

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1988 CHARTER CRUISE PROGRAMME

REPORT: DAWN HUNTER: CRUISE 2
(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

T J Hulme
A M Watson
B C Mumford, 2 November only
P Hudson, 2 November only

DURATION

Left Lowestoft 1145h, 2 November
Arrived North Shields 0700h, 16 November

LOCALITY

Thames Estuary and the Wash

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 stock.
3. If time and weather permit, to extend the survey along the East Anglian coast and into the Wash.

NARRATIVE

DAWN HUNTER arrived at Lowestoft early on the morning of 2 November and was loaded and made ready for sea by 1145h, when she sailed from the port to carry out trial hauls with the mid-water trawl.

The following day the vessel steamed to Ramsgate, carrying out an echo survey in the outer reaches of the Thames Estuary, but strong south-easterly winds prevented any fishing that day and the next as well.

During the period 4-11 November, an echo and fishing survey was carried out in the Thames Estuary within the area Orford Ness to North Foreland. On the 12 November, DAWN HUNTER steamed from Felixstowe to Boston, and the 13 and 14 November were spent carrying out a limited echo and fishing survey in the Wash. The fishing gear, cable winch and all the other scientific equipment and samples were off-loaded in Boston Dock on the morning of the 15 November, and DAWN HUNTER sailed from there at 0900h to steam back to North Shields.

RESULTS

Aim 1. A total of 13 hauls were made with the mid-water trawl at 12 different locations, and the catch at each station expressed as number per hour are listed below.

Station Position	No.per hour	Station Position	No.per hour
Knock Deep	124	The Warp	58
Black Deep	132	Leigh Channel	164
Queens Channel (1)	3835	The Wallet	12
Oaze Deep	596	Whitaker Channel	54
Barrow Deep	16	South West Reach	2880
Queens Channel (2)	0	Heaps Buoy	209
		Ship Wash	4

The great variation in number per hour between the stations is possibly due, in part, to the time when fishing took place, as the two biggest catches were made in late afternoon when the fish were coming off the bottom. With the exception of the Ship Wash station, all the other hauls were made at locations where pair trawlers, working out of Whitstable, had recently caught herring.

Aim 2. A total of 321 fish were biologically examined and otolithed for stock analysis, and it would appear from these observations that the majority of the fish caught were of the Thames spring spawning stock with only a few of the larger fish coming from the Downs stock. The length distribution of all the herring caught in the Estuary during the survey is given in the attached figures, and it shows that the recruiting 1986 year-class (19-23cm fish) appears to be a very good one.

Only one good haul of sprats was made in the Estuary, in the Kentish Knock, and the length distribution of these and all the other sprats is given in the attached figures.

Aim 3. No fishing was attempted along the East Anglian coast between Orford Ness and the Wash. As DAWN HUNTER steamed down the Wash towards Boston, around day break on 13 November, she found extensive fish traces throughout the water column in the area Burnham Ridge to the Lynn Deeps which were subsequently surveyed and fished on. Four hauls were made with the mid-water trawl at the following localities: Lynn Deeps, Lynn Well (2) and Boston Deep, and a mixture of herring and sprats was taken each time, which overall were in the proportions, by weight, of 1:1½ herring to sprats. A total of 199 fish were biologically sampled and otolithed for stock analysis, and a sample of sprats was kept for age/length analysis. The length compositions of all the herring and sprats caught in the Wash are given in the attached Figures.

The catches taken and the amount of fish traces observed in the Wash would seem to indicate that there were good prospects for a sprat fishery there once the current ban has been lifted providing, that is, that there is a market outlet and the herring and sprat take up more discrete positions in the water column as they have been observed to do in past years.

I would like to record my thanks to Capt John Cole, owner of DAWN HUNTER, and to Skipper Alf Walker and his crew for their contributions to the smooth running and success of the two surveys.

