

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

REPORT: RV CEFAS ENDEAVOUR: SURVEY 4/07

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DURATION: 3 – 16 March.

LOCATION: Irish Sea.

AIMS:

To collect biological data from fish stocks in the Irish Sea in support of the EU Data Collection Regulation.

NARRATIVE

RV CEFAS ENDEAVOUR sailed from Lowestoft 08:45, 3 March and proceeded to a position just off Lowestoft to undertake engine trials. This work was completed at 13:30 and the engineer dropped at Lowestoft. A 'shakedown' tow was then completed before CEFAS ENDEAVOUR made passage for the Irish Sea fishing grounds to begin the sampling programme. Slow passage was made due to adverse weather conditions and the vessel headed via north of Scotland toward the Irish Sea. The vessel started work in the north channel of VIIa at 12:50, 6 March using the Portuguese high headline trawl (PHHT) and after hauling the port belly was found to be missing. CEFAS ENDEAVOUR continued to fish, working the north channel, until 19:00 on 6 March when passage was made to the south of the Isle of Man. Fishing continued throughout the night with notable large catches of haddock and whiting whilst 800 biological samples were taken. The following day the vessel continued fishing with the PHHT though due to extremely small catches it was

considered necessary to switch gear to the 4m-beam trawl. The following day work recommenced working clear tows north of Wales and Anglesey targeting sole and plaice. Catches were reasonable and the biological targets were gradually filling. On the 10th March CEFAS ENDEAVOUR headed across St Georges Channel in an attempt to fill biological targets that were not being met on the Eastern side of the Irish Sea. This proved fruitless, however it was noted that the stations fished via the crossing harvested a small amount of cod. Over night we returned to Anglesey and sheltered from the 50 mph south easterly winds until morning where we decided to head northwards from Anglesey and back across to Dundalk and Dundrum Bay to target cod. Here fishing was very poor so we headed back towards the eastern Irish Sea. Many stations were fished providing samples of sole, plaice and thornback ray. After analysing the data collected, it showed there was a lack of female sole data for all the length groups. A steam overnight via numerous stations to Solway Firth on the 12th March resulted in an improvement in catches of female sole especially from shallower water, and males from deeper water. Over the next 24 hours the vessel continued to fish many stations all the way back to Anglesey. On March 14th additional stations were picked up in Canaervon Bay before it was decided CEFAS Endeavour should start her passage for Swansea, docking on the 15th of March at 13:00.

RESULTS

A total of 101 tows were completed (Figure 1) of which 1 was invalid due to net damage.

The table below details the number of each species for ICES division VIIa, for which length, weight, sex, maturity and (where appropriate) age data were collected.

Species code	Latin name	Total
BLL	<i>Scophthalmus rhombus</i>	36
BLR	<i>Raja brachyura</i>	13
COD	<i>Gadus morhua</i>	98
CUR	<i>Raja naevus</i>	90
HAD	<i>Melanogrammus aeglefinus</i>	429
HKE	<i>Merluccius merluccius</i>	2
LEM	<i>Microstomus kitt</i>	119
MON	<i>Lophius piscatorius</i>	24
MUR	<i>Mullus surmeletus</i>	1
PLE	<i>Pleuronectes platessa</i>	1014
PTR	<i>Raja microocellata</i>	1
SDR	<i>Raja montagui</i>	198
SKT	<i>Raja batis</i>	2
SOL	<i>Solea solea</i>	512
THR	<i>Raja clavata</i>	331
TUR	<i>Scophthalmus maximus</i>	5
UNR	<i>Raja undulata</i>	1
WHG	<i>Merlangius merlangus</i>	515
Total		3391

Maturity ogives for the targeted species are shown in Figure 2 and growth curves in Figure 3.

Additional aims

10 Whiting samples collected for DNA analysis – N.Taylor (Cefas)

Maturity photos for cefas id:-

<u>Species</u>	<u>Number of photos</u>
Spotted Ray (male)	23
Spotted Ray (female)	2
Sole (male)	2
Cod (male)	1
Cod (female)	2

Tagged fish species – Jim Ellis (Cefas):

<u>Tagged species</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>
Nurse hound	27	11	16
Spurdog	3	3	
Common skate	2	1	1
Smooth hound	1	1	
Starry smooth hound	1	1	

A Tidd
15 March 2007

SEEN IN DRAFT
T Reading (Master)
B Salter (Senior Fishing Mate)

INITIALLED
B Harley

DISTRIBUTION:
Basic list
Staff on Cruise
Devon SFC
Cornwall SFC
South Wales SFC
Isles of Scilly SFC

CEFAS Endeavour 4/07 survey stations

Figure 1.

