

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

1990 CHARTER VESSEL PROGRAMME

REPORT: BALAENA 2/90

STAFF:

D Eaton  
C Whiting

DURATION:

5-9 October 1990

LOCALITY:

Medway and southern Thames estuaries

AIMS:

1. To investigate the distribution and abundance of 'O'-group and juvenile bass, and to collect biological samples for use in growth studies.
2. To tag juvenile/pre-recruit bass in nursery areas.
3. To sample bass caught on the screens at Kingsnorth power station.

NARRATIVE:

Sampling at Kingsnorth power station commenced at 0650 h on 5 October. The presence of large amounts of 'salad-weed' (*Ulva*) prevented normal continuous sampling over the 5 hr sampling period, and only intermittent sampling was possible.

Fishing operations began on 6 October working out of Queenborough, Isle of Sheppey, and trawl survey stations were worked in the Medway estuary where some shelter was gained from the force 7 SW winds. The survey was continued in the Medway on 7 October until gear damage afforded the opportunity to test a new lightweight trawl whilst the survey gear was being repaired. Only two tows were completed with this gear before it too suffered damage and the rest of the day was spent using rods in an attempt to catch bass of taggable size whilst the damaged gear was being repaired.

The survey resumed on 8 October but only 3 more stations were worked before an otter-board broke and it was necessary to return to Queenborough and find an establishment capable of carrying out the repair. This was done and while the repair was being effected the lightweight trawl was again deployed in the Kingsnorth hot-water outlet creek. The remainder of the survey in the southern Thames estuary and the Swale was attempted on 9 October but deteriorating weather caused the abandonment of two stations.

RESULTS

Aim 1.

Fourteen valid survey stations were completed (21 in a full survey) and a total of 2429 bass were caught, 97% (2357 fish) being O-groups and the rest 1-group. One-group fish were widespread and were caught at all stations except 4 deeper stations in the Thames. O-group fish however were only caught at four of the stations and furthermore one station in the Medway accounted for 92% of the O-group catch. It is difficult therefore to reach any firm conclusion about the strength of the 1990 year-class even though the catch rate of these fish in the survey was 11.3 bass/minute compared with 3.5 bass/minute in 1989. The outstanding strength of the

1989 year class was confirmed by both their widespread distribution and their catch rate; 0.34 bass/minute compared with 0.01 bass/minute in 1989.

**Aim 2.**

Only 52 bass were tagged in the length range 19.5-32.0 cm (48 Hallprint T-bar tags and 4 mini-Howitt) which were released in the Kingsnorth nursery area.

**Aim 3.**

Because of the problems with weed on the screens only a total sampling time of 125 minutes was achieved during the 5 hour sampling period. A total of 122 0-group bass were sampled which can be extrapolated over the total sampling period to arrive at an estimate of the total number of 0-group bass over that period, -296 fish. The mean length of 0-group fish appearing on the screens was 6.7 cm compared with a mean length of 7.5 cm in the trawl survey. This small difference is almost certainly due to selectivity effects of the survey gear, very few fish <5.5 cm being retained by the trawl. Samples of both 0-group and 1-group fish were collected from the screens and different locations in the Medway for use in growth studies in the laboratory.

D Eaton  
29 October, 1990

**INITIALLED: GPA**

**DISTRIBUTION:**

Basic List +

Mr Eaton

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