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MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, NR33 0HT ENGLAND

1986 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 7

STAFF: G P Arnold
B H Holford
A E Howard
T W Beard
P M Hudson
R P Flatt
A P Scott (12-13 June only)
and: P Sykes
J Tipple
(shore-based divers)

DURATION: Left Lowestoft 0840h 6 June
Arrived Lowestoft 0745h 18 June
(All times are Greenwich Mean Time)

LOCALITY: Bridlington Bay

AIMS:

1. To release 3400 hatchery-reared juvenile lobsters.
2. To carry out a reef survey to identify potential release sites for hatchery reared juvenile lobsters.
3. To observe the behaviour of acoustically-tagged adult lobsters.
4. To investigate methods of sampling prerecruit lobsters.

NARRATIVE

RV CLIONE left Lowestoft at 0840h 6 June and arrived in Bridlington Bay late the same day after a rough passage. The northerly winds had generated a large swell and zero underwater visibility, which precluded diving operations for several days. Work commenced on 7 June with a sonar and echosounder survey of the seabed in the area of Witter hole off Skipsea but was abandoned after a hydraulic failure of the sector scanning sonar. This necessitated the recovery of the transducer by the divers and the replacement of the two hydraulic pipes supplying the mode ram. On completion of the essential repairs a grid survey was made of the seabed within 3 miles of the coast between Aldbrough and Withernsea, using the sector scanner, a sidescan sonar and the ship's echosounders simultaneously.

After a brief pause for bad weather during the afternoon of 10 June work began again the following morning with the release of the juvenile lobsters supplied by the Conwy laboratory. Two thousand were released on 11 June by divers using stacks of trays and a further 400 on 12 June by the same method. During the ensuing two days the remainder of the lobsters were released using a 30m pipe (7.5cm internal diameter) running down to the seabed.

An acoustically tagged adult lobster was released during the evening of 12 June but was only tracked for an hour before the tag signal vanished abruptly and a further scanner failure caused the station to be abandoned. A second lobster was released late on 14 June and tracked until 0830h 17 June. A third lobster was tagged underwater on the seabed but there was insufficient time to observe the behaviour of this animal. Work finished at 1830h 17 June and CLIONE docked in Lowestoft early the following morning.

RESULTS

1. 3400 juvenile lobsters were released on the seabed on selected reefs off Grimston. The pipe release showed considerable promise and an underwater video was made showing it in action. The behaviour of the newly released juvenile lobsters was also observed and recorded. With a flow rate of 12 ls⁻¹ in the pipe the young lobsters took 80s to traverse the release pipe. On arrival at the seabed they emerged tail-first with their claws extended in line with the body and were ejected some 20-30cm from the end of the pipe. They then immediately swam tail-first to the bottom.
2. Some 34 potential reef sites were identified from the combined sonar/ echosounder grid but these features showed up poorly on both sector scanner and sidescan sonar records and were mainly identified from the echo-sounder records. Nine features showed particular promise. The sector scanner was not working to specification.
3. Two acoustically tagged lobsters were released by divers and a third (a berried hen) was tagged in situ on the seabed. The second animal was tracked for 62h and its track plotted in relation to the position of an underwater acoustic beacon. This lobster showed a nocturnal pattern of activity moving distances of several hundred meters along a circuitous path during each of the three nights that it was under observation. It was inactive during the daytime and was observed by the divers to shelter under the edge of large rocks. Its resting position was different on each of the three days. The tag was recovered at the end of the track.
4. A serious attempt on this aim was deferred until a later diving trip but a single tangle net was shot on the penultimate day to familiarise the divers with the technique.

G P Arnold
(Scientist-in-Charge)
17 June 1986

SEEN IN DRAFT: G Sinclair (Master)
R C Newrick (Fishing Skipper)

INITIALLED: D J G

DISTRIBUTION:

Basic list+

G P Arnold	R P Flatt
B H Holford	P Sykes
A E Howard	J Tipple
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	S J Lockwood