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1977 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 3

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

STAFF

G P Arnold
P Scholes
J Last
S P Milligan

DURATION

Left Lowestoft 0830 h 2 February
Arrived Lowestoft 1600 h 14 February
All times are Greenwich Mean Time

LOCALITY

Southern Bight North Sea

AIM

To continue plaice migration studies by fishing for spent fish in midwater and comparing the catch rates on northerly and southerly tides.

NARRATIVE

CORELLA sailed at 0830 h 2 February and arrived on station some 30 miles off Southwold in time for the start of a northerly tow at 1200 h. With gale-force southerly winds, however, it proved impossible to shoot the midwater trawl on this or the subsequent tide and CORELLA sought shelter in Corton Roads until 2115 h 3 February. The first haul was made on a northerly tide starting at 0118 h 4 February and work continued with the loss of only one tide until 0600 h 7 February, when, with deteriorating weather, CORELLA returned to Lowestoft to land live fish and take on fresh water. CORELLA docked at 1000 h 7 February and sailed again at 2300 h the same day with Captain Sellers on board. The gear was shot away again at 1000 h 8 February and paired 3 h tows were made until the afternoon of 10 February when the onset of south-easterly gales prevented any further work. After dodging until 2330 h CORELLA took shelter in Corton Roads again before entering Lowestoft at 1305 h 11 February to land Captain Sellers. CORELLA sailed one hour later and began fishing again at 1815 h; work continued uninterrupted until 0630 h 14 February. CORELLA then set course for Lowestoft where she docked at 1600 h.

RESULTS

1. Fourteen paired hauls were made along the axis of the tidal stream between positions $52^{\circ}10'N$ $02^{\circ}14'E$ and $52^{\circ}21'N$ $02^{\circ}22'E$ on consecutive northerly and southerly tides.
2. A total of 113 plaice was caught in midwater, 99 on northerly tides and 14 on southerly tides, giving catch rates of 2.36/h and 0.33/h with a ratio of 7:1.

3. When combined with the results of CLIONE 2/76 the overall ratio of catch rates is 5.6:1 as shown below:

	<u>Tide</u>			
	<u>Northerly (N)</u>		<u>Southerly (S)</u>	
	h	catch	h	catch
CLIONE 2/76	24	81	26	19
CORELLA 3/77	42	99	42	14
catch/h	2.73		0.48	
catch rate	N : S		5.6 : 1	

4. Female fish outnumbered males by a factor of 10 to 1 and on northerly tides 82% (81 fish) of all the fish were spent. A similar ratio was observed during CLIONE 2/76.
5. A short echo survey was made in the immediate vicinity of a small pit in position 52°10.2'N 02°15.0'E but even in good weather it proved impossible to take a water sample from the pit with the necessary precision to test the submarine spring hypothesis proposed by Dr Harden Jones.
6. Eyes of immature, mature and spent fish were preserved for histological analysis by Dr Greer Walker.
7. Live plaice and dogfish were returned to the laboratory for experimental purposes.
8. Small whiting were frozen for use as fish food at the laboratory.

G P Arnold
23 February 1977

SEEN IN DRAFT JEMB
ETB

INITIALLED AJL

DISTRIBUTION

Basic list
G P Arnold
P Scholes
J Last
S P Milligan
F R Harden Jones
M Greer Walker