

# Application of Dual-frequency Imaging Sonar and Underwater Video to the Study of Oyster Reef Ecosystem Services

Matthew B. Ogburn, Ph.D.

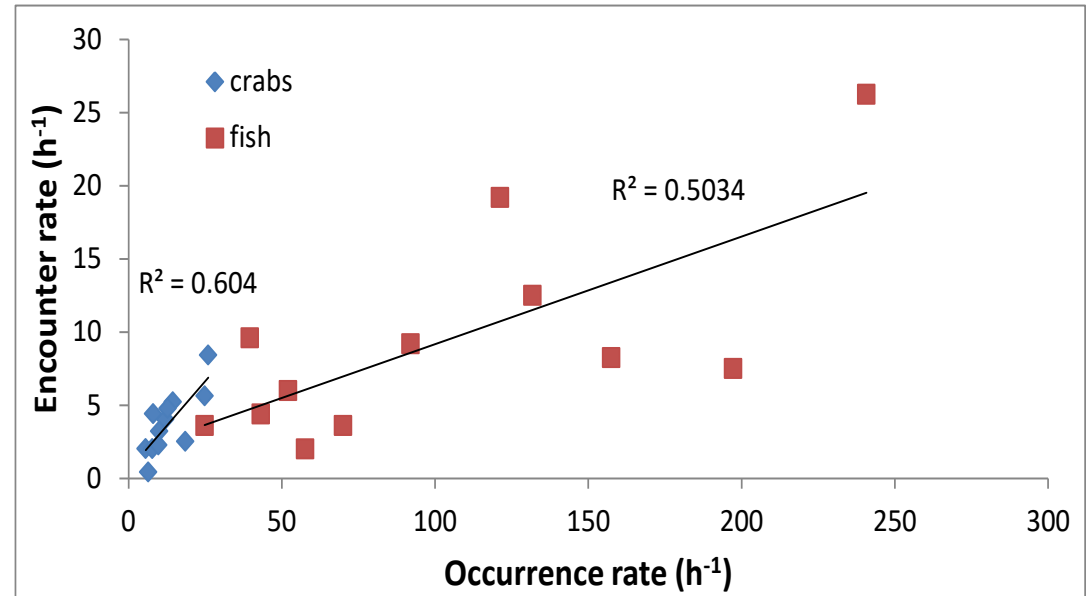
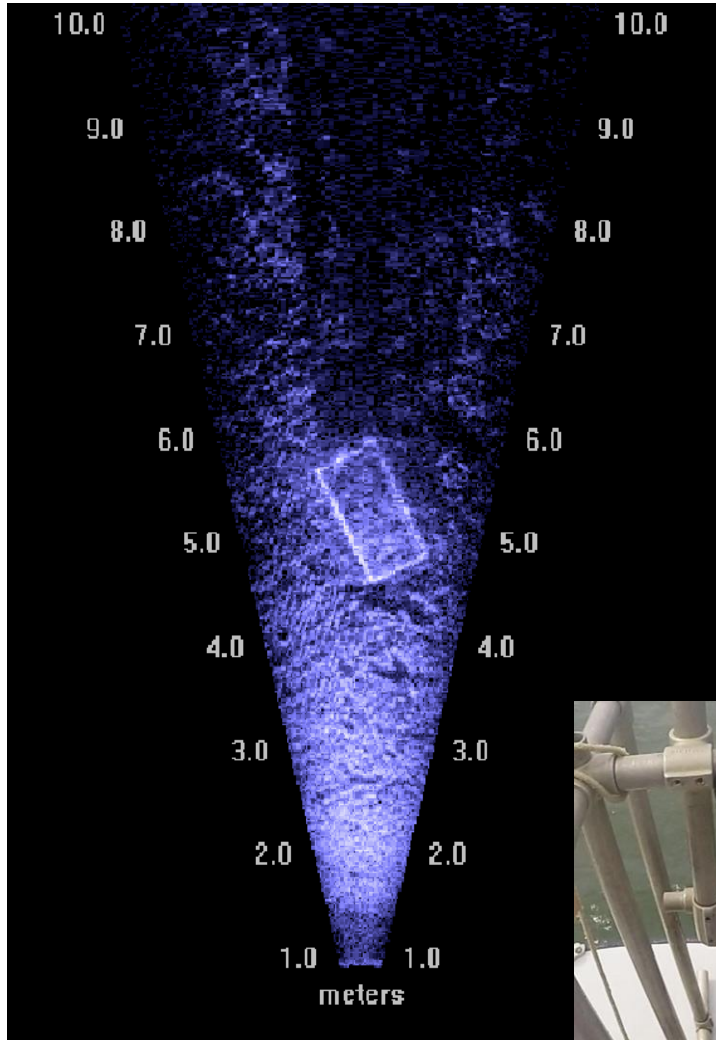
Fisheries Conservation Lab

Smithsonian Environmental Research Center

# Outline

- Do fish trap data reflect fish/crab abundance?
- Does restoration improve oyster reef habitat?
- Does restoration increase fish/crab populations?

