



Fish of Medway 2025 Report

Report of the activity and progress undertaken in the fourth year of fish surveying for the locally supported project monitoring the impact of the No Take Zone.

Introduction

This year the 'Fish of the Medway' project, run by Living River Foundation, has developed and gained a project lead for the fish surveys, as many of our volunteers will already know, Bernice Brewster joined us at the start of the year. With expertise and experience in fish health, fish welfare and freshwater ecology, her addition to Living River Foundation is of benefit to the future of the Fish of the Medway project.

This year we added a site in Milton Creek, initially suggested by one of the volunteers. Incorporating Milton Creek in the project increases our understanding of fish utilisation of the saltmarshes in the Medway under the restrictions of the No-Take Zone. No-Take Zones are protected areas where harvesting, commercial or recreational fishing is banned.

Fish populations are not static and can be influenced by environmental factors catches of adult fish and climate change. Figure 1 shows the data for sea bass found in our surveys from 2022 – 2025. In 2024 there was an increase in numbers of sea bass at all of the sites that year, but in 2025 all the sites were much lower.

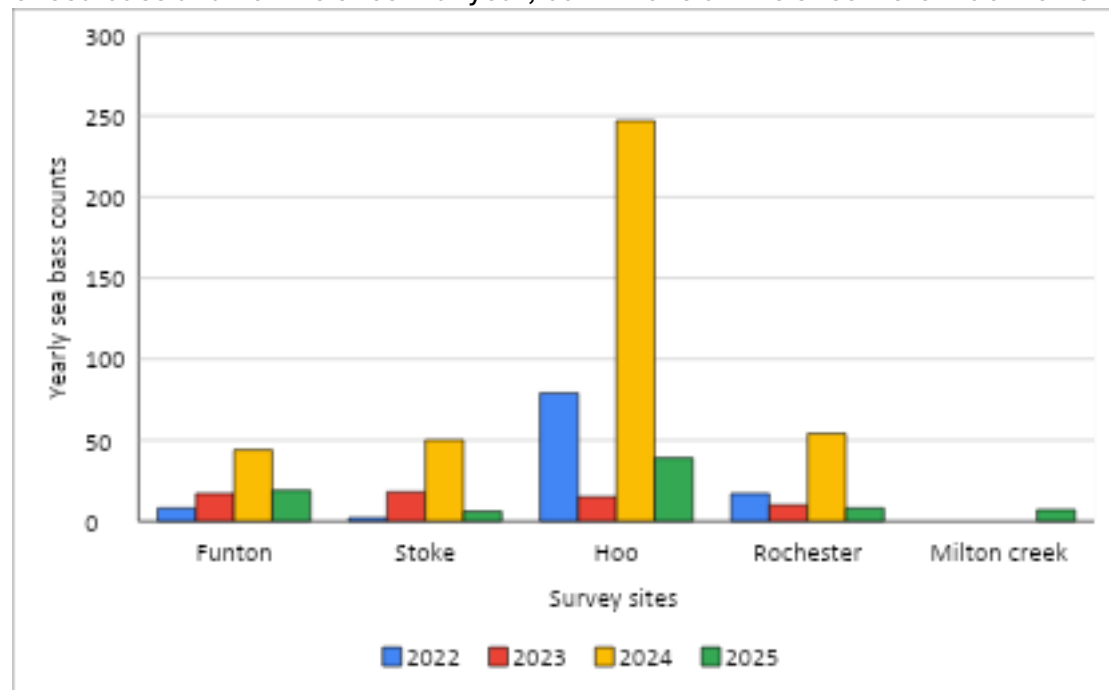


Figure 1. Annual sea bass numbers identified at the survey sites 2022 - 2025

The salt marshes and creeks are constantly re-shaped by the tides, storm surges and wind, which affects the way in which young fish use the marshes. The fish will enter the creek on the rising tide to feed on the abundance of invertebrates in the sediments but leave as the tide begins to recede. Fish are very sensitive to these tidal movements and even small changes in the contours of the creeks can affect feeding patterns.

