

Do Oyster Farms Benefit Estuarine Fisheries?

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Estuaries

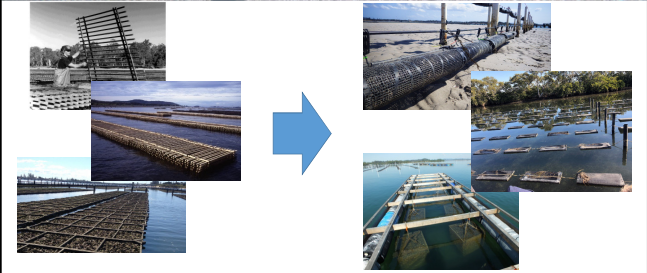
Estuarine Fisheries and Aquaculture

<p>Estuary Fishery</p> <ul style="list-style-type: none"> • 76 Estuaries in NSW • Trawls and mesh/gill nets • Prawns, Bream, Luderick, Mud Crab, Dusky Flathead, Blue Swimmer Crab 	<p>Oyster Aquaculture</p> <ul style="list-style-type: none"> • 31 Estuaries in NSW • Value \$47 million in NSW (2016/2017) • 66 million Oysters annually
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How important are Oyster Farms to Fisheries Productivity?



Oyster Farming Methods



Do Different Farming Methods have Different Habitat Values?



Wallis Lake



Wallis Lake

- Turbid
- No Seagrass
- Medium Tide

- Estuarine
- Seagrass
- Limited Tide
- Exposed
- Submerged

- Oceanic
- Seagrass
- Tidal
- Exposed

Sampling

Seine Net Sampling

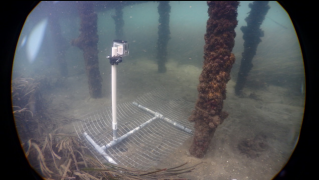


- 14 species
- 1794 individuals
- Yellowfin Bream
- Luderick
- School Prawns
- Mullet

Seine Net Sampling

Species	Whangamba River	Luderick	Mosquito Island
Grid (Green)	~1.5	~0.5	~1.5
Net (Yellow)	~1.0	~0.5	~1.0
Control (Black)	~1.0	~0.5	~1.0

Sampling

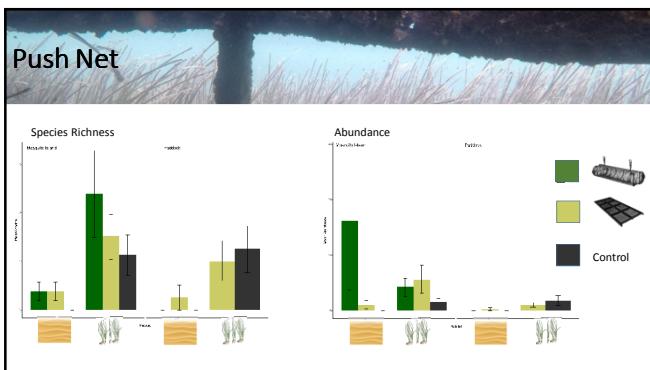
- Remote Underwater Video
 - Target large fish
 - 30 min deployment
 - Not Wallamba – too turbid
- Push Net
 - Target small fish
 - Sample at fine spatial scales
- Baited trap
 - Target sub adults, inverts and predators
 - 25 mm mesh 24 hr soaks
 - Not Paddock – Traps not permitted

Push Net




- Few fish – 525
- 15 Species
 - 5 Syngnathid species
 - Luderick
 - Prawns
- Hoping to catch more species in November during recruitment

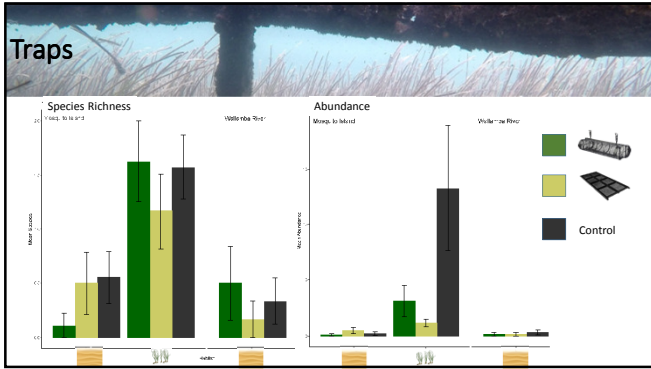


Traps

- 159 individuals
- 17 species
 - Blue Swimmer Crab
 - Yellowfin Bream (juvenile)
 - Catfish
 - Eels
 - Octopus
 - Dusky Flathead



Conclusion

- Oyster farm infrastructure an important fish habitat (particularly in bare habitats)
- Attract commercial species as recruits and adults
- Is it the structure or change in food availability?
- Ongoing sampling – need more data
- Re-purpose infrastructure – ecological benefits?

