

**THE CENTRE FOR ENVIRONMENT, FISHERIES & AQUACULTURE SCIENCE,
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK, NR33 0HT.**

2003 CHARTER CRUISE PROGRAMME

REPORT: YOUNG FISH SURVEY 2003

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

STAFF:	Team 1 – South Coast	John Dann James Pettigrew
	Team 2 - Thames	Philip Welsby Gary Burt
	Team 3 – NE Coast	Tom Woods- Dave Brown
	Team 4 – Morecambe Bay	Michael Easey Jennie Keable

DURATION: 20th August to 8th September 2003

LOCATION: Flamborough Head - Eastbourne and Morecambe Bay

AIM: To carry out an inshore beam trawl survey of parts of the North Sea, English Channel and Morecambe Bay for juvenile flatfish year class size estimation and collect data on young demersal fish in relation to the environment.

METHODS:

Teams of two staff working on charter vessels carried out the Young Fish Survey. The stations worked in the survey areas (Figure 1) were as last year. The gear used was a 2-metre wooden beam trawl with a 3mm-mesh liner. Tows of 10-minute duration were carried out. At each station all the fish were identified and measured and otoliths taken from a stratified length sample of sole and plaice. Shrimp catch was estimated volumetrically and benthic species were identified to species where possible. Observations of temperature, salinity and sediment type were collected and in the Humber, dissolved oxygen measurements were taken.

TEAM: 1

LOCATION: Dungeness Bay to Eastbourne (survey areas 16 to 17)

DATES: 22nd August to 1st September

NARRATIVE:

Staff travelled to Pevensey on 22nd August and the survey commenced the following day using F.V. Halcyon from Sovereign Harbour. A total of 16 valid survey stations were completed in Pevensey and Norman's Bays. To determine whether the fish were avoiding the net due to clarity of the water 3 hauls were repeated in the dark. Staff travelled to Folkestone on 24th August. After losing a day due to unsuitable weather conditions a total of 27 valid stations were worked, using the F.V. Lady Patricia, between Folkestone and Rye Harbour over a 2-day period without any damage. On completion of the survey from Folkestone the staff travelled to Hastings where 48 valid tows were fished successfully over a period of 4 days between Bexhill and Rye Harbour on F.V. St Richard in unsettled weather conditions. Staff travelled back to Lowestoft on 1st September.

RESULTS:

A total of 93 tows were completed successfully. The night tows at Pevensey gave similar catches to the daylight hauls; the main difference was that juvenile mullet, which were not present in the daylight hauls, were caught in the dark. These results indicate that the lack of sole and plaice during the day was probably not due to net avoidance in the clear water. The catch rates for sole and plaice varied between survey locations, with very few fish being taken at the western end of the survey area in Pevensey and Norman's Bays. Higher than normal numbers of plaice were taken in Dungeness and Rye bays; sole were also plentiful in these areas. An unusual feature of this year's survey was the number of commercial size sole taken in the beam trawl. A total of 115 sole and 72 plaice otoliths were collected for ageing purposes. The overall abundance of 0-group sole was around the same level as 2002 whereas 1-group sole were much less abundant than in the previous year. The abundance of older, 2⁺, fish was at the highest level since 1985. Plaice 0-group abundance was the highest recorded since 1987 whereas the abundance of older fish was well below average.

TEAM: 3

LOCATION: North East Coast (survey areas 8 to 11)

DATES: 24th August to 6th September

NARRATIVE:

Staff travelled to Skegness on 24th August to join the FV Challenge from Wainfleet Haven. The survey commenced on 25th in the Boston Deepes and the Wash in a moderate North Westerly swell. Fishing continued in this area for 3 days after which the F.V. Challenge returned to Gibraltar point as deteriorating weather conditions meant fishing had to be curtailed. As there was no immediate prospect of work re-commencing staff returned to Lowestoft on 29th August and did not return to Skegness until 1st September to complete the stations in the Wash. Over the next 5 days the remaining stations off the Lincolnshire coast and in the Humber were completed. The staff travelled back to Lowestoft on 6th September.

