

2004 CHARTER CRUISE PROGRAMME

REPORT: ANGELLE MARIE 1/2004

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

STAFF: G D Pickett
W Riley
M Brown

DURATION: 14-17 January 2004

LOCATION: Southampton Water and adjoining estuaries and the western Solent.

AIMS:

1. To determine the distribution and density of 1 and 2-group bass in winter to compare with the May and September Solent surveys and November Thames survey.
2. To determine the presence of salmon and sea-trout smolts in Southampton Water and tributaries and inner harbours.
3. (Additional objective) To repeat selected tows with different trawls and at different speeds to compare the effects on size composition of the catch.

NARRATIVE:

Staff travelled to Warsash on the Hamble River on 13 January and met the charter vessel to load survey gear and sampling equipment. With a forecast of severe gales for the whole period of the charter, work was restricted to Southampton Water and the western Solent. The survey commenced at 0920 on 14 January, and seven tows were made inside Southampton Water that day, using a replacement CEFAS bass trawl of standard design, including repeats on three stations, at 2 knots and 4 knots. On 15 January, similar comparative tows were made using the regular survey bass trawl. Over next two days, a further 14 tows were fished in an attempt to locate estuarine salmon smolts, including new stations in the estuaries of the rivers Itchen and Test. One of 2 tows in the Test estuary was invalid, due to the cod-end being blocked with old tree trunks, but very little damage was sustained to the gear during the survey, despite working some stations in areas outside the usual bass survey grid. The fishing gear was unloaded at Warsash Marina late on 17th January, and staff returned to Lowestoft on 18th January.

RESULTS:

A total of 29 valid tows were made on 11 stations. Some stations were repeated to ensure fishing over different states of the tide or were fished at a slower speed to compare the effects on size composition of the catch. A total of 2423 bass were caught, of which 52 over 36cm were tagged and 189 were scaled for age analysis.

Bass were widely distributed in Southampton Water and the adjoining estuaries, but very few were caught outside, off Beaulieu, Fawley and Lee-on Solent. All but 3 tows yielded bass. The 1- groups (2003 year-class) were largely confined to the mouths of the Hamble and Itchen rivers. The 2-groups were mainly caught in central Southampton Water between these two rivers (Figure 1). A comparison of bass length distributions obtained for slow and fast tows showed that a higher proportion of 6-10 cm bass (1-groups) were obtained at 2 knots, but at the expense of 15-35 cm bass (2-5-groups), which appear to be better sampled at 4 knots (Figure 2).

The age length distribution (Figure 3) shows that, for separate age groups with modal lengths of 8cm, 18cm, 24cm and 29cm respectively, 22.5% of bass caught were 1 year old (2003 year class), 27.9% were 2 year olds (2002 year class), 13.6% were 3 year olds (2001 year-class) and 21.8 % of were 4 year olds (2000 year class). 86 bass caught were above the minimum landing size (36cm).

A narrower range of other species was caught than is normal in the May and September surveys, in particular the new trawl, although very effective for bass, caught less other species and benthos than the regular CEFAS bass trawl in comparative tows. It was concluded that this difference was because the footrope of the replacement trawl appeared to have been fitted with slightly lighter robber bobbins, so that it did not fish so hard on the ground.

No salmonid species of any size were caught in the survey.

Water surface temperatures were recorded at each station. These ranged from 7.0°C to 8.3°C in Southampton Water and the western Solent; lower values (5.2°C and 6.7°C) were recorded in the lower Itchen and Hamble rivers, after overnight frosts, and possibly influenced by fresh-water run-off.

CEFAS would like to thank the skipper and crew of the Angelle Marie for their help in the successful completion of this survey.

G D Pickett,

20 January 2004

INITIALLED:

DISTRIBUTION:

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Mr D Baldacchino, Skipper FV Angelle Marie
Mr D Jenkins, FOII Portsmouth
Mr T Dapling, CFO Sussex SFC

