

**CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE
LOWESTOFT LABORATORY, LOWESTOFT,
SUFFOLK NR33OHT**

1997 CHARTER PROGRAMME

REPORT: INA-K: CRUISE 1

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

STAFF:

S Warnes
P J Welsby

DURATION:

0400h 17 November
1530h 28 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 of the Thames spring spawning herring stock.

NARRATIVE:

The scientific staff travelled to Leigh-on-Sea on 16 November and joined INA-K at 0330h the next day.

For the first 5 days of the survey INA-K worked out of Leigh-on-Sea and, from there, surveyed Margate Roads, the Kentish Flats, Princes and Queens Channels the Oaze and Barrow Deeps and the West Swin. The INA-K docked in Wallasea Marina on the R Crouch on the evening of 21 November and worked from there, during the period 22-24 November, surveying in the Middle Deep, the R Blackwater the Wallet Swire Hole and the R Crouch and the R Roach. INA-K returned to Leigh-on-Sea for the last 4 days of the survey and worked in the inner Estuary, the R Medway and the R Thames. The survey was completed at 1147h on 28th Nov. and the INA-K docked at Leigh-on-Sea at 1530h.

The scientific staff travelled back to Lowestoft on 29 November.

RESULTS:

AIM 1. A Total of 39 valid hauls of varying length were made with the Larsen sprat trawl, two in the R Thames and the others at the positions shown on the attached chart. The length distribution of all the herring caught during the survey is given on the attached figure.

AIM 2. A total of 609 fish were sampled and otolithed for age structure and stock analysis. The sprats taken during the survey were of a larger size range than normally encountered with many fish in the 12-14cm size range.

Samples of 0 group herring were collected for growth studies (Dr C Fox).

Small cod, probably '1' group, were more abundant in the survey area than on this survey in recent years.

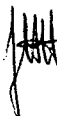
A total of 265 bass were caught, 220 'O' group at one station. 3 scale samples were collected for age determination studies (G Pickett).

The echo sounder was run continuously throughout the survey and pelagic fish traces were observed over the whole estuary. Shooting on those traces, herring were caught in 38 of the 39 valid tows, of varying duration, with the Larsen sprat trawl. Two of these tows were in the upper reaches of the R. Thames.

I would like to record my thanks to Messrs Colin and Ken Knapp, owners and crew of the INA-K, for their contribution to the smooth running and success of the Survey.