# Black Sea Bass trap efficiency



Capture efficiency:  
8% for fish  
6% for crabs

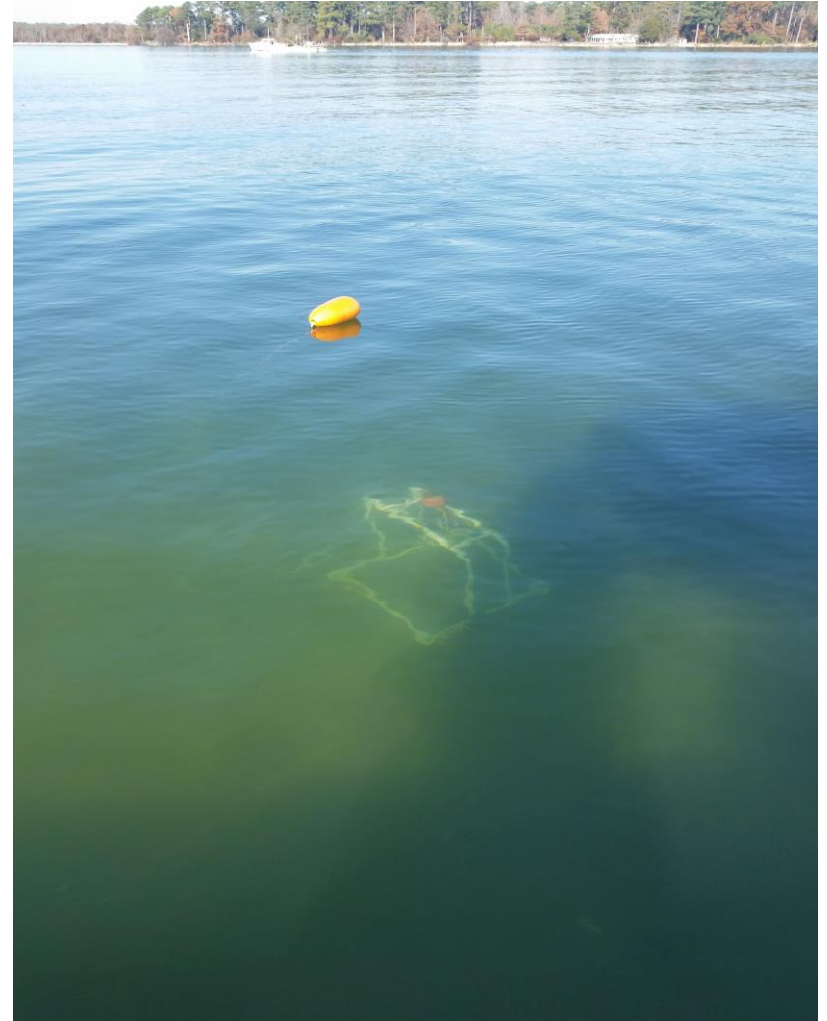
Ogburn et al., unpublished data

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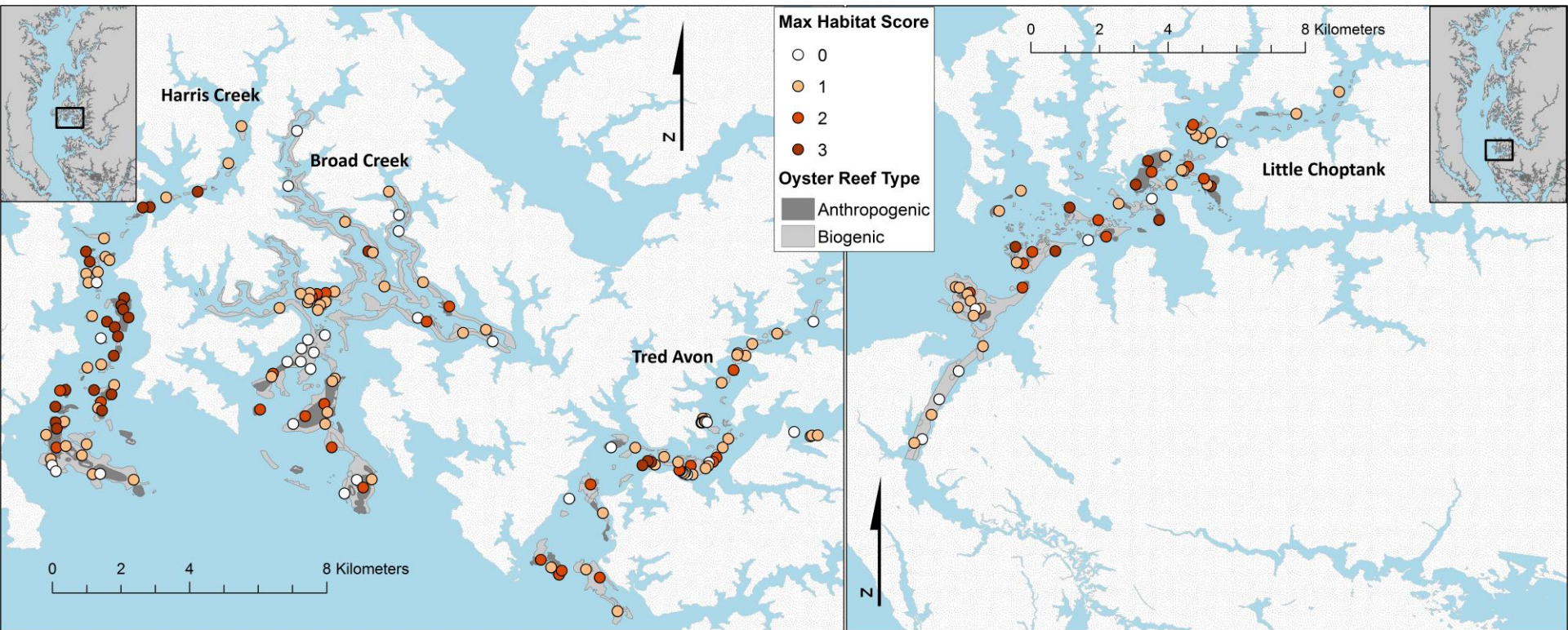