Sampling

The fish surveys are scheduled for weekends but the tides were not favourable through the spring, which meant the surveys extended into the summer. Our volunteers helped with most of the sites, but were also supported by students from Hadlow College and a volunteer from Raybel Charters.

The constant re-shaping of the creeks can also impact the surveys, whilst every effort is made to repeat surveys at the same site, sometimes the original survey site is no longer safely accessible. In 2025 one site each at Funton and Middle Stoke proved less accessible and an adjacent site was surveyed.

Crabs in the fyke nets continue to remain a challenge but in 2025 the introduction of a method to remove the nets at earlier in the tide reduced injuries to the fish. The crab populations and risk to the fish varies by site.

The autumn survey at Funton did not take place as the tide patterns coincided with the start of the wildfowling season on the site and the Middle Stoke survey proved disappointing as no fish were captured.



Figure 2 Setting Fyke nets in saltmarsh creeks

Data Analysis



Figure 3 Measuring sea bass 2025

Hoo

The fish community caught during the Hoo surveys this year was composed of sand smelt, common goby, sea bass and mullet. The relative abundance of these species is shown in Figures 4 and 5.

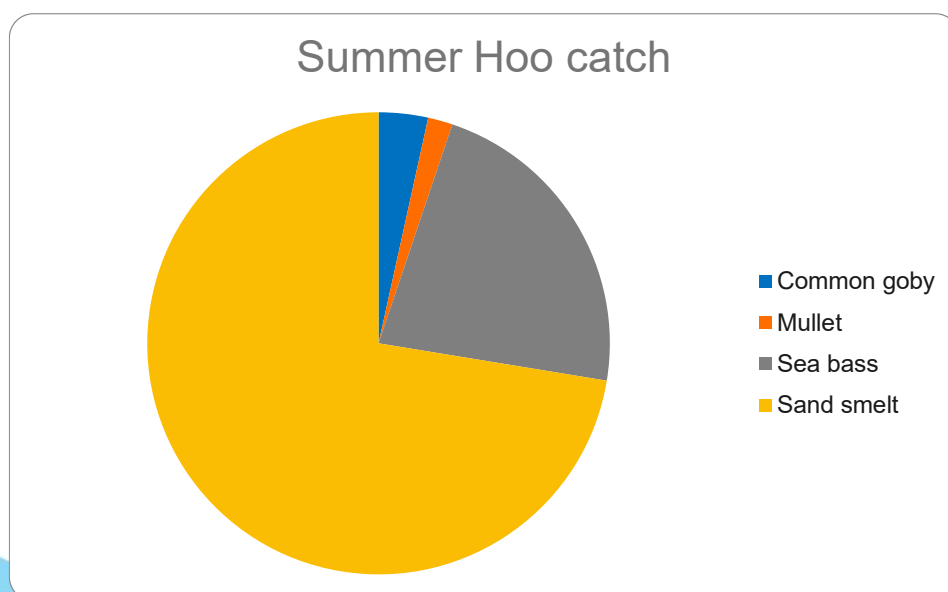


Figure 4. Proportion of fish species at Hoo Summer 2025

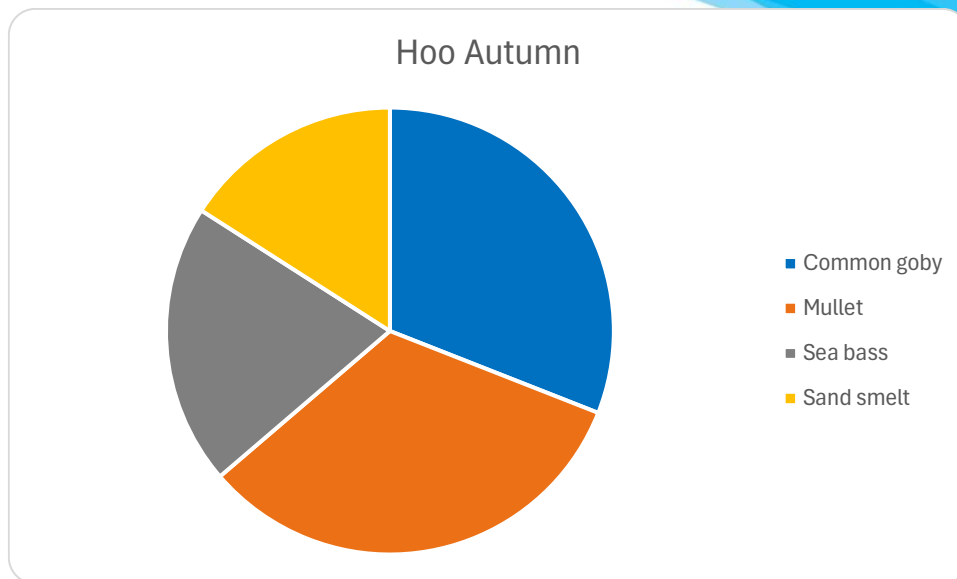


Figure 5. Proportion of fish species at Hoo Autumn 2025

It would be expected that populations of fish species will oscillate throughout a year and Figures 4 and 5 demonstrate such changes between the Hoo summer and autumn surveys. In the autumn, the sand smelt have declined, the sea bass numbers are more or less consistent, whereas common gobies have increased and mullet have entered the area.

Rochester

The fish community caught at Rochester was the least diverse of the surveyed sites this year. The Rochester site is becoming increasingly dominated by terrestrial plants, with fewer creeks available for the fish to enter. The encroachment of terrestrial vegetation has reduced the volume of water entering the creeks, reducing the feeding grounds for fish. The site can only be surveyed during very high tides.