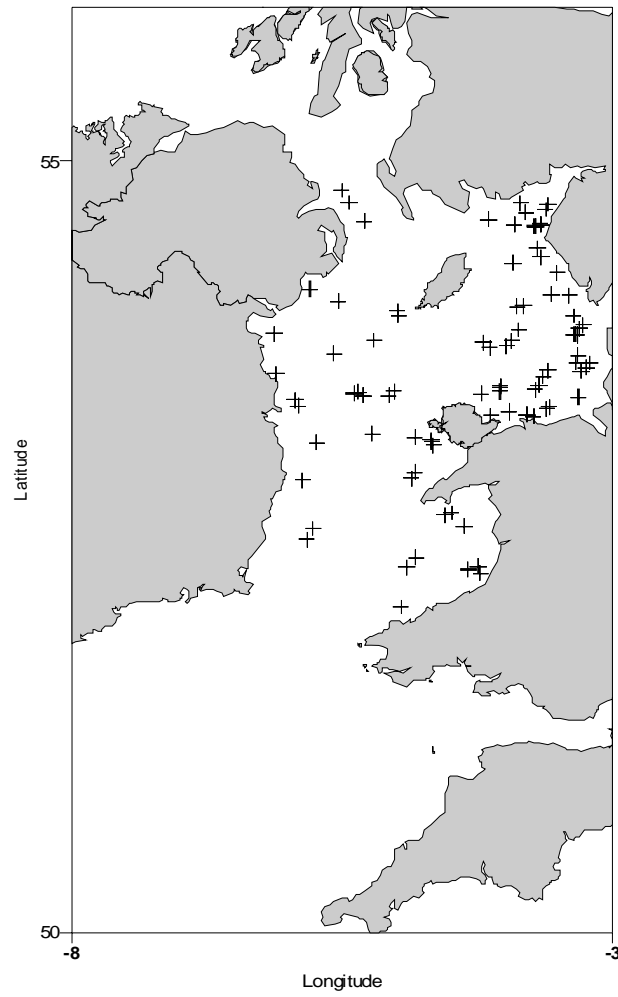
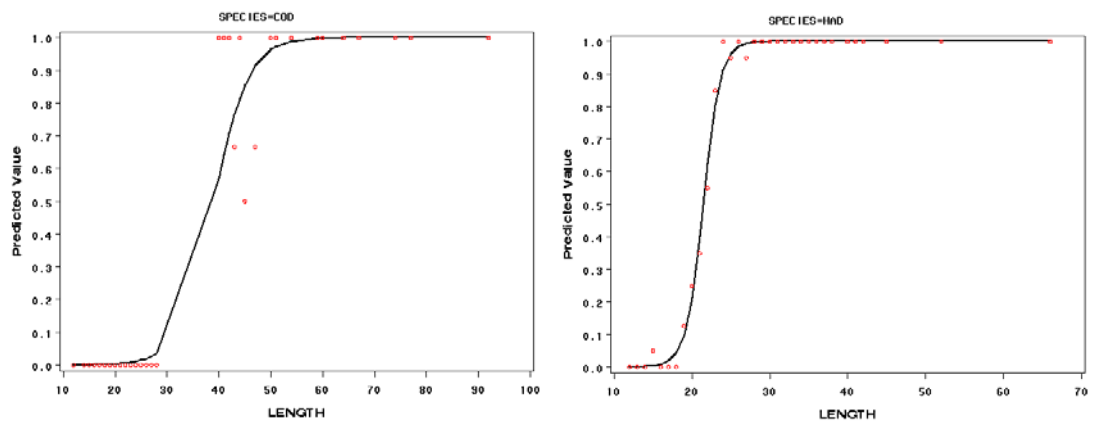


Figure 2. Maturity ogives for the targeted species. The thick lines represent predicted values and the points represent actual values.



