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

1991 RESEARCH VESSEL PROGRAMME

REPORT: MFV PATRICIA D

STAFF: S I Rogers
B R Howell
T W Beard
A R Child
N Earl
F Couper

DURATION: 18-29 May
29-30 July, 7-8 August, 12 August, 15 August
21-22 August, 3-4 September
24-25 October, 5 December

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

AIMS:

1. To repeat the grid survey conducted during May 1989 and May 1990 to establish a time-series of 1-group sole abundance data on the North Wales coast.

2. To measure the growth rate of 0-group sole and plaice and the change in biomass of these year-classes, and of selected epifauna, during a five week period from 29 July.

3. To estimate annual production of 0-group sole and plaice by continuing sample collection to December.

NARRATIVE:

Persistent strong N to NW winds delayed the start of the grid survey for five days. The charter vessel was able to anchor behind Rhos Point breakwater and was thus immediately available when the weather cleared on 18 May. Two further periods of strong W winds interrupted the survey for several days, and the last station was finally completed on the 29 May, in a fresh NE wind. The collection of 0-group sole and plaice for work on the growth rate and production of the population began on 29 July. Fish were sampled from throughout the nursery area at approximately weekly intervals until 4 September, and benthos samples from nine fishing stations were taken on three occasions. To complete the field programme two further samples of the fish population were taken during October and December. The water temperature at the sea-bed was recorded during each cruise.

RESULTS:

Ninety-one beam trawl stations were completed during the May grid survey on the North Wales coast. The abundance of 1-group sole was very much lower than that of three previous year-classes, and fish were only taken at the easterly extreme of the grid. During 1990 this year-class had been virtually absent on the nursery ground.

Growth rates of 0-group sole and plaice recorded during August were high. The sole population increased in mean length from 38.5 mm on 1 August at a rate of 0.6 mm per day, and the plaice population increased from 69.8 mm at 0.5 mm per day. Both these

growth rates are close to the maximum growth rates of fish held at equivalent temperatures and fed excess rations. Production estimates of 0-groups to December 1991 for sole (.0037 g dry weight per m^2) and plaice (.024 g dry weight per m^2) have been determined. Progress has also been made with production estimates of all other mobile epifauna on the nursery ground during August. All samples are now sorted by cruise and by species and await further analysis.

S Rogers
12 December 1991

INITIALLED: SJR

DISTRIBUTION:

Basic List +

S I Rogers
B R Howell
T W Beard
A R Child
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F Couper