THE CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33 OHT

2002 CHARTER PROGRAMME

REPORT: INA-K 1/2002
(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

P J Welsby
M E Etherton
B Roel

DURATION:

0230 h 8 November
1500 h 19 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 CDT data on selected stations over the estuary.

4. To collect length distributions of bass for G.Pickett.

5. To collect herring samples for C. Fox for daily growth studies.

NARRATIVE:

The scientific staff travelled to Leigh-on-Sea on 7 November and joined INA-K at 0230 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 Kentish Flats, Princes and Queens Channels and the Oaze. The INA-K docked in Wallasea Marina on the River Crouch on the evening of 13 November and worked from there during the next four 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 2 days of the survey and worked in the inner Estuary and the River Medway. The survey was completed at 1500h on 19 November.

The scientific staff travelled back to Lowestoft on 20 November.

RESULTS:

AIM 1. A total of 36 hauls of varying length were made with the Larsen sprat trawl (figure 1). The length distribution of all the herring caught during the survey is given in figure 2. The sprats taken during the survey were of the same length range encountered in recent years (12-14cm).

AIM 2. A total of 531 herring were sampled and otolithed for age structure, maturity and stock analysis.

AIM 3. A total of 22 CDT samples were taken on pre-selected trawl stations. These stations have their numbers underlined on the survey map (figure 1).

AIM 4. A total of 186 bass were caught. Two of the bass were tagged, scaled for age determination studies and released.

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

The echo sounder was run continuously throughout the survey and pelagic fish traces were observed over most of the estuary, with the highest concentrations on the north side of Sea Reach round to West Swin. The Larsen Sprat trawl was shot on those traces and herring were caught on all tows, of varying duration. A least one specimen of all the common pelagic species (herring, sprat, mackerel, anchovy, pilchard and shad) was captured during the survey.

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
28 November 2002

INITIALLED: RM

DISTRIBUTION:

Basic List+
B Roel
S Warnes
R Ayers
P A Large
M E Etherton
S Warne
Mr K Knapp
S Douglas DEFRA Fisheries Office, Colchester

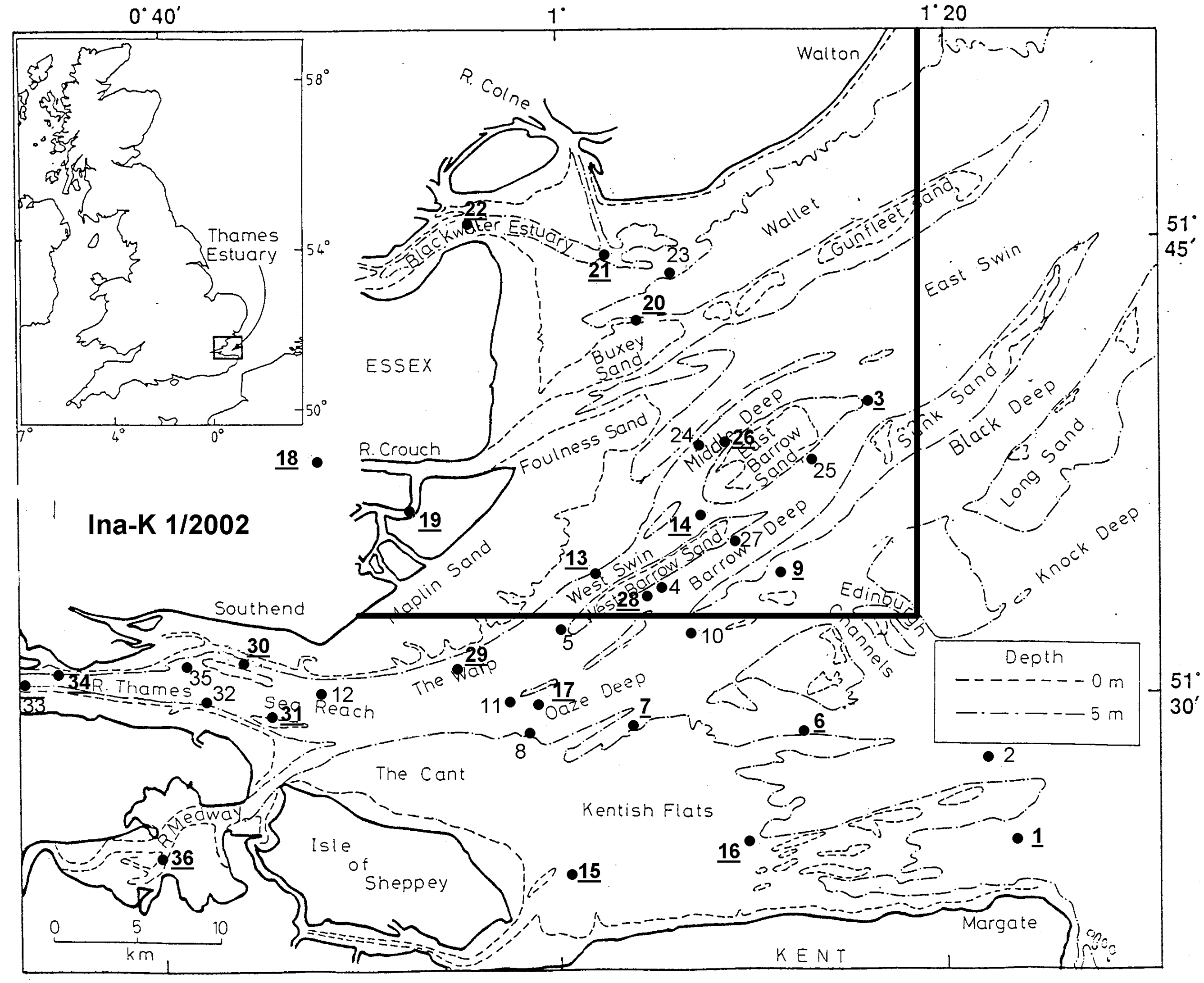
0°40′
1°
1°20
51° 45′
51° 30′
58°
54°
50°
7°
4°
0°
Thames Estuary
Ina-K 1/2002
Walton
R. Colne
Blackwater Estuary
Wallet
Gunfleet Sand
East Swin
ESSEX
Buxey Sand
R. Crouch
Foulness Sand
Middle Deep
East Barrow Sand
Sunk Sand
Black Deep
Long Sand
Knock Deep
Maplin Sand
West Swin
West Barrow Sand
Barrow Deep
Edinburgh Channels
Southend
R. Thames
Sea Reach
The Warp
Oaze Deep
The Cant
Kentish Flats
R. Medway
Isle of Sheppey
Margate
KENT
Depth
0 m
5 m
0 5 10
km
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Figure 2: Blackwater Herring 2002
Total Numbers (Stations standardised to 60mins.)