

MINISTRY OF AGRICULTURE FISHERIES AND FOOD, FISHERIES
LABORATORY, CONWY, GWYNEDD, N. WALES

1989 RESEARCH VESSEL PROGRAMME

REPORT: MFV Guide Me 'B'

STAFF: S I Rogers (SIC)
S J Lockwood (18 May)
B R Howell (22-23 May)
B E Spencer (24 July)
S D Utting (25 July)
S M Baynes (17 May)
A R Child (27-28 July)
D B Edwards (24 May)
P F Millican (25 July)
T Ellis (student) (17-18 May)
S Vagianis (student) (2-5 October)

DURATION: 17 May - 5 October 1989

LOCATION: Rhyl Flats and Constable Bank, North Wales coast.

AIM: To describe in detail the distribution of year-classes of juvenile sole before and after larval settlement. Also to correlate the density of prerecruits, within and beyond the nursery area, with environmental variables considered important for survival and growth.

NARRATIVE: A close grid of fishing positions covering the entire nursery area, and containing 91 stations, was devised. All but 2 provided valid hauls using paired "modified" 2 m beam trawls when the grid was first surveyed 17-24 May. All sole and plaice captured were measured and recorded. All valid stations were repeated 24 July - 3 August. During this survey replicate samples of substrate were collected at 21 of the most inshore stations, representing a range of sites supporting different densities of juvenile sole. The grid station positions were fished for the third time between 2-5 October, but the onset of unsettled weather prevented the completion of some off-shore stations, representing 20% of the total number.

RESULTS: The distribution of 0-group, 1-group and 2-group plaice and sole was described by contouring. The close proximity of grid stations enabled changes in distribution between surveys to be accurately illustrated. 1-group sole remained close inshore in discrete areas until settlement of the subsequent year-class. In contrast 1-group plaice were dispersed throughout the area covered by the grid.

In order to double the area covered by the grid survey, data collected during CORYSTES 10/89 was used in conjunction with the October survey. To assist with the separation of year-

classes otoliths were taken and these results will shortly be available.

A correlation was found between the occurrence of relatively high densities of 0 and 1-group soles (>20 fish/1000 m²) and the presence of fine-grained sediment. The presence of this substrate did not always, however, indicate an abundance of juvenile fish.

S Rogers
1 December 1989

INITIALLED: SJL

DISTRIBUTION:

Basic list +
S Rogers
S Lockwood
B Howell
B Spencer
S Utting
S Baynes
D Edwards
P F Millican
A Child
NWNW SFC