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

1987 RESEARCH VESSEL REPORT

PROGRAMME: RV CLIONE: CRUISE 14

STAFF: P J Dare (SIC)
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D Key
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P Walker
D Palmer

DURATION: 9-22 November

LOCALITY: Irish Sea

AIMS:

1. To assess the distribution and abundance of scallop stocks between the Isle of Man and north Wales.
2. To sample bottom substrates and collect hydroids for scallop spatfall studies.
3. To obtain photographic and CCTV video records of the sea bed on one of the more productive grounds.

NARRATIVE:

CLIONE departed Lowestoft at 0930 on 9 November and reached the Irish Sea late on 11 November during a SW gale. CLIONE sheltered in Moelfre Bay, Anglesey, until the morning of 13 November when Dr Bannister joined the ship. Then, with the wind veering to a NW gale CLIONE steamed to the Isle of Man. Dredging was begun in the lee of the island off Douglas late on 13 November. Next day, dredging was started in the main survey area south of the Isle of Man between 4° and 5°W, and at 54°N (see chart attached). The work continued southwards with frequent interruptions due to rough westerly weather until noon on 19 November when the return journey to Lowestoft was started in worsening conditions. A total of 79 stations was worked despite losing about half of the 8 days available to bad weather. Whilst sheltering at Douglas on 16 November, discussions were held with scallop biologists from Port Erin Marine Laboratory.

CLIONE docked at Lowestoft at 0700 on 22 November.

RESULTS:

1. Stock distribution

A total of 63 standard (15 min) tows with 3 Newhaven scallop dredges was worked on the survey grid; 4 tows were made in most of the seventeen 5 x 5 nm squares surveyed. A further 9 tows were made at 0.2 nm intervals across a transect between two adjacent stations in order to assess the finer scale distribution of scallops. In addition, a set of 3 epibenthos sledges was towed for 10 mins at 7 of the more productive dredge stations.

Scallops (and queens) were widespread but very variable in abundance and age composition across these important fishing grounds. Totals of 1,185 scallops and 1,972 queens (833 in one tow) were taken with the standard dredges. The mean catch of scallops per tow was 16.5, or 29.2 per metre of dredge width per hour (maximum = 101 scallops per m.h.). Age distribution in the scallop catches ranged from 2-17 annual rings, and varied markedly between stations with 3 and 4 ring scallops dominant in some localities but +10 year olds at others. Approximately 75% of the catch exceeded the 110 mm minimum landing size. Growth rate also varied locally; large samples of shells were collected for detailed study later. Gonad (roe) condition likewise varied across the survey area; adult scallops ranged from mainly ripe/nearly ripe at many stations to spawning/recently spawned elsewhere.

The epibenthos sledges captured 6 large scallops and 153 queens (some only 10-28 mm wide), along with several small 'clams', but no small scallops were obtained.

2. Substrates and hydroids

The distribution and abundance of hydroids was very patchy; 16 large samples were preserved for later examination for scallop and queen spat. Large volumes of shell gravels taken by the epibenthos sledges were sieved, but no small scallops were found.

3. Cameras sledge

This gear was not deployed owing to the prevailing poor sea conditions and lack of time.

4. Benthos and fish

Predatory starfish were counted at all stations, whilst general notes were made of the diversity and abundance of other major epibenthos.

The following commercial species were taken by the dredges: 18 brown crab (3 damaged), 6 anglerfish, 15 cuckoo rays, 2 thornback rays, 2 plaice, 5 sole, 3 lemon sole, and 1 dab. Otoliths from the soles were collected for FSM2.

5. General

A sample of 20 scallops and 25 queens was preserved for AEP2. Other scallops were collected for the University of Cambridge project on age determination.