# Choptank Complex habitat survey (2017)



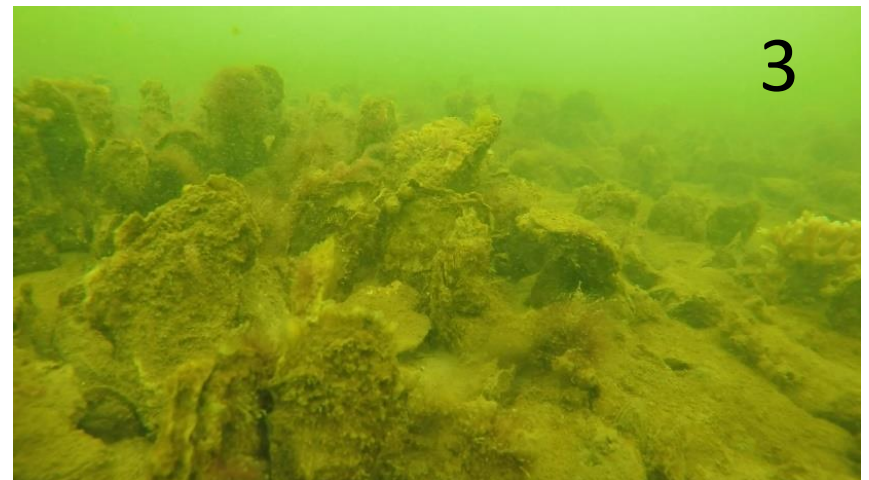
Ogburn et al., unpublished data

# Survey sites from GIS habitat layer

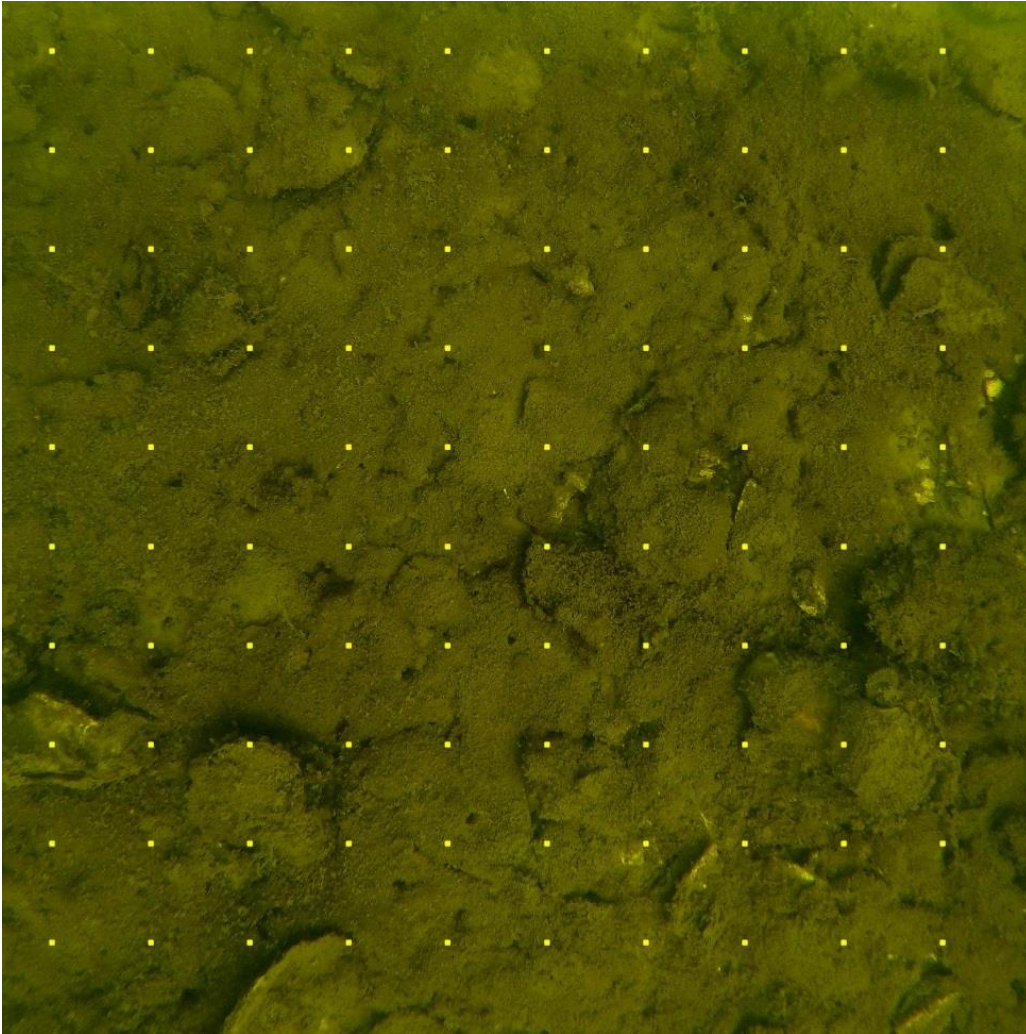




