

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, PAKEFIELD ROAD, LOWESTOFT, SUFFOLK NR33 0HT

1993 CHARTER VESSEL PROGRAMME

REPORT: ANGELLE MARIE 2/93

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

STAFF: D Eaton
G Pickett
Ms A Hayes (Swansea University)

DURATION: 17-25 September 1993

LOCATION: The Solent, Southampton Water, Chichester and Langstone Harbours

AIMS:

1. To carry out a trawl survey for pre-recruit bass in the Solent area.
2. To sample commercial bass landings in the area.
3. To tag adolescent bass.
4. To obtain samples of juvenile bass for population genetic studies (Mr T Bond, Swansea University).

NARRATIVE:

Equipment was loaded aboard the ANGELLE MARIE at Warsash, River Hamble on September 17 and the survey commenced the following day. After two days working the Southampton Water and western Solent part of the survey grid the remaining three days of the charter were spent in the eastern Solent and Chichester and Langstone Harbours. The survey was completed without interruption on September 22 and Ms Hayes returned to Swansea on September 23. GP and DE met with staff from the Fawley Aquatic Research Laboratory before travelling to Poole that evening for discussions with a local bass fisherman. Unfortunately, very low catch rates of bass, due to unavailability of bait for the rod and line fishery and fouling of gill nets by weed, prevented the proposed sampling trips aboard bass boats from the Poole area. A further meeting with SFI staff from Portsmouth and Chichester was held on September 24 followed by visits to the upper reaches of Chichester Harbour in the afternoon in order to investigate potential '0' group bass sampling sites, and sampling of commercial catches in the Selsey area. Staff returned to Lowestoft on September 25.

RESULTS

1. Forty-seven survey tows were completed and 2760 bass were caught. Of these 43 were of legal landable size, and only 1.7% (47 fish) were older than 4 years. The small proportion of older fish, which is seen in almost all the surveys, demonstrates the importance of the area as a nursery ground for immature bass. Good numbers of both '0'-group (294) and '1'-group (539) bass were caught, the latter having been missing from the catch during the May survey this year. The '0'-groups were found both in the lower part of Southampton water and the upper reaches of the harbours. It is possible

that prolonged heavy rain during the week preceding the survey may have had some effect on the '0'-group distribution, forcing them further down Southampton Water where there is a considerable freshwater input from the rivers Hamble, Itchen and Test. In Langstone and Chichester Harbours where the freshwater input is negligible, '0'-groups were still present in the upper reaches. Although the 1989 year-class still accounted for the biggest component of the catch by number, the growth of this cohort in the area is still depressed as is shown by the mean lengths of 4 year old fish in the September survey in recent years.

1990 37.4 cm: 1991 37.4 cm: 1992 36.3 cm: 1993 31.5 cm

In May the 4 year olds were 26.8 cm mean length and it would appear that good growth has been achieved over the summer. The 1991 and 1992 year-classes were both well represented, but the weakness of the 1990 year class is confirmed. The survey age and length distributions are summarised in the figures appended at the end of this report. The catch rates (bass/min) were 3.3 in the harbours and 1.0 outside (2.1 overall) which are very similar to those seen in May (4.0, 0.4 and 1.9 respectively). These are also comparable with average values in recent years.

2. 41 bass from commercial landings were sampled. Both merchants and fishermen were reporting a severely depressed market for small bass, attributed to the importation of farmed bass from abroad. Several merchants in the area had stopped taking small bass but the market for good quality large fish remained buoyant.
3. 271 bass >29 cm total length were tagged using large Hallprint 'T'-bar tags.
4. Samples of juvenile bass from Southampton Water and Chichester Harbour were preserved (frozen) for population genetic studies (T Bond, Swansea University).
5. Samples of commercial size bass and common eels (*A. anguilla*) were preserved for pollution studies (A Franklin, Burnham).
6. The ovaries of 14 bass of commercial size were preserved in buffered formalin as part of maturation studies being carried out at Lowestoft.