Figure 6. Rochester showing the encroachment of terrestrial vegetation

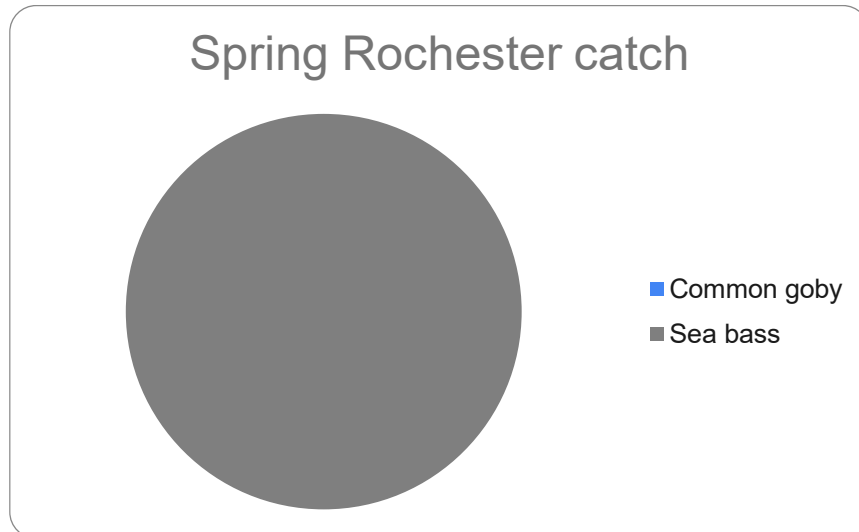


Figure 7. Rochester spring 2025

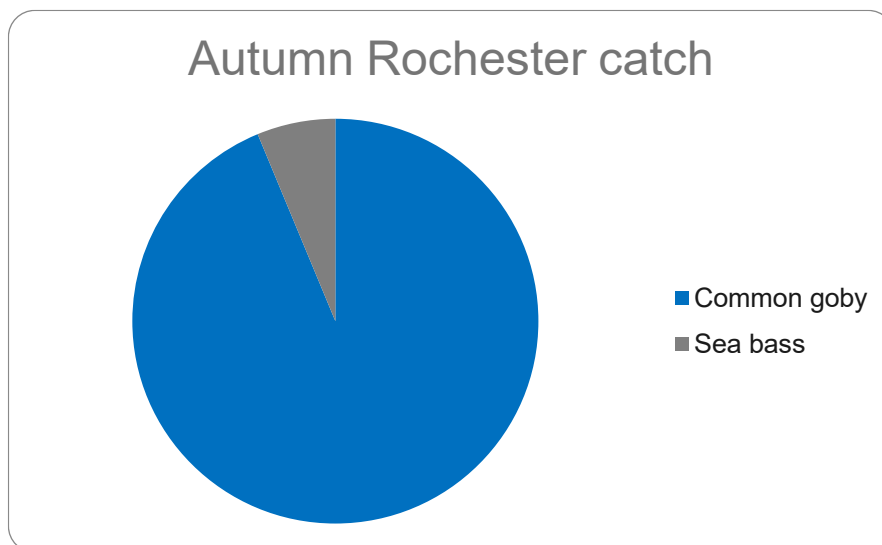


Figure 8. Rochester Autumn survey

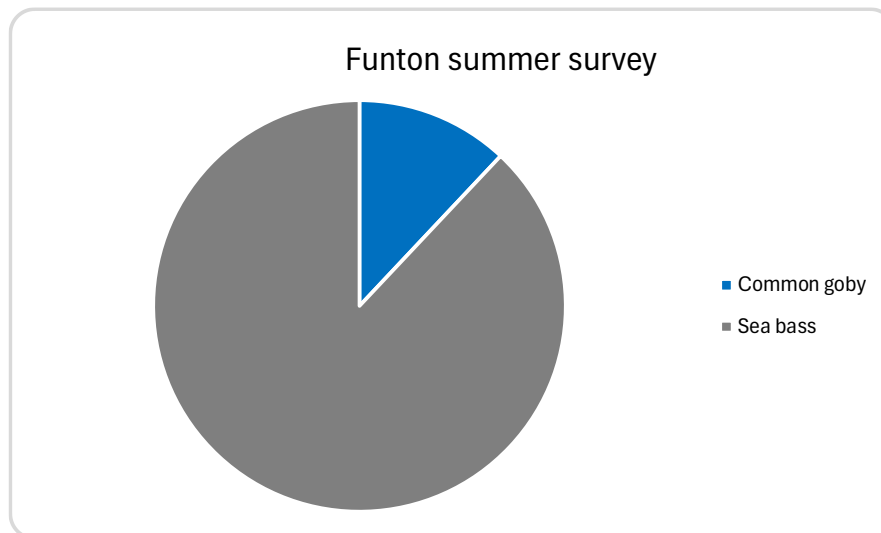
The push and fyke nets were employed in both spring and autumn surveys at the same location, however common gobies were only found in the autumn survey. The number of sea bass were consistent with only two in both of the spring and autumn surveys.

Funton

In the spring survey at Funton, push and fyke nets were employed. The push net was used in two of the creeks but only one site caught two common gobies and three sea bass. One fyke net was set at the original survey site and when retrieved

contained no fish, the second was in a relocated site due to erosion of the bank. When retrieved, this net contained thirteen sea bass.

Figure 9. Funton spring survey



Middle Stoke

There is data for the summer survey at Middle Stoke, but although the autumn survey took place, it was disappointing as no fish were caught.