# Qualitative habitat score



# Percent cover

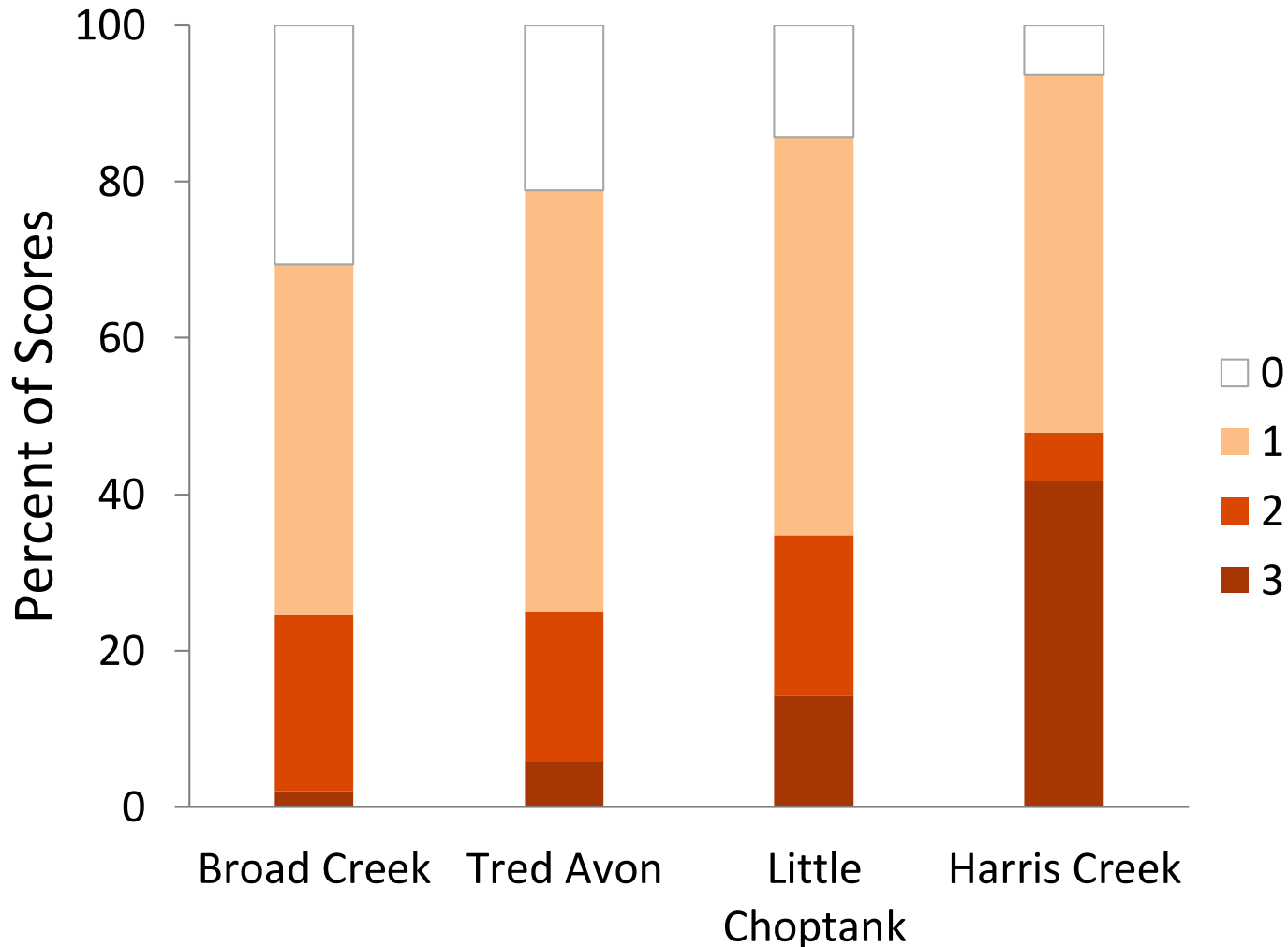


Hard substrate

Other reef  
associated species