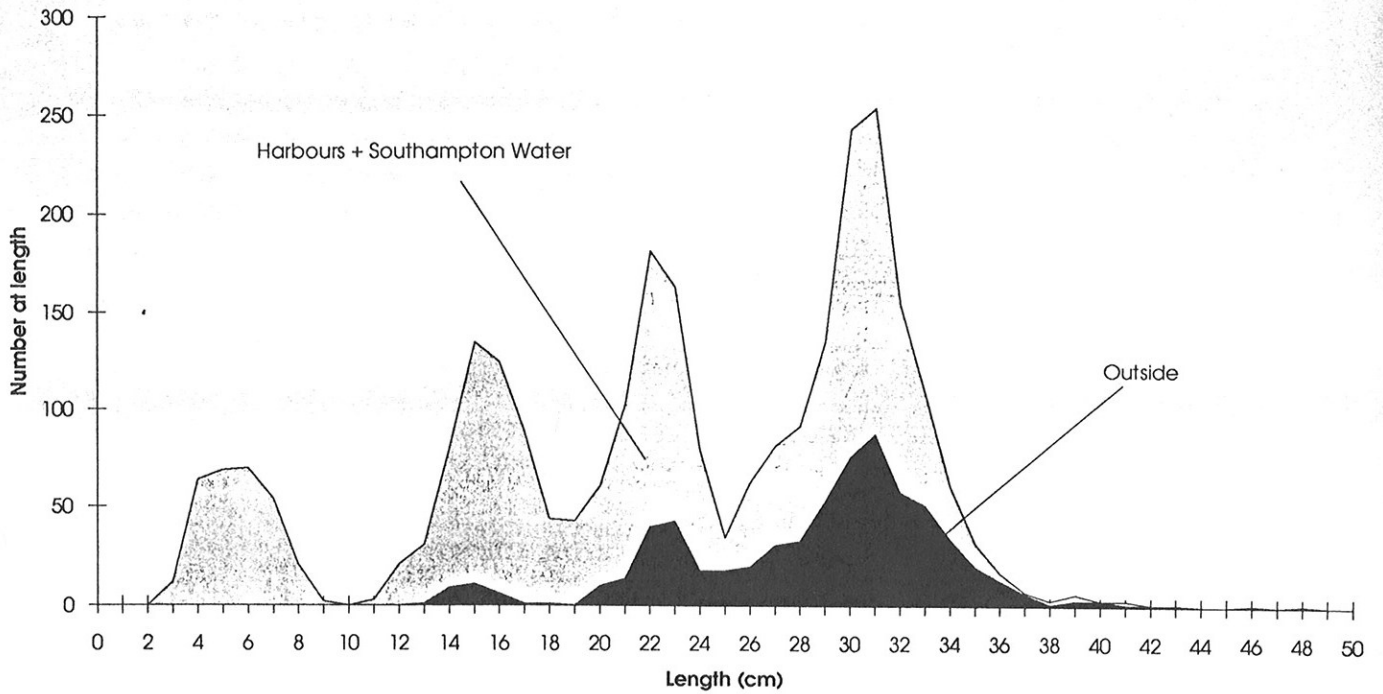
D Eaton
18 October 1993

INITIALLED: GPA

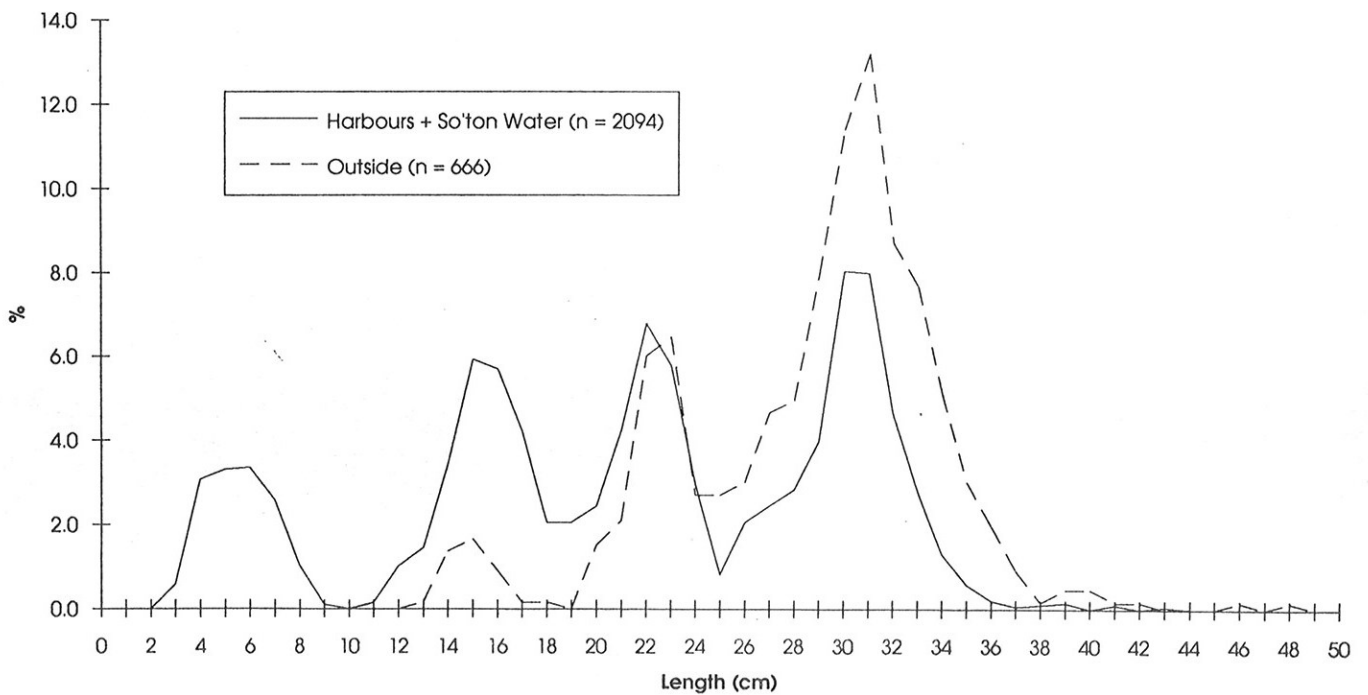
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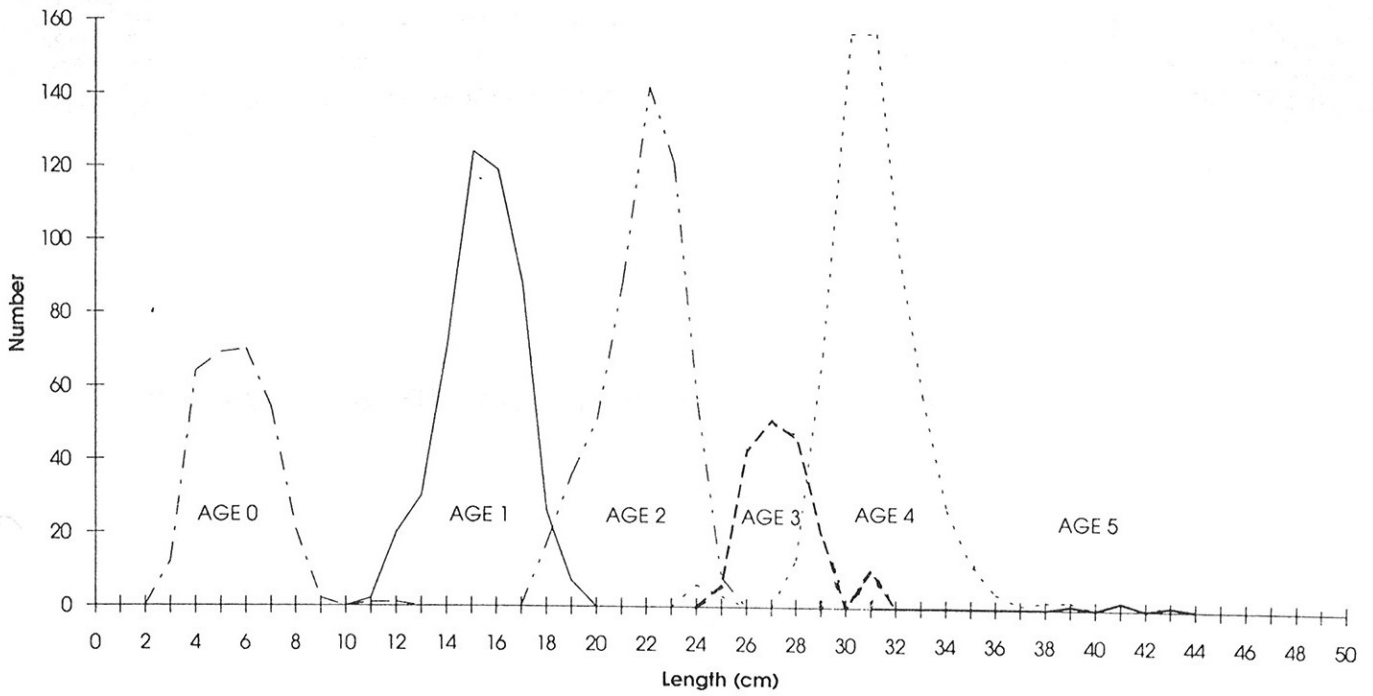
Solent Bass Survey September 1993 LD



Solent Bass Survey September 1993 % LD's



Solent Bass Survey September 1993 - Harbours and Southampton Water ALD



Solent Bass Survey September 1993 - Outside ALD