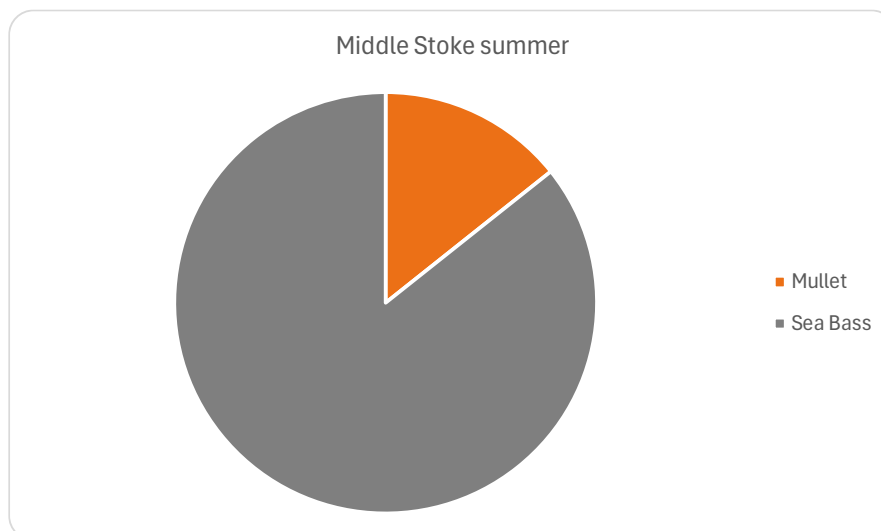


Figure 10. Summer survey Middle Stoke

Milton Creek

The most abundant species at Milton Creek in the summer survey were common goby. The autumn survey, at Milton creek, was similar to the summer survey but included a few mullet. The site proved to support the other sites in the estuary.

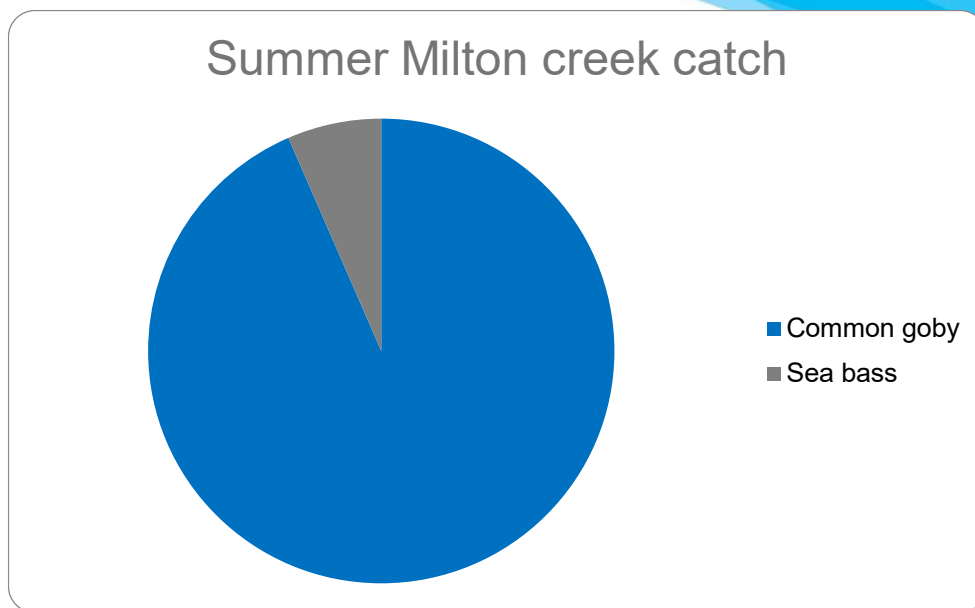


Figure 11. Milton Creek, summer survey

Figure 12. Milton creek autumn survey

The survey results for summer and autumn are very similar and returning to the site in 2026 will be of interest.

Fish count and frequency data

The following graphs show the frequency with which fish of different sizes were identified on each site in the 2025 surveys.