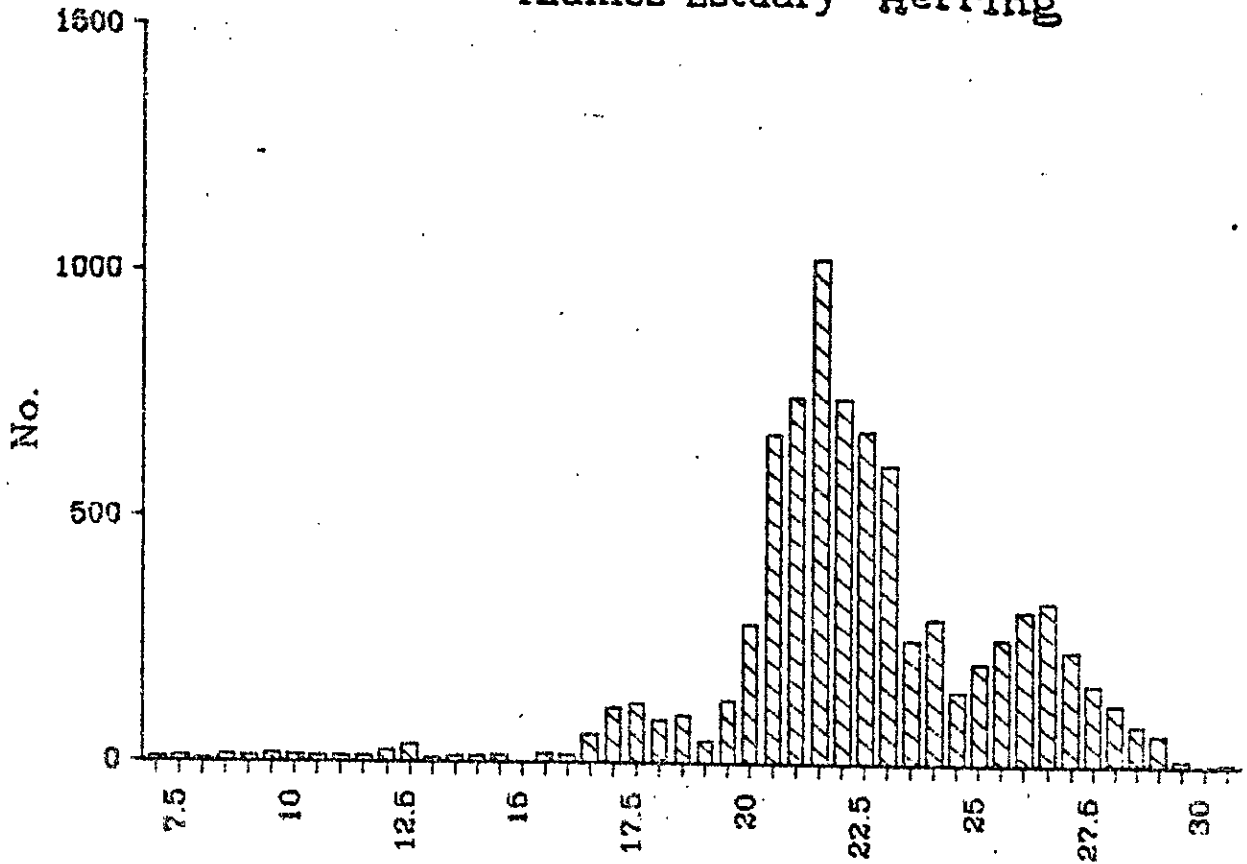
T J Hulme
22 November 1988

INITIALLED: DJG

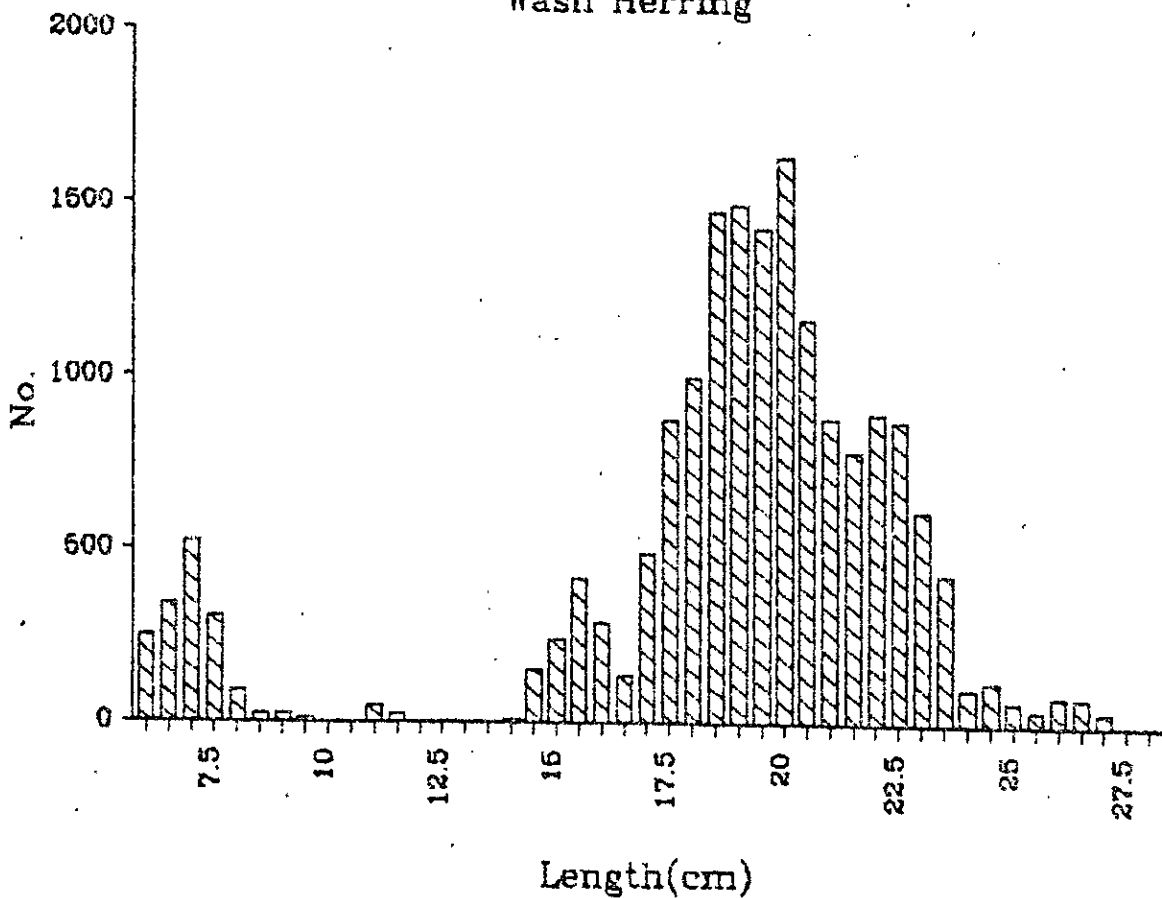
DISTRIBUTION:

