



# Sussex IFCA Small Fish Surveys – 2017 Summary

## Introduction

- Sussex IFCA conducted small fish surveys in Chichester Harbour, Medmerry managed realignment site, Rye and Tide Mills (between Newhaven and Seaford).
- 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.
- The surveys were conducted in partnership with the Environment Agency, RSPB, Sussex Wildlife Trust (Rye Harbour Nature Reserve) and Sparsholt College with the support of nine other organisations. Support funding from the Environment Agency was provided for the surveys in Medmerry
- Overall, 45 staff, students and volunteers from 13 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.

## Methods

- Rye: one site on Rye Harbour beach, once per month in May, June and July, 43m long seine net.
- Chichester Harbour: two sites, in October and November, 43m long seine net.
- Medmerry: seven sites, twice a year (June and September), 22m long seine net and 0.5m high fyke net.
- Tide Mills: one-off fish survey at two sites in Mill Creek in October, 22m long seine net and 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

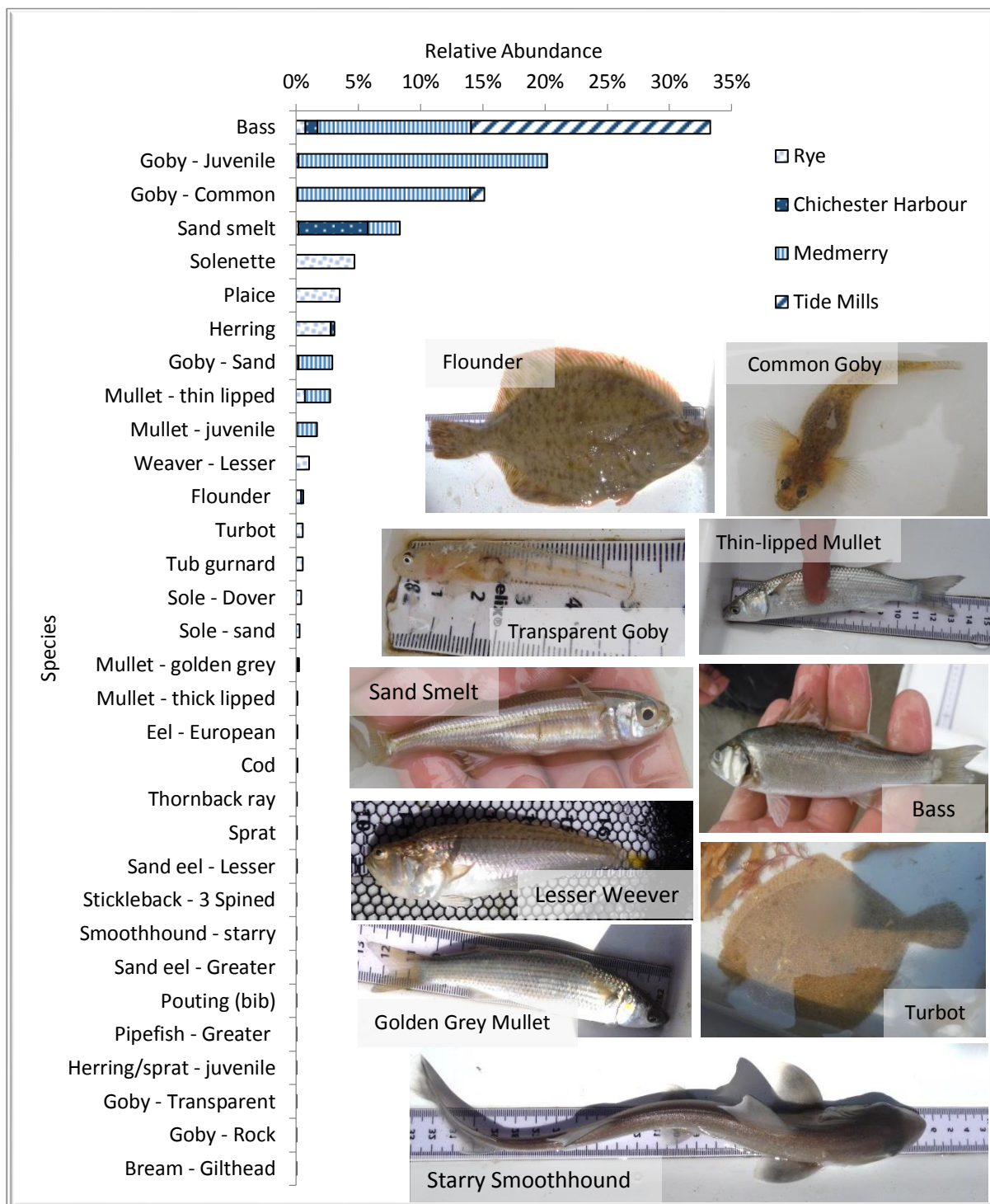
- There was a total abundance of 3036 and a total of 32 species.
- Bass (*Dicentrarchus labrax*) was the most abundant (33%), followed by juvenile goby (*Pomatoschistus spp.*) (20%) and common goby (*Pomatoschistus microps*) (15%).
- Below is a summary for each site:

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

	Rye	Chichester Harbour	Medmerry	Tide Mills
<b>Abundance</b>	501	220	1695	620
<b>Number of species</b>	23	9	14	3
<b>Simpson's Index of Diversity</b>	0.836	0.393	0.755	0.110
<b>Most abundant</b>	Solenette	Sand Smelt	Juvenile Goby	Bass
<b>Relative abundance</b>	28%	77 %	36%	94.2%
<b>2<sup>nd</sup> most abundant</b>	Plaice	Bass	Common Goby	Common Goby
<b>Relative abundance</b>	21%	14%	25%	5.6%
<b>3<sup>rd</sup> most abundant</b>	Herring	Herring	Bass	3-Spined Stickleback
<b>Relative abundance</b>	17%	4%	22%	0.2%

## Discussion

There has been a diversity of species caught at each site. There was a new species not found in a Sussex IFCA small fish survey before, a starry smoothhound found in the Rye survey. 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 32 species found in 2017, all sites combined.