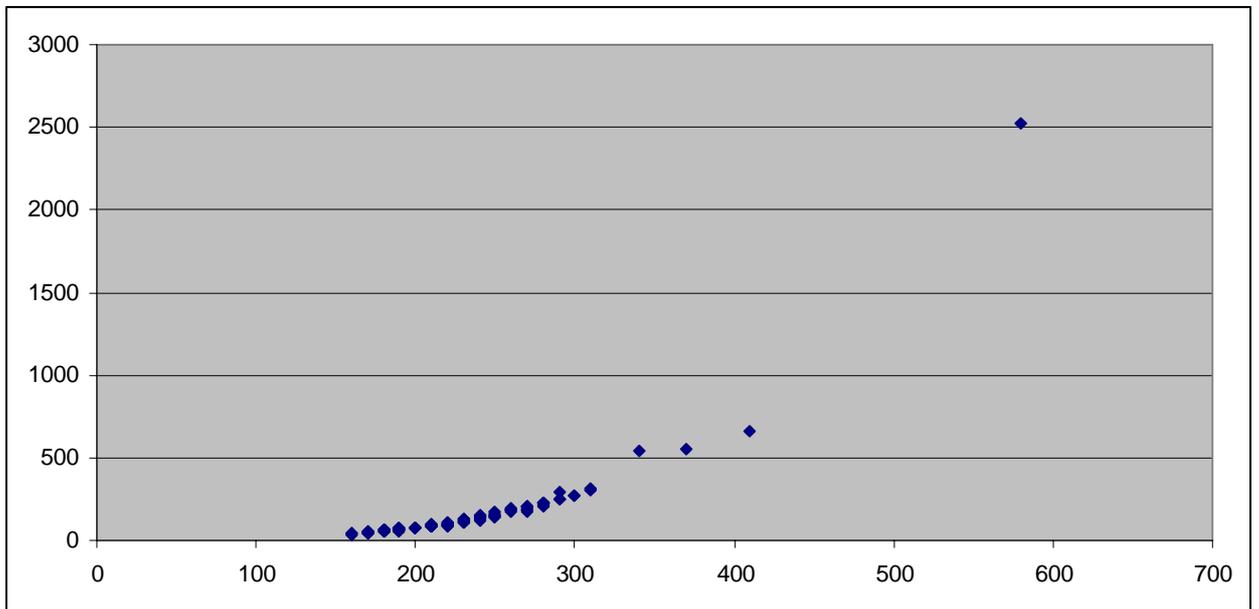


Figure 3.7 Plaice male

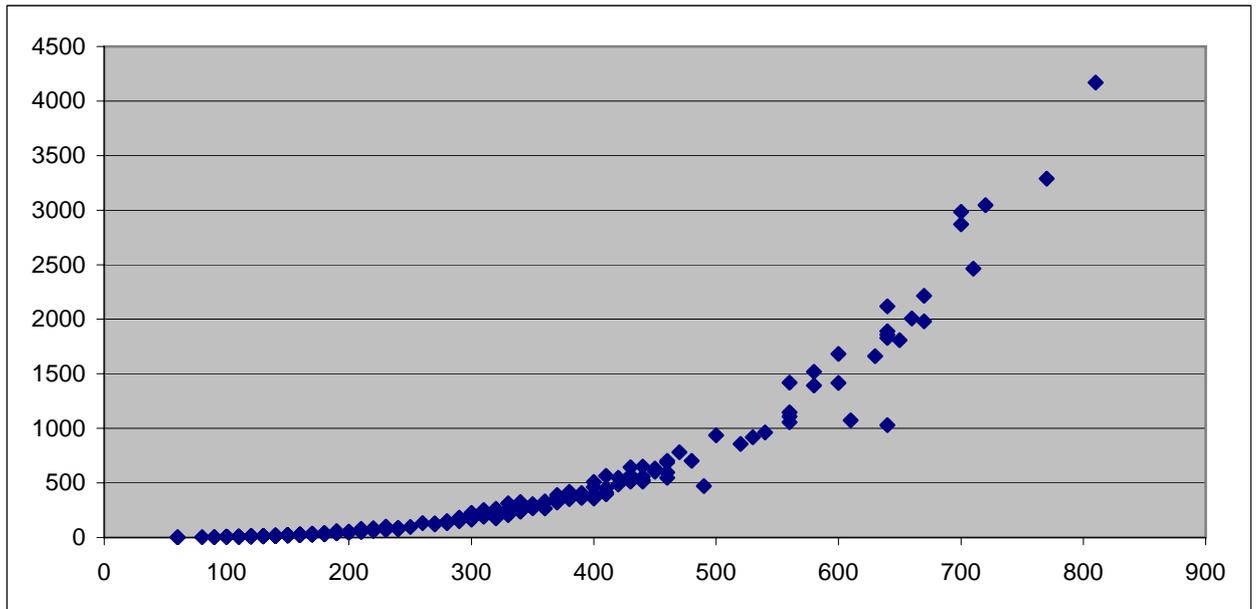


Figure 3.6 Hake

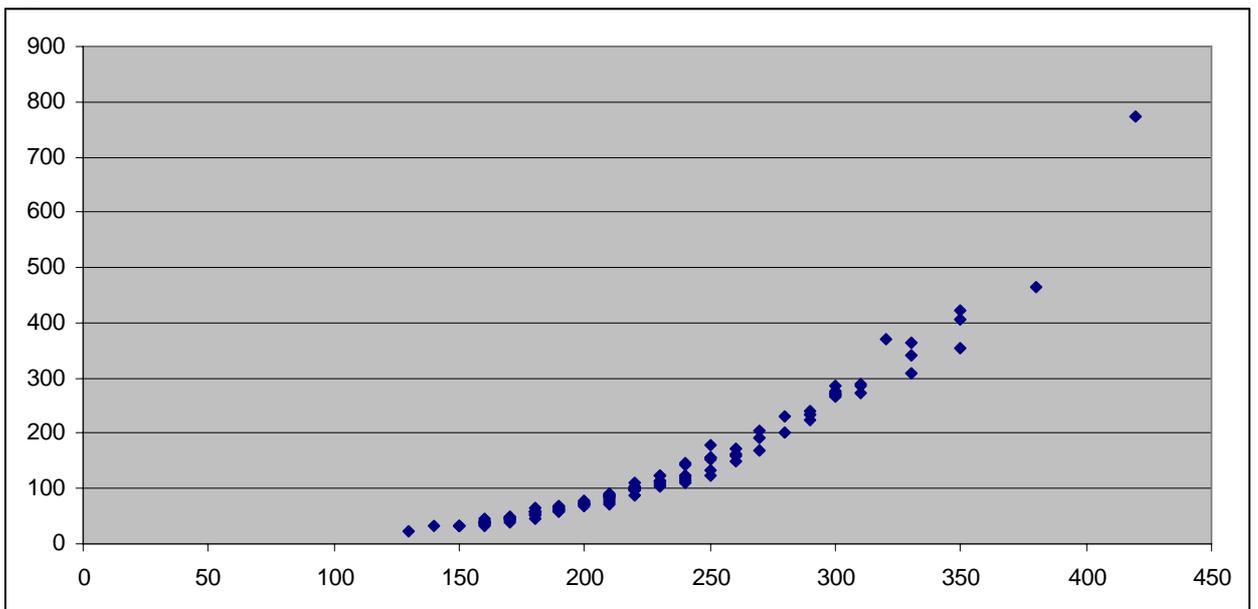
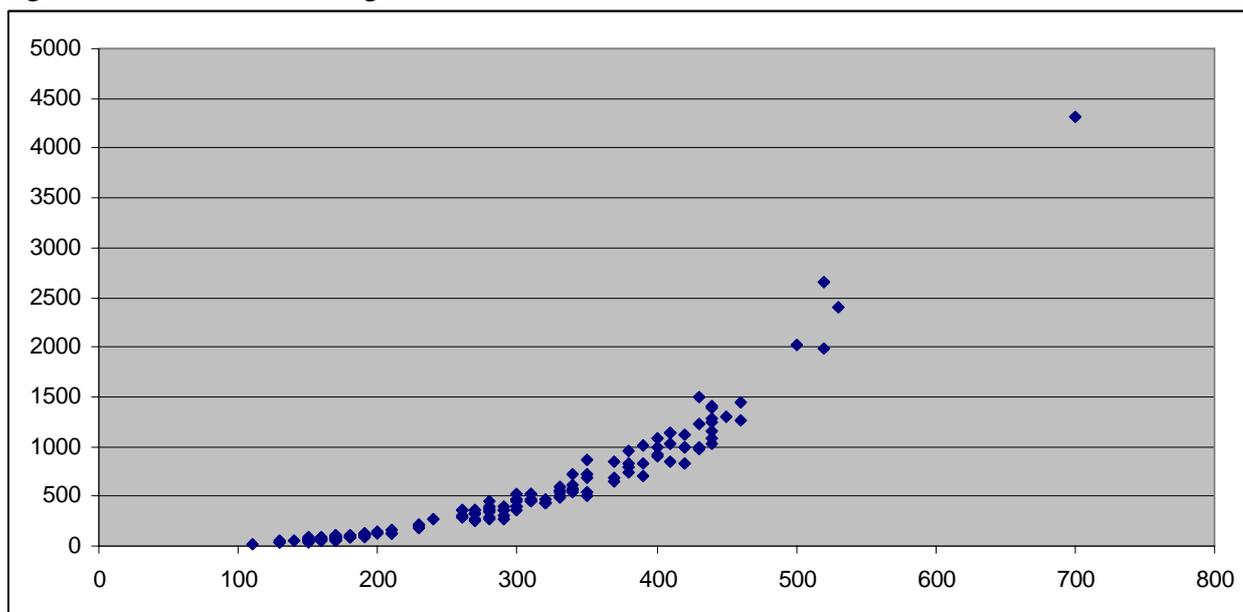


Figure 3.7 Black Bellied Anglerfish



Our thanks go to the officers and crew of Cefas Endeavour for their hard work and professionalism, which enabled this survey to be completed on time and to schedule.

B Harley
16 March 08

DISTRIBUTION:

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