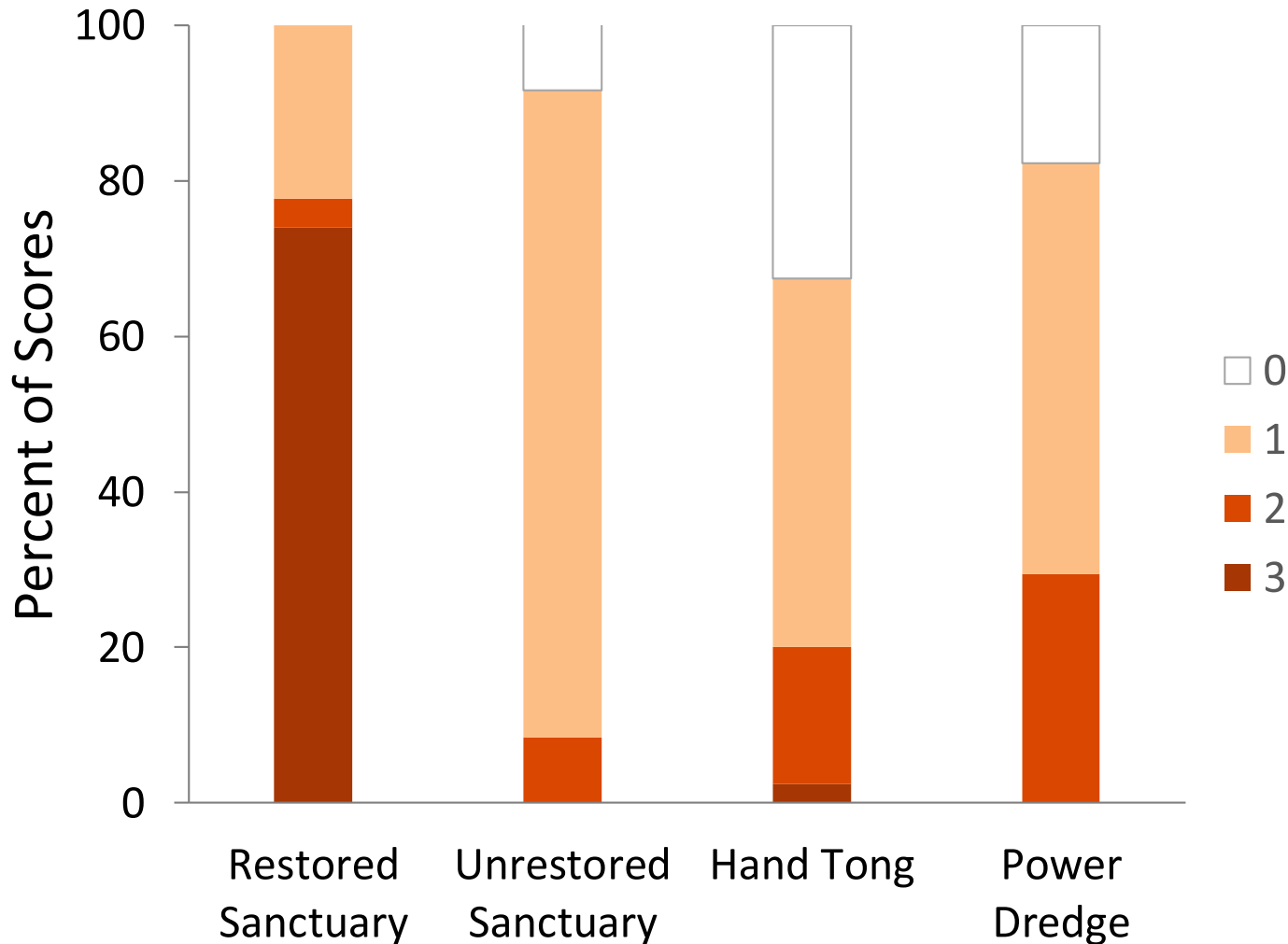


# Is the reef ecosystem recovering?



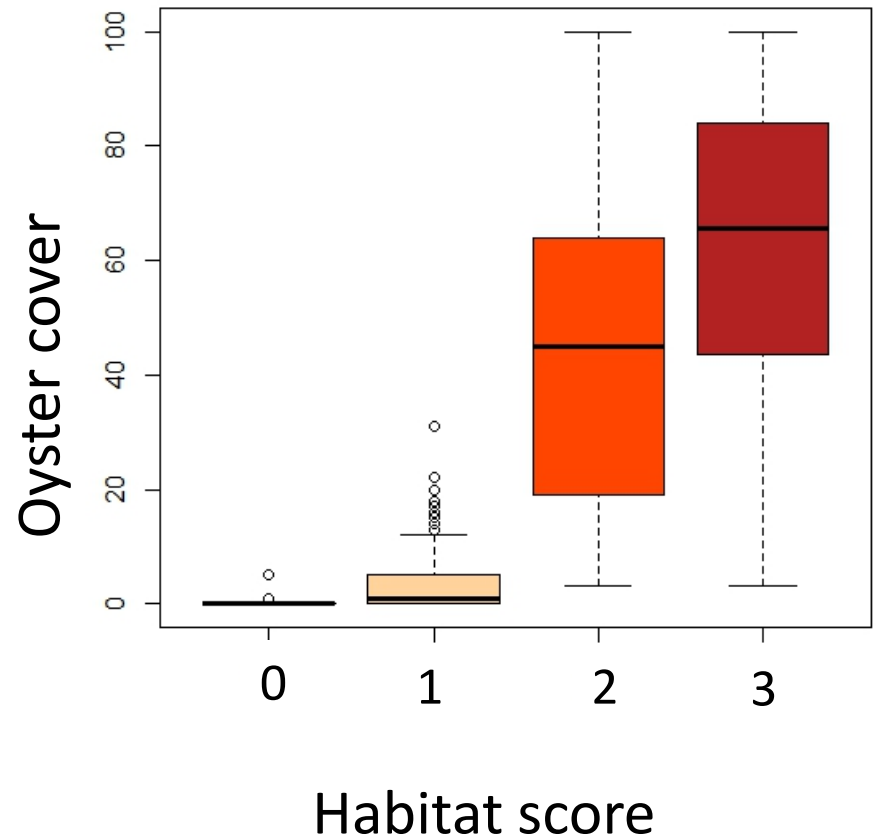
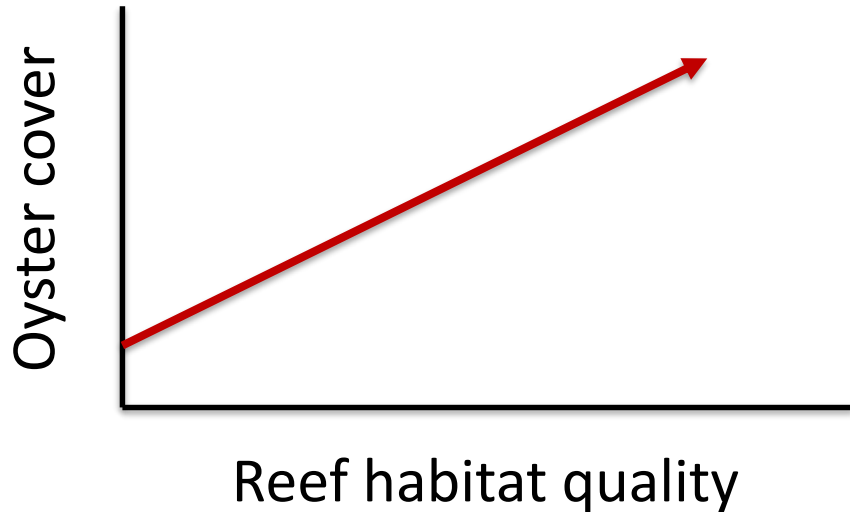
Ogburn et al., unpublished data