P J Dare
(Scientist-in-Charge)
2 December 1987

SEEN IN DRAFT: JRF, PM

INITIALLED: DJG

DISTRIBUTION:

Basic List+

P J Dare

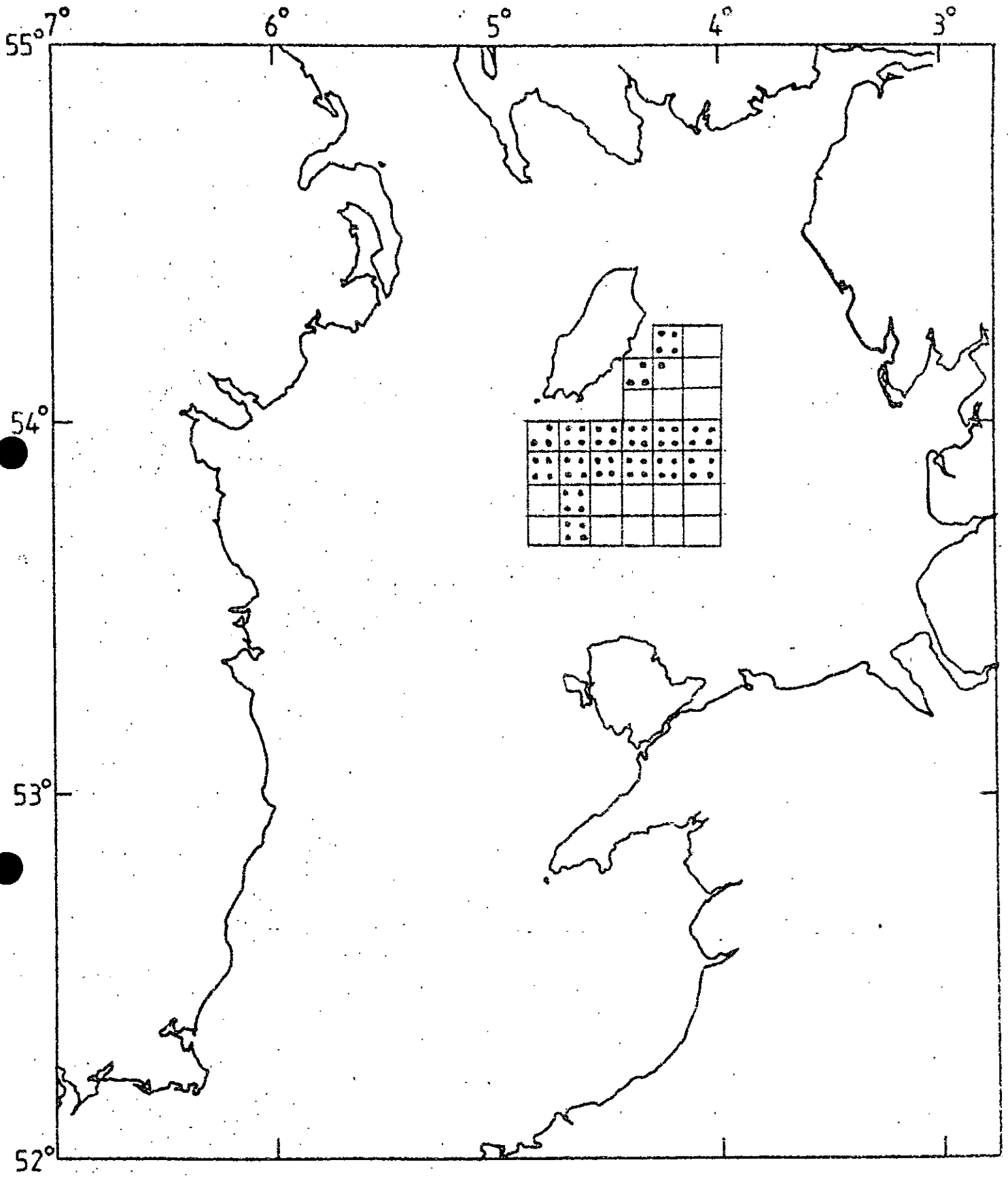
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CLIONE 14/87. Dredge Survey Stations: Scallop Survey, 13-19 November.