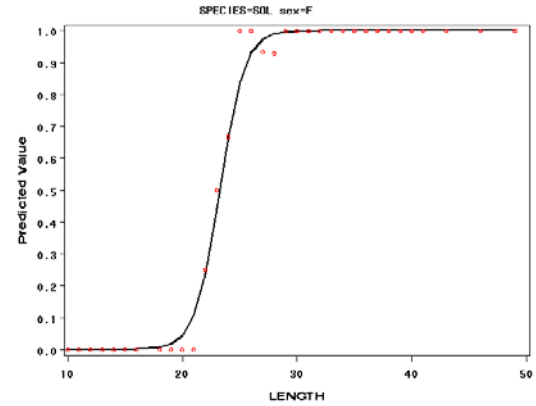
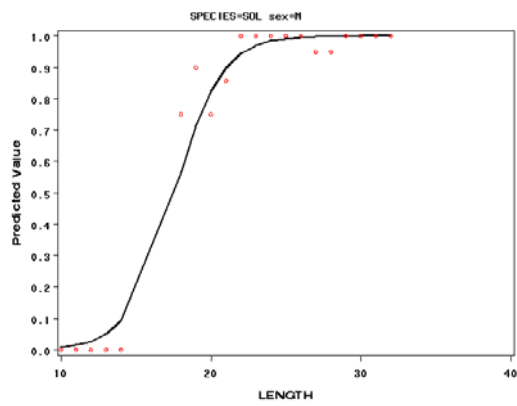
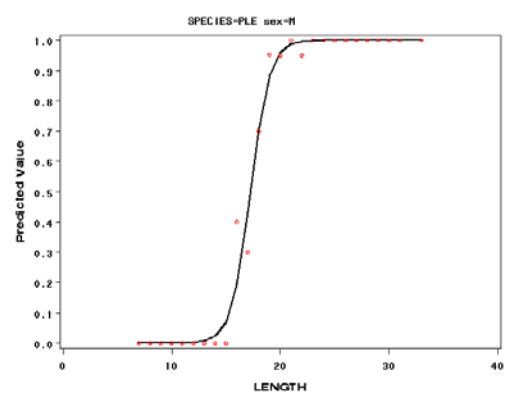
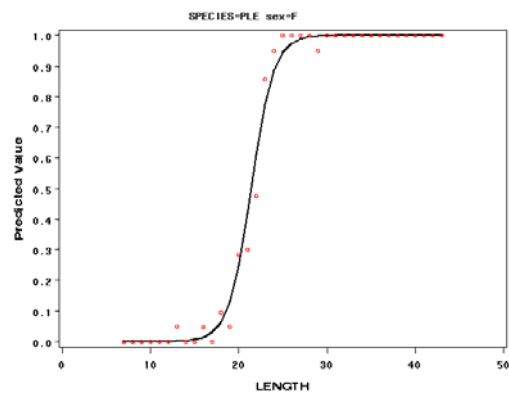
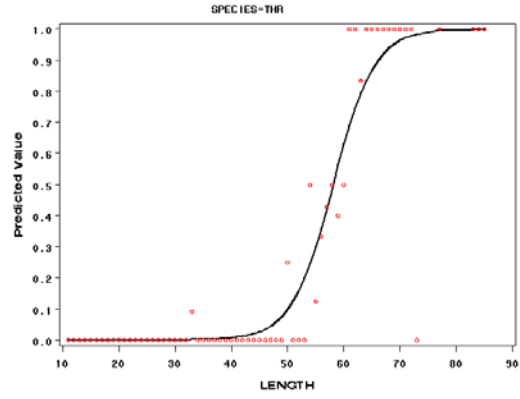