# Harris and Broad creeks



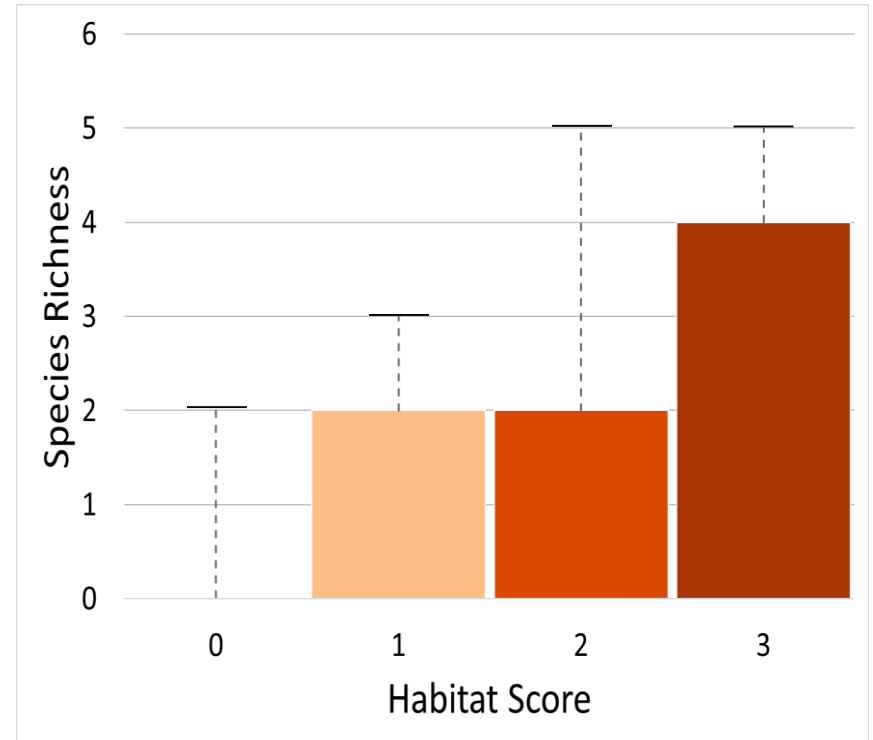
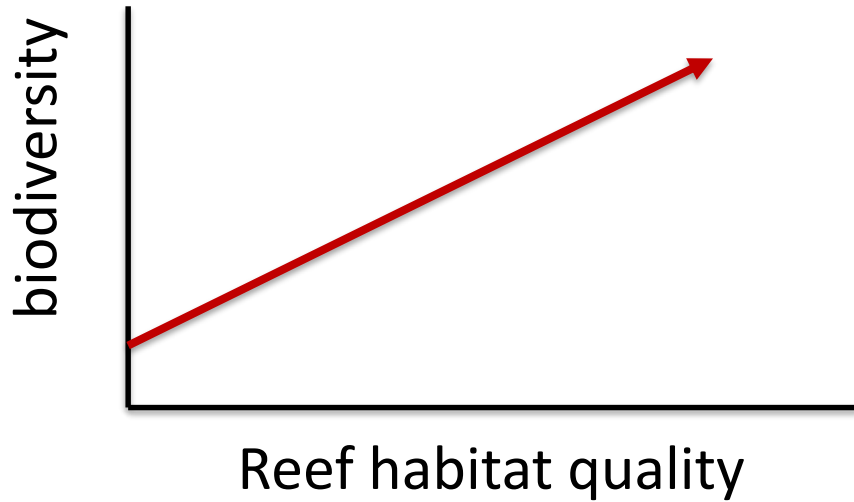
Ogburn et al., unpublished data