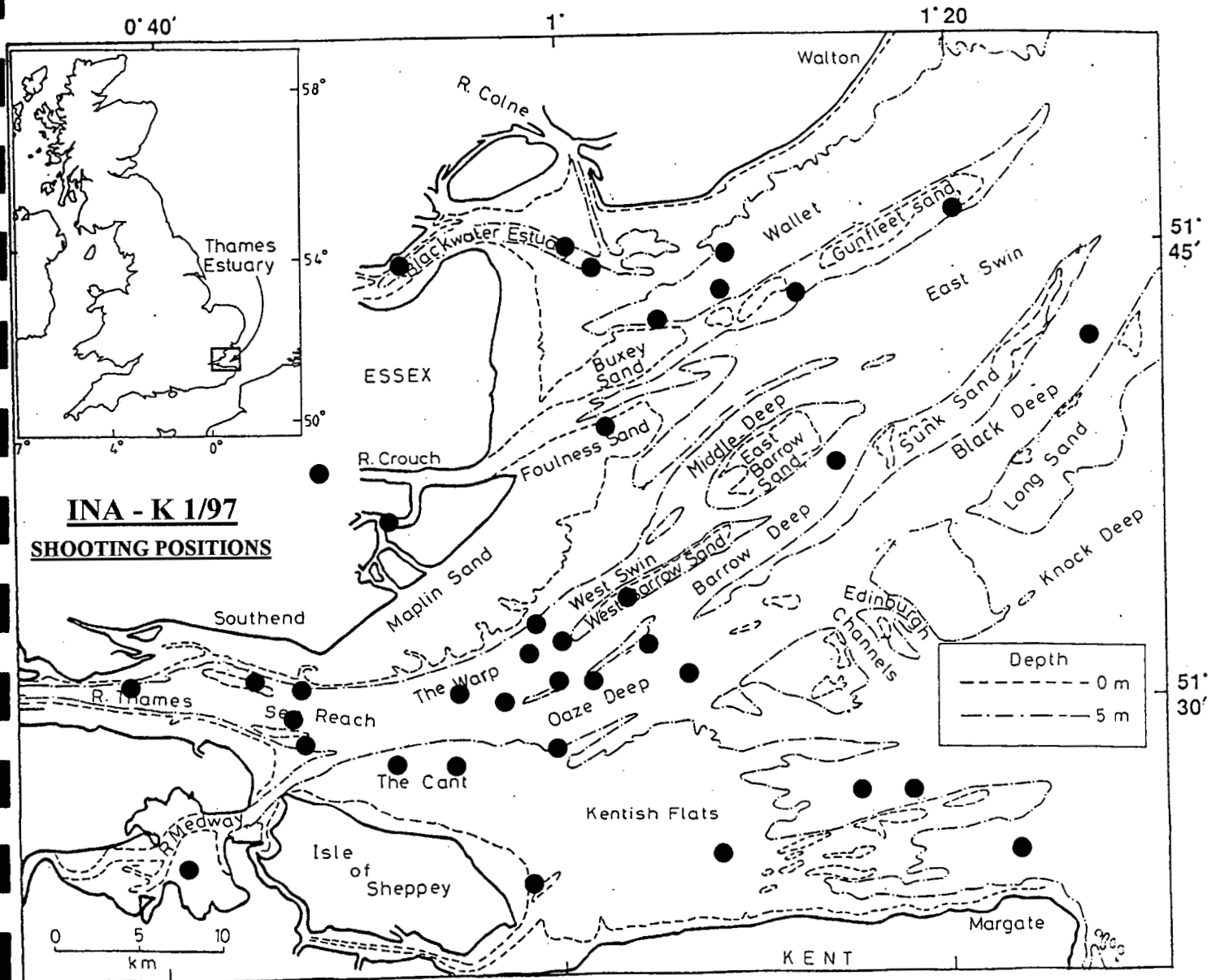
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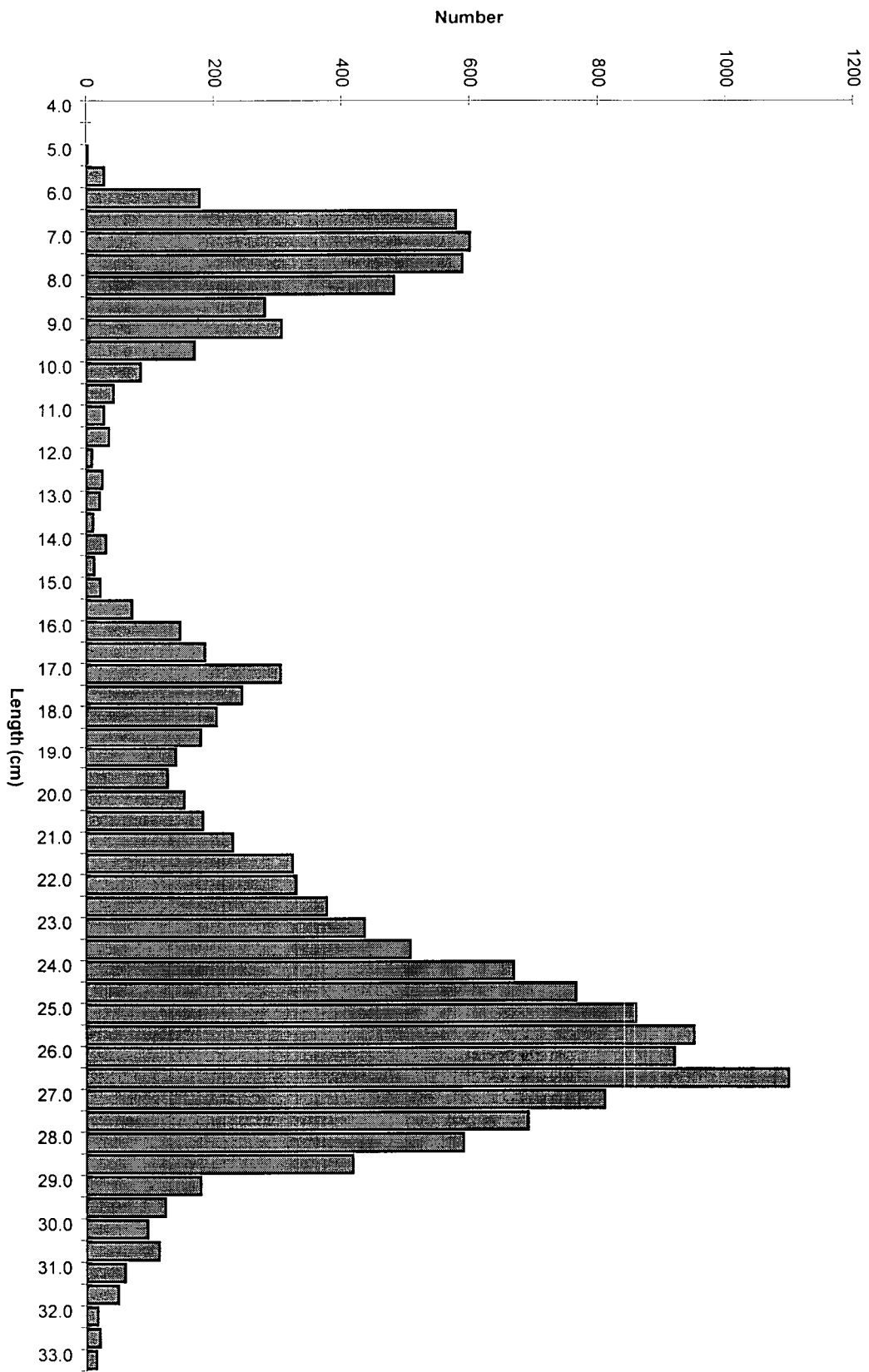
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INA-K Survey, Nov 1997 :- Thames Estuary herring