

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

2005 CHARTER PROGRAMME

REPORT: INA-K 2/2005

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

STAFF:

P Welsby

S Warne (19th – 24th Nov)

M Etherton (25th – 28th Nov)

DURATION:

19th November

30th November

LOCALITY:

Thames Estuary

AIMS:

1. To assess the distribution and abundance of herring in the Thames Estuary using a mid-water trawl.
2. To obtain an independent estimate of the age structure and maturity of the Thames spring spawning herring stock.
3. To collect CTD data on selected stations over the estuary.
4. To collect length distributions of bass for S Walmsley.
5. To collect juvenile herring samples for C. Fox for daily growth studies.

NARRATIVE:

The scientific staff travelled to Leigh-on-Sea on 18th November and joined INA-K at 0200 h the next day.

For the first 6 days of the survey INA-K worked out of Leigh-on-Sea and, from there, surveyed Margate Roads, the Barrows, Princes and Queens Channels and the Oaze. The INA-K docked in Wallasea Marina on the River Crouch on the evening of 24th November and worked from there during the next two days, surveying in the River Blackwater, the Wallet, Swire Hole, the River Crouch and the River Roach. INA-K returned to Leigh-on-Sea for the last 4 days of the survey and worked in the inner Estuary and the River Medway. Gear damage on the final day brought a premature end to the survey with 2 stations remaining unfished.

RESULTS:

AIM 1. A total of 34 valid 60 minute hauls were completed out of a possible 36 core stations with the Larsen sprat trawl and 5cm mesh cod end (Figure 1). All fish were identified to species and the numbers or weight caught recorded. Length distributions were recorded for herring, sprat and bass. The length distribution of all the herring caught during the survey is given in Figure 2.

AIM 2. A total of 511 herring were sampled for length and maturity and otolithed for age structure to provide data for stock analysis.

AIM 3. A total of 18 CTD samples were taken on pre-selected trawl stations.

AIM 4. A total of 426 bass were caught and measured.

AIM 5. Samples of '0' group herring were collected for daily growth studies.

Although the echo sounder was run continuously throughout the 12 days no pelagic marks of any size were encountered and catches of herring were extremely low. This observation was backed up by commercial fishermen who also commented on the lack of herring present. Higher than average numbers of '1' year old cod and very small sprat were encountered although there was an absence once again of the larger sprat.

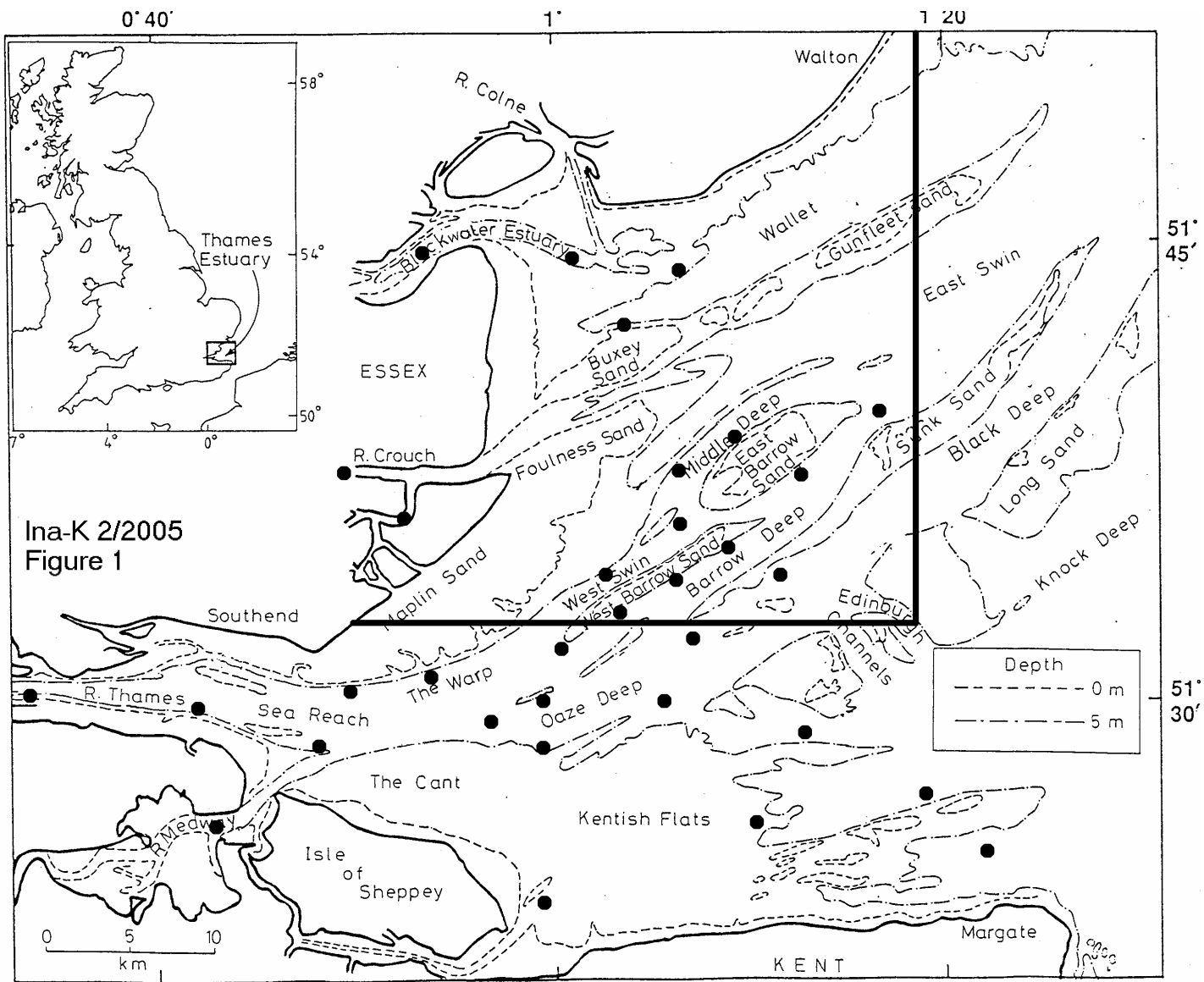
I would like to record my thanks to Ken Knapp, the owner of INA-K, and the crew for their hard work and dedication towards the smooth running and success of the survey.

P J Welsby
8 December 2005

INITIALLED: Richard Millner

DISTRIBUTION:

Basic List+
B Roel
P A Large
M E Etherton
S Warne
K Knapp
N Mynard, DEFRA Fisheries Office, Harwich



Ina-K 2/2005
Figure 1

Figure 2: Blackwater herring Ina-K 2/2005
Total numbers (stations standardised to 60 mins)