# Percent cover of hard substrate





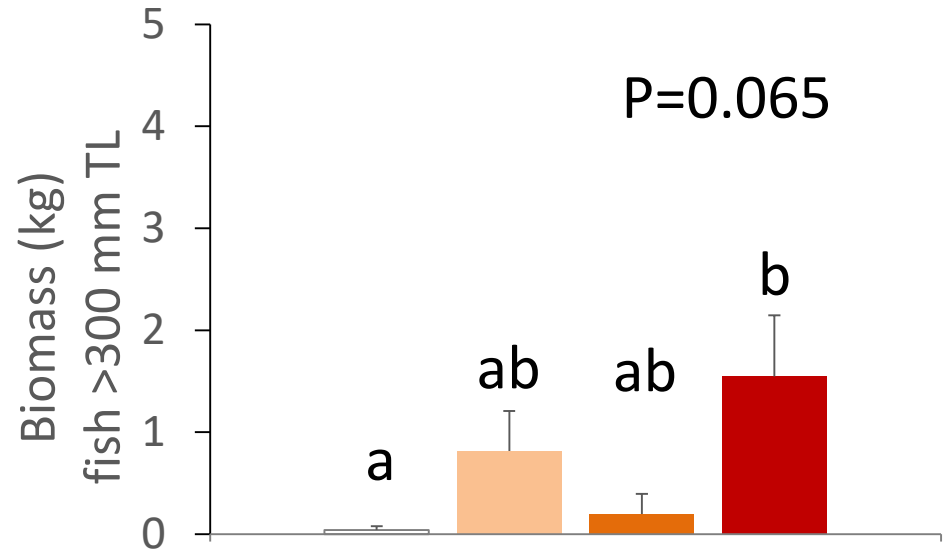
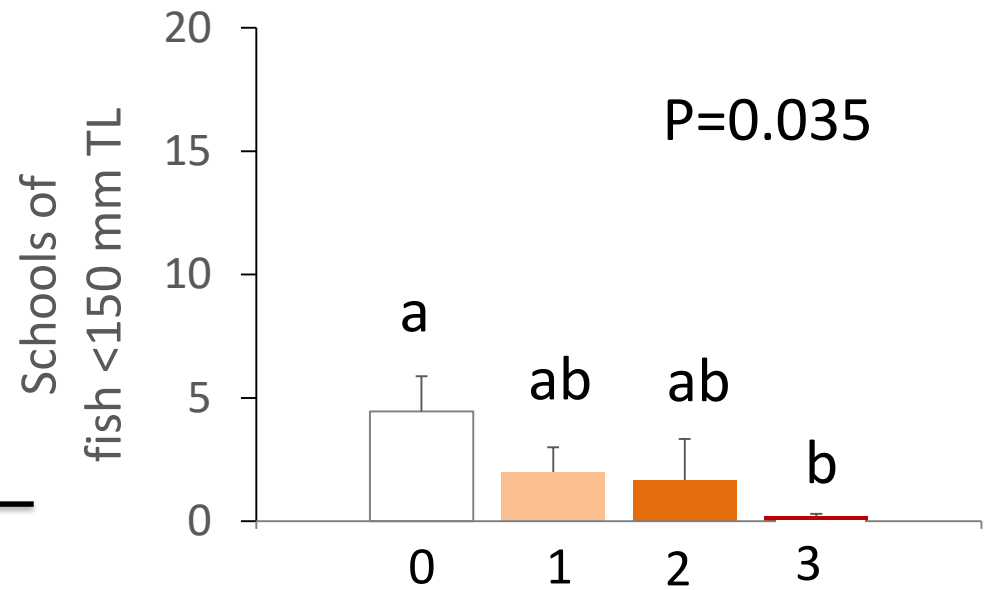
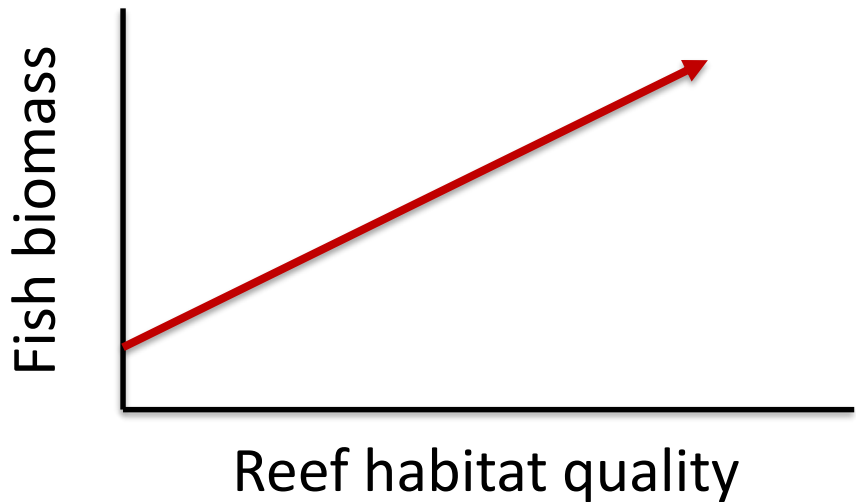
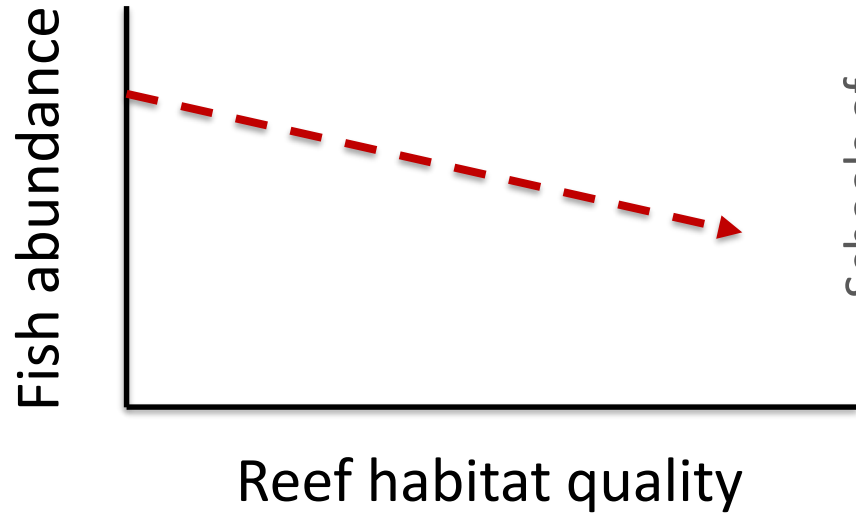
# Biodiversity