Figure 1

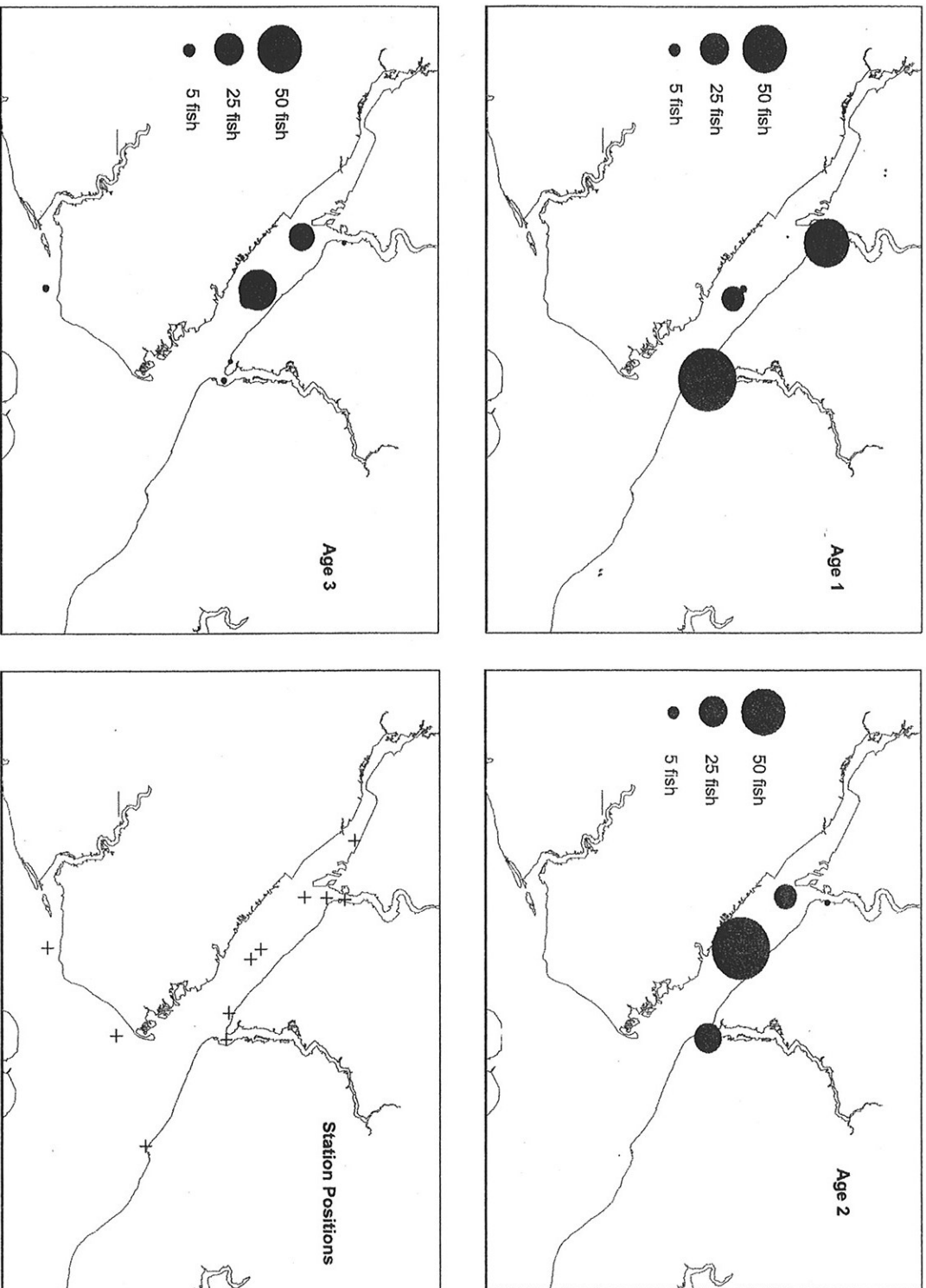


Figure 2

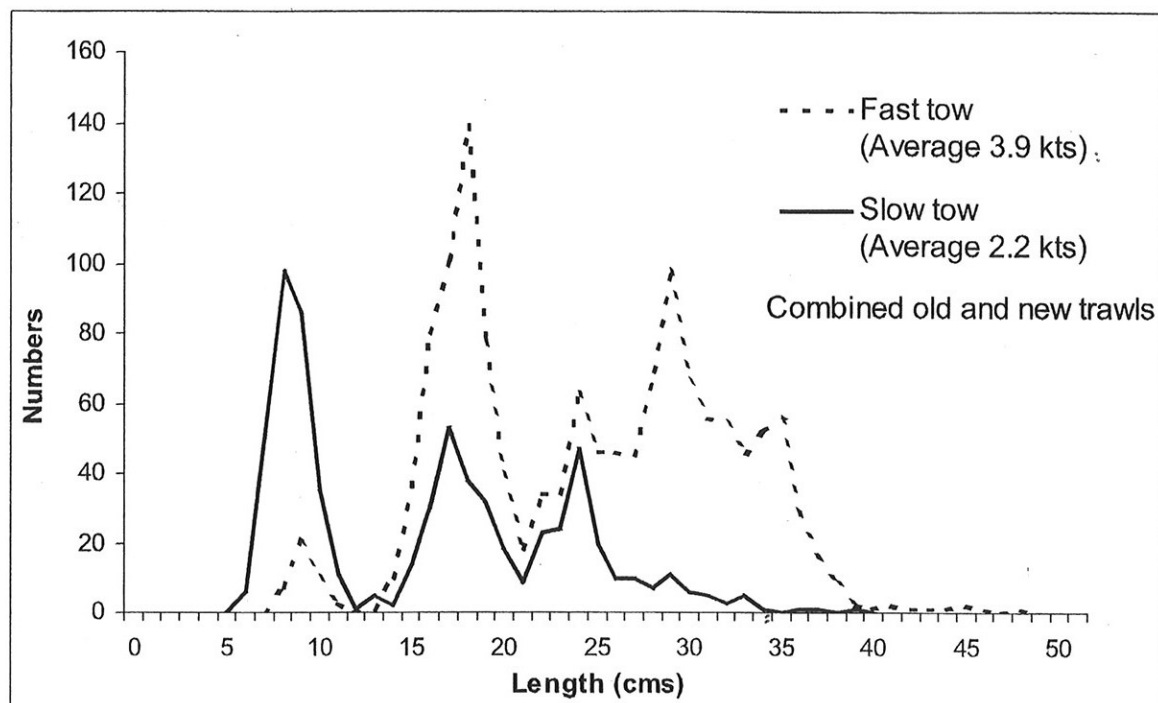


Figure 3. January 2004 Bass length frequency distribution at Age

