

Sussex IFCA Small Fish Surveys – 2018 Summary

Introduction

- Sussex IFCA conducted small fish surveys in Rye Harbour, Chichester Harbour and Medmerry managed realignment site.
- The surveys were conducted in partnership with the Environment Agency, RSPB, Sussex Wildlife Trust (Rye Harbour Nature Reserve), Chichester Harbour Conservancy and Sparsholt College with the support of six other organisations. Support funding from the Environment Agency was provided for the surveys in Medmerry.
- Overall, 43 staff, students and volunteers from 11 organisations have been involved in the surveys. The sharing of skills, knowledge, experience and resources through partnership working has been instrumental to the success of the surveys, increasing efficiency, productivity and proficiency.
- It is important to survey fish populations to monitor juveniles of commercially important species and to further understanding of the ecosystem health, particularly within Marine Protected Areas.

Methods

- Rye: one site on Rye Harbour beach, once per month in May, June and July using a 43m seine net. In addition, four sites in Rye Bay once in September using a 2m beam trawl.
- Chichester Harbour: three sites sampled twice in June and October/November. At two sites a 43m long seine net and 2m beam trawl were used. At the third, just the seine net was used. A fourth site was sampled once, using the 43m seine net in November.
- Medmerry: four sites, twice a year in July and October. Two sites sampled using a 22m long seine net and two sites using a 0.5m high fyke net.

All fish were identified to species level. 50 of each species in each sample were measured with any additional counted. The fish were then returned alive to the sea. Conspicuous non-fish species were recorded.

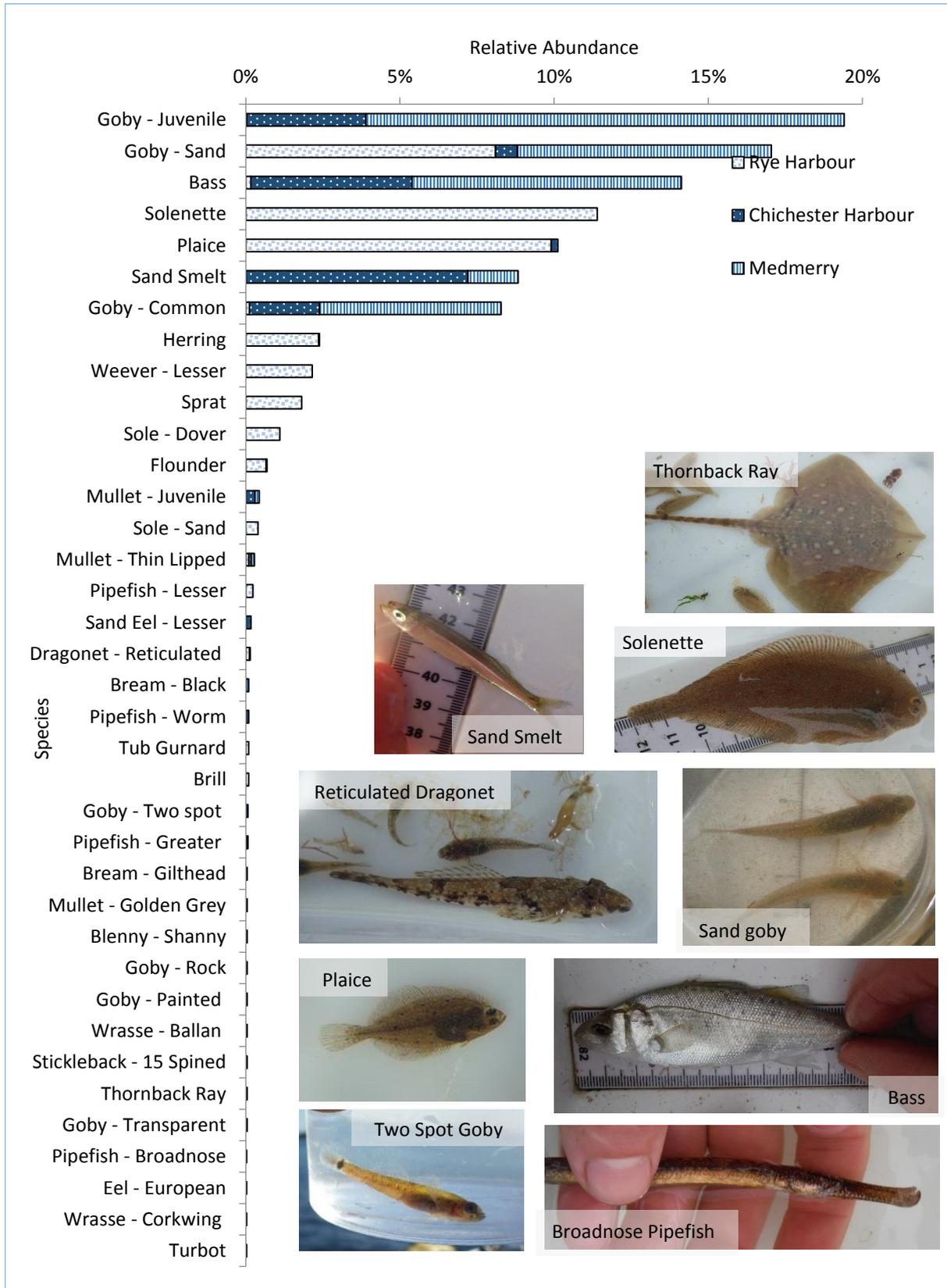
Results

- There was a total abundance of 4359 fish and a total of 37 species.
- Juvenile goby (*Pomatoschistus spp.*) was the most abundant (19%), followed by sand goby (*Pomatoschistus minutus*) (17%) and bass (*Dicentrarchus labrax*) (14%).
- Below is a summary for each site:

Simpson's Index of Diversity:
1 = infinite diversity
0 = no diversity

	Rye Harbour	Chichester Harbour	Medmerry
Abundance	1698	896	1765
Number of species	21	20	13
Simpson's Index of Diversity	0.797	0.764	0.743
Most abundant	Solenette	Sand Smelt	Juvenile Goby
Relative abundance	29%	35%	38%
2 nd most abundant	Plaice	Bass	Bass
Relative abundance	25%	25%	22%
3 rd most abundant	Sand Goby	Juvenile Goby	Sand Goby
Relative abundance	21%	19%	20%

There has been a diversity of species caught at each site and there was one species new to Sussex IFCA small fish surveys; a broad nose pipefish (*Syngnathus typhle*) found at Medmerry managed realignment site. There has been inter-annual variation for individual species, demonstrating the dynamic and mobile nature of these populations. Continued monitoring is important for the successful management of the marine environment and associated fisheries.



The relative abundance of each of the 37 species found in 2018, all sites combined.