# Outline

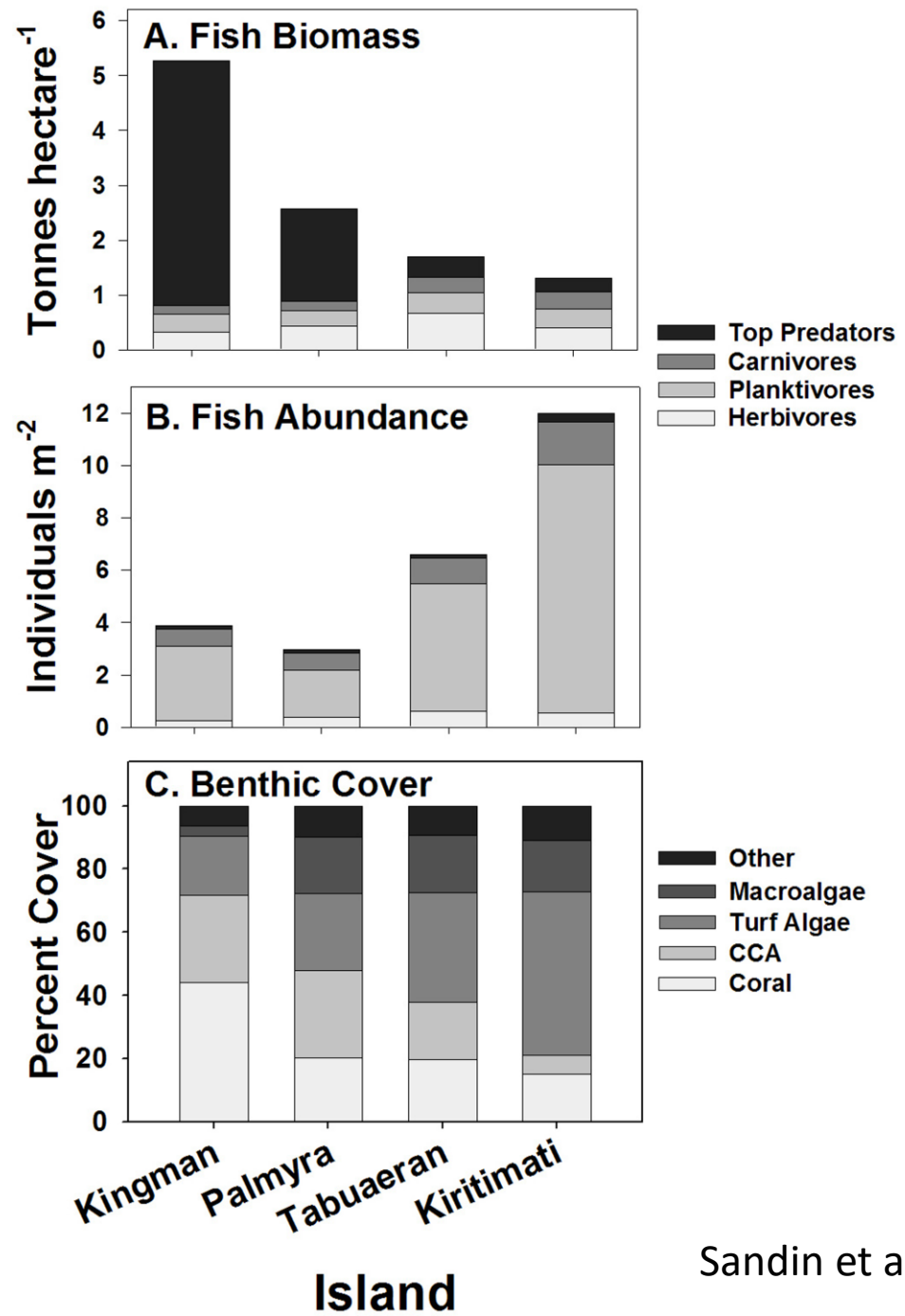
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# Fish populations



Ogburn et al., unpublished data





# Acknowledgements



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