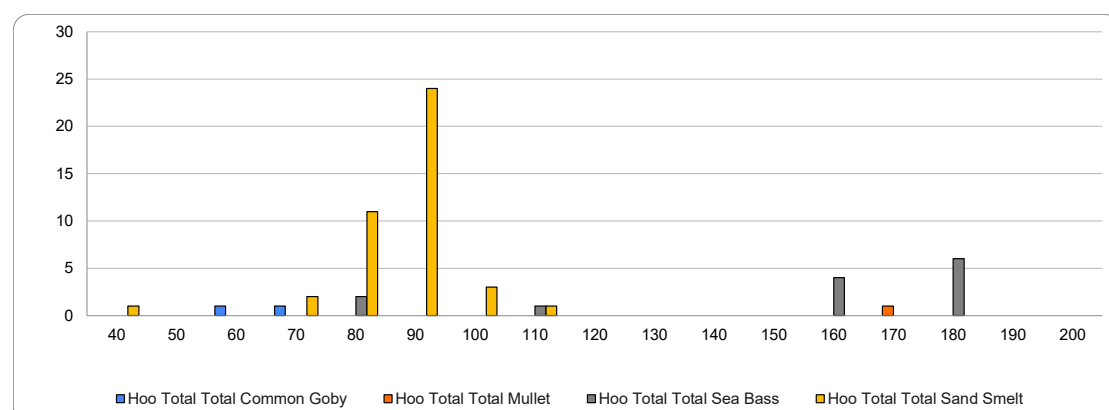


Figure 13. Hoo frequency of fish species summer and autumn surveys

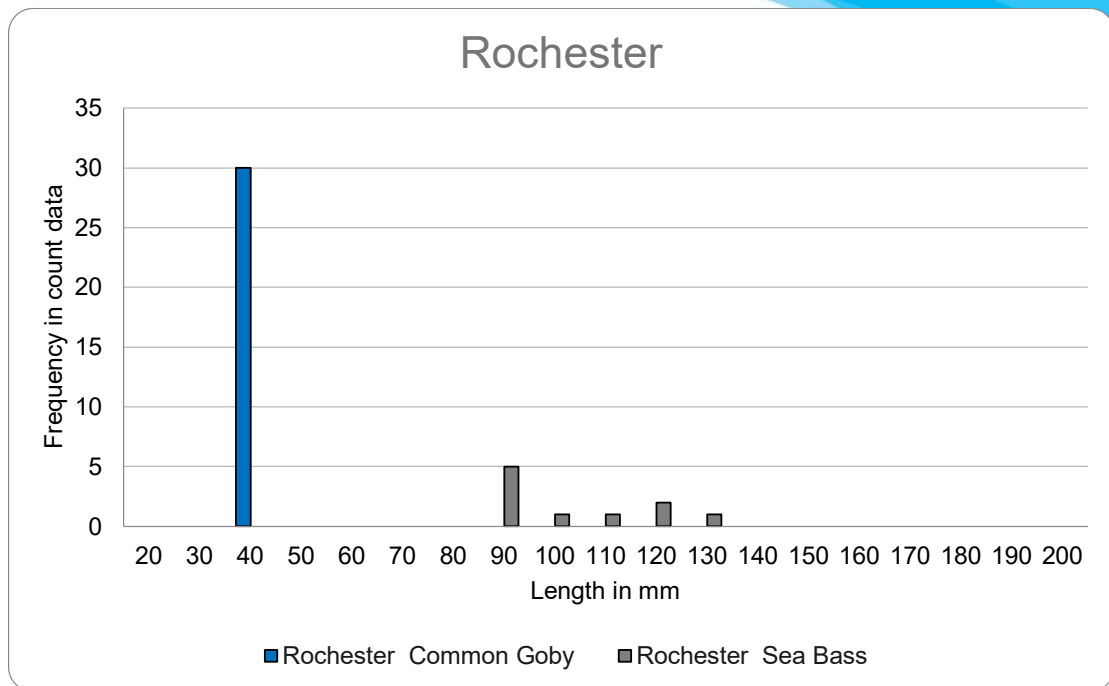


Figure 14. Rochester frequency of fish species spring and autumn surveys

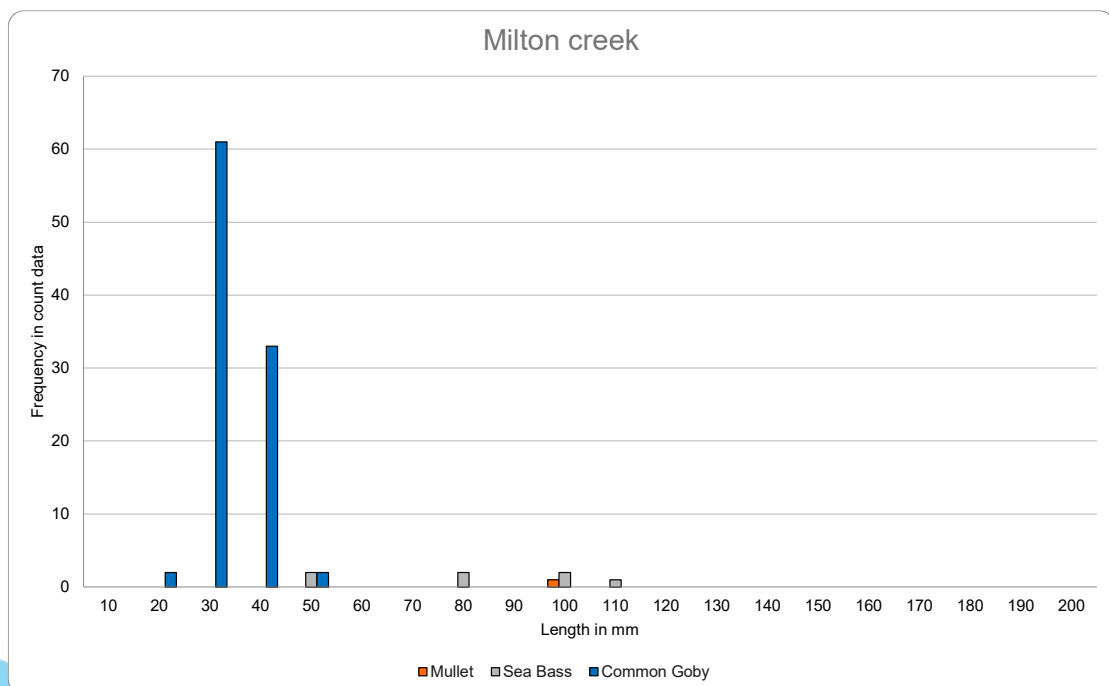


Figure 15. Milton creek frequency of fish species summer and autumn surveys

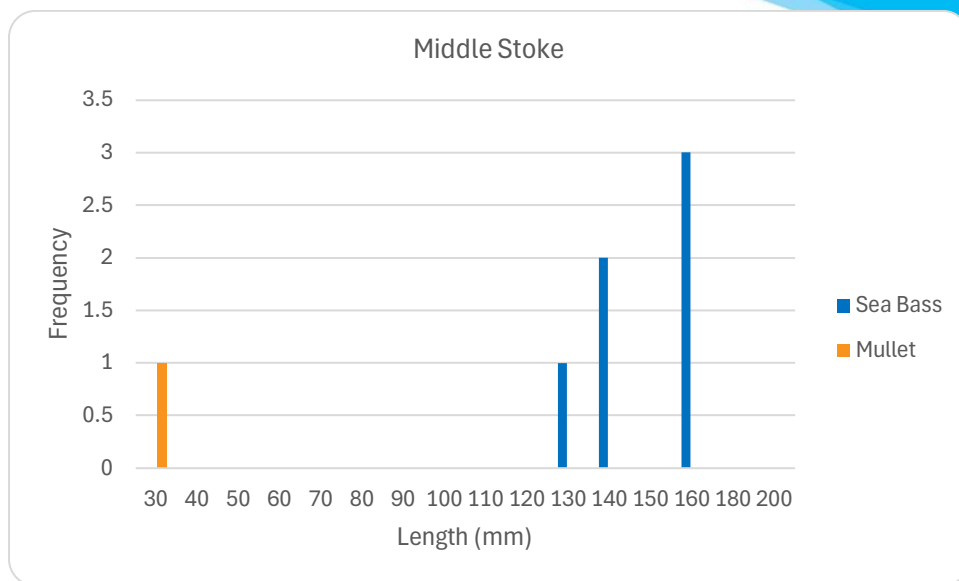


Figure 16. Spring survey Middle Stoke

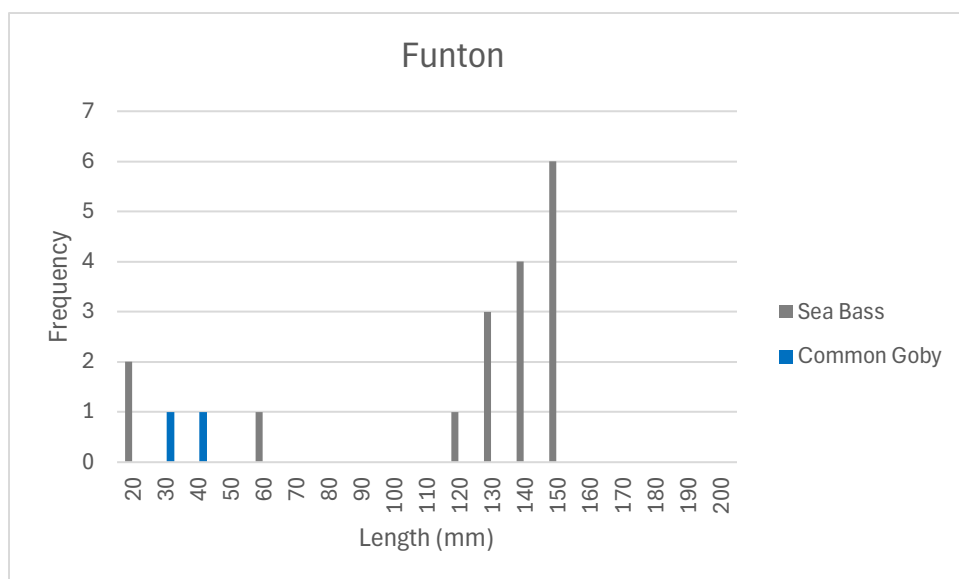


Figure 17. Spring survey Funton

Results

The above pie charts and graphs illustrate the variability of fish species identified at each of the sites. The data shows the salt marshes are important feeding grounds for juvenile sea bass as illustrated by the graphs comparing frequency with