Basic List + T J Hulme, A M Watson, B C Mumford, P Hudson, Capt Cole,
Skipper Walker, Eastern Sea Fisheries Committee,
Kent and Essex Sea Fisheries Committee

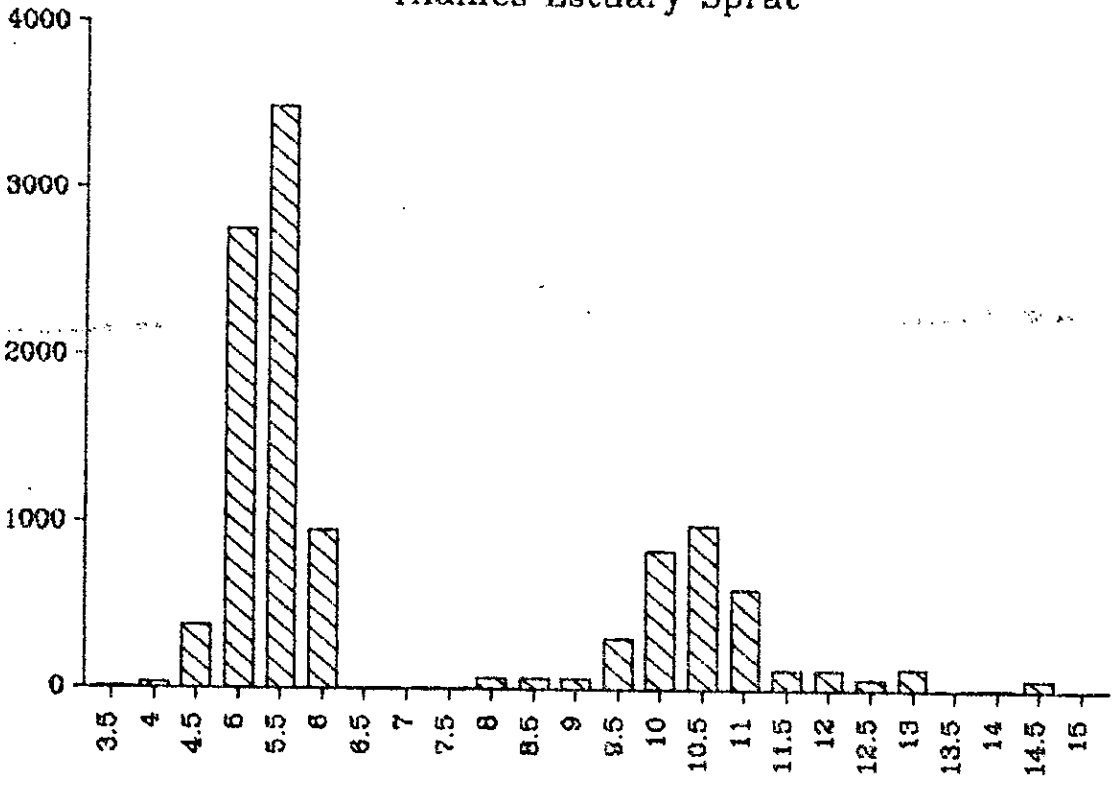
Dawn Hunter Survey, Nov. '88
Thames Estuary Herring



Dawn Hunter Survey, Nov. '88
Wash Herring



Dawn Hunter Survey, Nov. '88 Thames Estuary Sprat



Dawn Hunter Survey, Nov. '88 Wash Sprat

