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

1978 RESEARCH VESSEL PROGRAMME

REPORT: R.V. CLIONE: CRUISE 14

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

STAFF:

- M Greer Walker
- J McCleave (University of Maine)
- B Thompson
- E Shreeve
- L Cox
- D Solomon 14-22 November
- K Medler 9 November only
- M Fouda (University of Bristol) 9-14 November

DURATION:

Left Lowestoft 1400 h, 9 November
 Arrived Lowestoft 1300 h, 22 November

LOCATION:

Southern North Sea

AIM:

To continue eel migration studies by tracking silver eels using acoustic transponding tags and sector scanning sonar

NARRATIVE:

CLIONE sailed at 1400 h, 9 November and the first current meter rig (Lat. 52°22' and Long. 2°01') was laid by 1610 h. The first release cage containing an acoustically tagged eel for adaptation was set (52°09.5'N, 1°58.9'E) at 1730 h followed by the second current meter rig (52°01.7'N, 01°52.3'E) at 1900 h. CLIONE then steamed for Harwich to fit the dome, docking at 2200 h. On return to the working area the following day the first eel cage could not be found and after a search a second cage was set at 1000 h 10 November in the same area. During the adaptation period the new automatic release cage was tested satisfactorily. The second eel was released at 1814 h but was lost at 2230 h the same day. The third eel cage was laid at 0700 h 11 November in the same position and the fish released at 1245 h. This fish was tracked until 2245 h 13 November. On the next day the weather made work impossible and the opportunity was taken to exchange Mr Fouda for Dr Solomon at Great Yarmouth. The bad weather continued and CLIONE remained in the Yarmouth Roads until 0800 h 16 November when she steamed to the southerly current meter rig where the automatic release cage (ARC) was laid. This eel was released at 1630 h and tracked until 1545 h 17 November. Eel 6 was set for adaptation in the working area at 1800 h and released at 2100 h. However this fish was lost shortly after release at 2215 h. The following two days were spent sheltering from the weather either close to Dunwich or in the Yarmouth Roads. On 20 November the weather improved sufficiently and an ARC was laid at 0730 h and the sixth eel released at 1030 h. This fish was abandoned at 1700 h 21 November. CLIONE steamed to the southerly current meter rig which was raised by 1900 h and reached Harwich in order to remove the dome at 2200 h. The northerly current meter rig was recovered by

0800 h the following morning and CLIONE docked at 1300 h.

RESULTS:

1. There were three eel tracks of consequence

Eel 3 was released 8 n.miles south of the northerly current meter during a northerly tide. This fish was tracked for 58 h (the longest track to date) and during this period the fish moved about 17 n.miles in a north-westerly direction using selective tidal stream transport. This was achieved by remaining close to the bottom on southerly tides and rising into midwater on northerly tides thus the fish moved steadily northwards.

Eel 4 was released close to the southerly current meter rig during a northerly tide and was tracked for 24 h. This fish moved seven n. miles in an easterly direction by remaining in mid water for most of the period and swimming eastwards. Several excursions to the bottom were noted at slack waters.

Eel 6 was released midway between the two current meter rigs during a southerly tide and was tracked for 30 h. In contrast to eel 4 this fish moved 7 n.miles eastwards by remaining in midwater and swimming in an easterly direction.

2. The automatic release cage (ARC)

This cage, designed by RVSG, has a single reinforced electric cable connected to a solenoid switch on the door such that it may be opened on demand. The cage was tested and used under extreme conditions and was found to be entirely satisfactory.

3. Two current meter rigs were deployed and recovered. However, both rigs had moved from their original positions and there was evidence that at least one had been caught in the trawl. 8 acoustic tags were used.

M Greer Walker
27 November 1978

SEEN IN DRAFT:

GRF
RG

INITIALLED: AJL

DISTRIBUTION:

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