length. Sand smelt are commonly found in the estuaries and salt marshes in the summer, migrating into the warmer offshore water in the autumn, which is shown in the pie charts and graphs for Ho. The average length of adult sand smelt is 150mm (6in) (Wheeler, 1978) the data obtained from the Hoo survey shows a length range of 10-92mm, which suggests these are likely to be juveniles from the summer spawning.

The common goby is an abundant species on the salt marshes, whilst the adults are about 64mm (2.5in), the size range of those found at Hoo, Rochester and Funton are most likely to be juveniles from the summer spawnings. These little fish only have an annual life span and spawn in vast numbers, it is thought they form an important part of the food webs on the salt marshes but little is known of the predators which feed on the common gobies.

Next Steps

2026

The plan for the 2026 season is to continue bi-annual surveys at Funton, Hoo, Middle Stoke and Rochester.

It is our intention that we continue the addition of Milton in partnership with Raybel Charters to the survey season, if funding can be found.

References

Baldock, L & Dipper, F. 2023 *Inshore fishes of Britain and Ireland* Princeton University Press, Oxford

Wheeler, A 1978 *Key to the fishes of Northern Europe. A guide to the identification of more than 350 species.* Frederick Warne, London

The report has been prepared by Kiera Green and Bernice Brewster. Reviewed by Tanya Ferry. Published by Living River Foundation in 2026.