RESULTS:

A total of 81 valid tows were completed. Measurements of dissolved oxygen were taken at all stations in the Humber estuary for the Environment Agency. The catch rates for 0-group sole in both the Humber and Wash were down on the previous year whilst that for 1-groups was the highest since 1997 in the Humber and since 1991 in the Wash. The abundance of 0-group and 1-group plaice was around half the level in 2002 whereas in the Wash 0-group plaice were about the same level of abundance as last year with 1-group plaice being at their highest abundance since 2000. A total of 51 sole and 31 plaice otoliths were collected for ageing purposes. Samples of fish from the Humber were collected for Hull University.

TEAM: 2

LOCATION: Thames Estuary (survey areas 13 to 15)

DATES: 20th August to 28th August

NARRATIVE:

The survey commenced on 20th August using the F.V.Charlie Boy from Whitstable for 3 days, this part of the survey concentrated on the Southern Thames Estuary from Margate to Tilbury. The West Mersea part of the survey comprised 4 days of fishing in the Northern Estuary using F.V. Fisher Lassie from West Mersea.

RESULTS:

A total of 49 valid tows were worked from Whitstable. A large amount of juvenile sole was caught around the Gore with moderate to light catches of sole and plaice elsewhere. A total of 33 valid stations were fished from West Mersea in an area covering the Blackdeeps to inside the River Blackwater. One day was lost to bad weather. The highest concentration of sole was found in an area off Clacton with light to moderate catches of sole and plaice elsewhere. Overall the sole abundance at all age groups was about half the long-term average value. Catches of 0-Group plaice were up on last year whereas those for 1-groups were down to around a quarter of the 2002 level. Two additional stations were completed in an attempt to assess the size of the area off Clacton where large numbers of juvenile sole were present. A total of 85 sole and 29 plaice otoliths were used for ageing purposes. Staff returned to Lowestoft on 28th August.

TEAM: 3

LOCATION: North East Coast (survey areas 8 to 11)

DATES: 24th August to 6th September

NARRATIVE:

Staff travelled to Skegness on 24th August to join the FV Challenge from Wainfleet Haven. The survey commenced on 25th in the Boston Deepes and the Wash in a moderate North Westerly swell. Fishing continued in this area for 3 days after which the F.V. Challenge returned to Gibraltar point as deteriorating weather conditions meant fishing had to be curtailed. As there was no immediate prospect of work re-commencing staff returned to Lowestoft on 29th August and did not return to Skegness until 1st September to complete the stations in the Wash. Over the next 5 days the remaining stations off the Lincolnshire coast and in the Humber were completed. The staff travelled back to Lowestoft on 6th September.

RESULTS:

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TEAM: 4

LOCATION: Morecambe Bay & Lancashire coast (survey area 71)

DATES: 20th August to 28th August

NARRATIVE:

Staff travelled to Morecambe on 20th August. After losing 1 day for bad weather the survey commenced on the 22nd on FV "Hope" and over the following 3 days a total of 33 valid hauls were completed in the shallow flats of Morecambe Bay and in the estuaries. Staff travelled to Fleetwood on 24th August and a further 25 valid tows were made on the open coast west of Fleetwood and off Blackpool using FV "Albion". The survey was completed on 27th August. Staff returned to Lowestoft on 28th August.

RESULTS:

A total of 58 valid tows were completed successfully. Catch rates for both sole and plaice were down on the previous years. A total of 14 sole and 115 plaice otoliths were collected for ageing purposes.