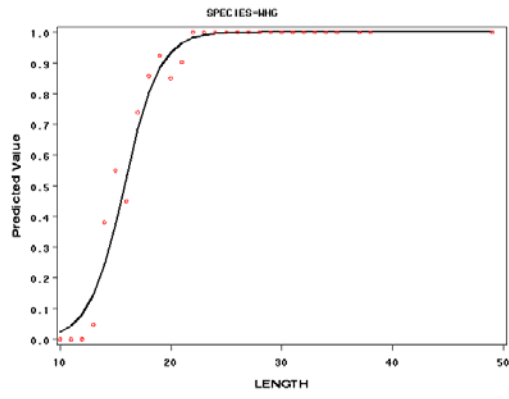
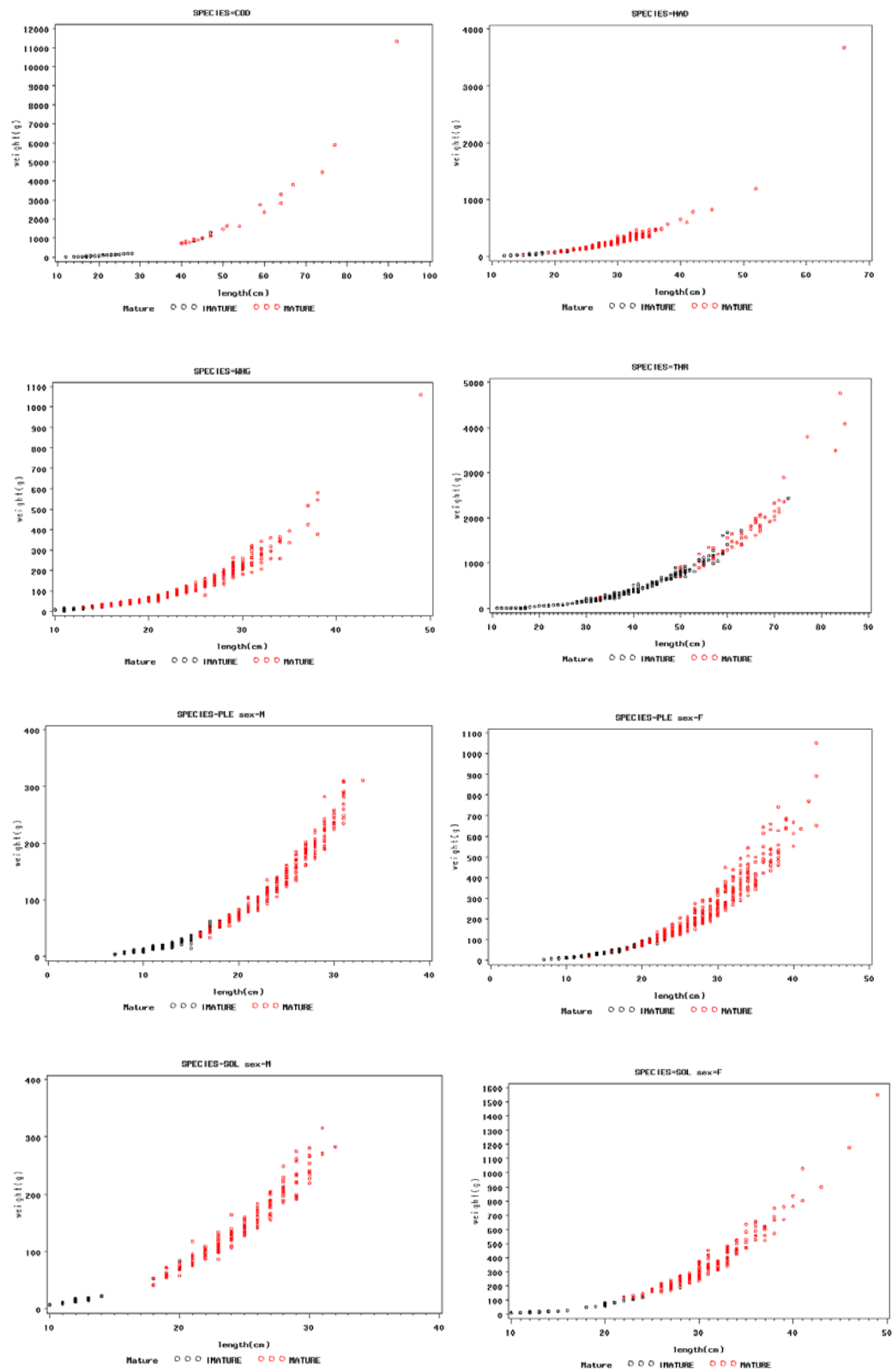


Figure 3. Length weight relationships for the targeted species



Numbers per hours towed for the targeted species (figure4)
Figure 4.