J Dann

16th October 2003

Initialled:

Distribution

Basic List +

J Dann

J Pettigrew

M Easey

J Keable

T Woods

D Brown

P Welsby

G Burt

S Rogers

T Boon

Participating skippers

North Eastern Sea Fisheries Committee

Eastern Sea Fisheries Committee

Kent and Essex Sea Fisheries Committee

Sussex Sea Fisheries Committee

Southern Sea Fisheries Committee

Lancs and Western Sea Fisheries Committee

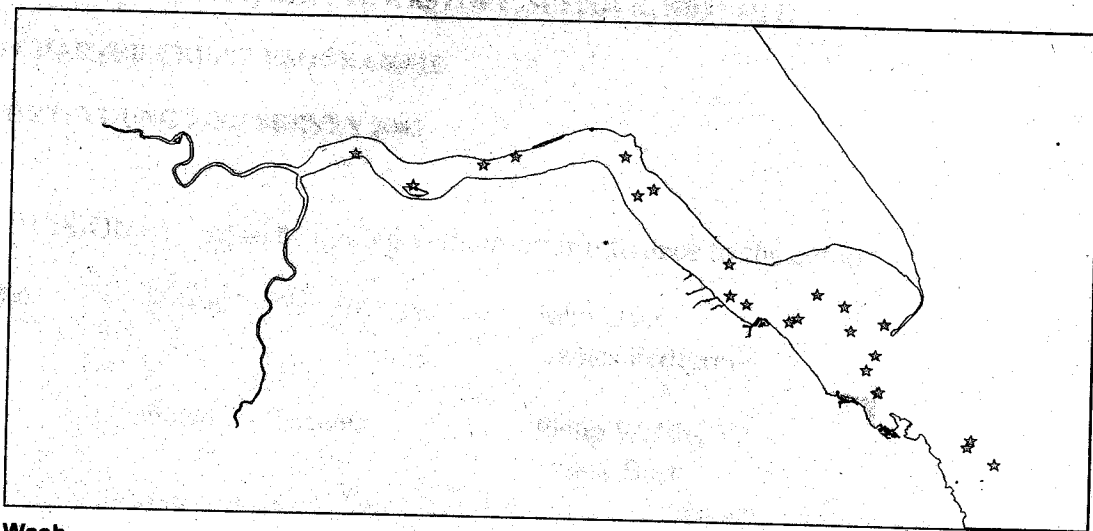
H Gudmundsson - Environment Agency

M Elliot - University of Hull

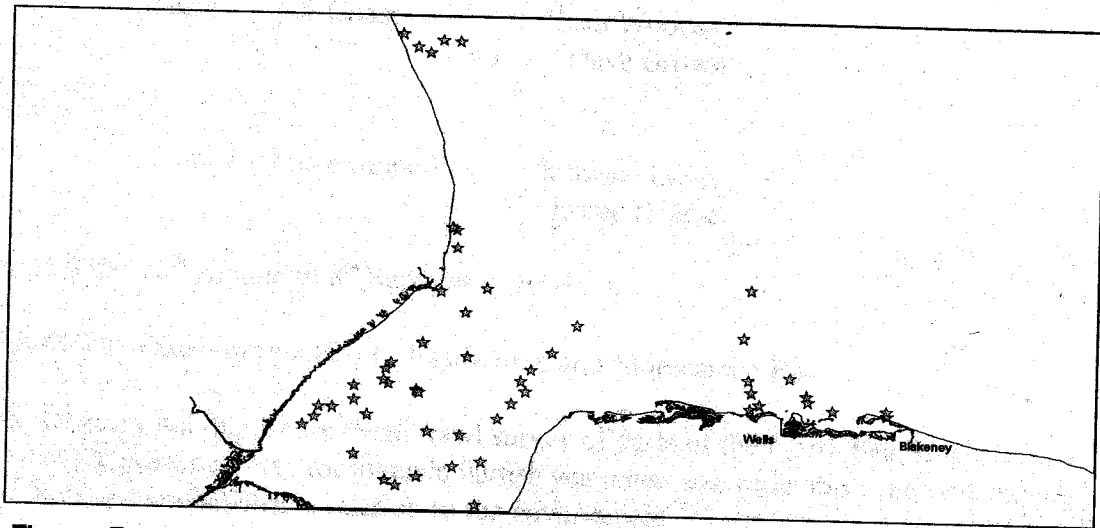
FLR 9641

FIGURE 1 Position of sampling stations

Humber Estuary



Wash



Thames Estuary

