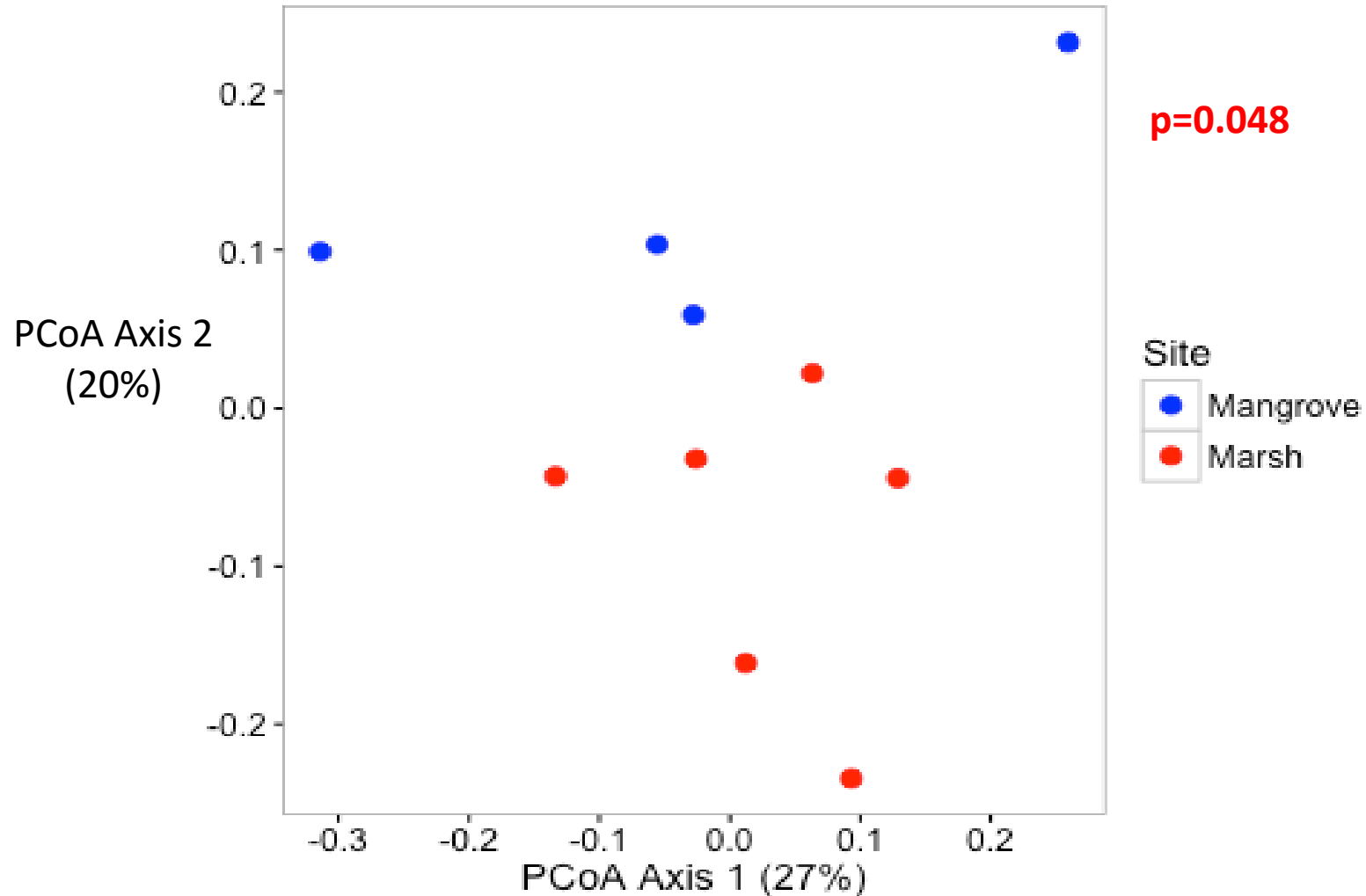


# Mangrove encroachment into saltmarshes alters wetland microbial community composition and function

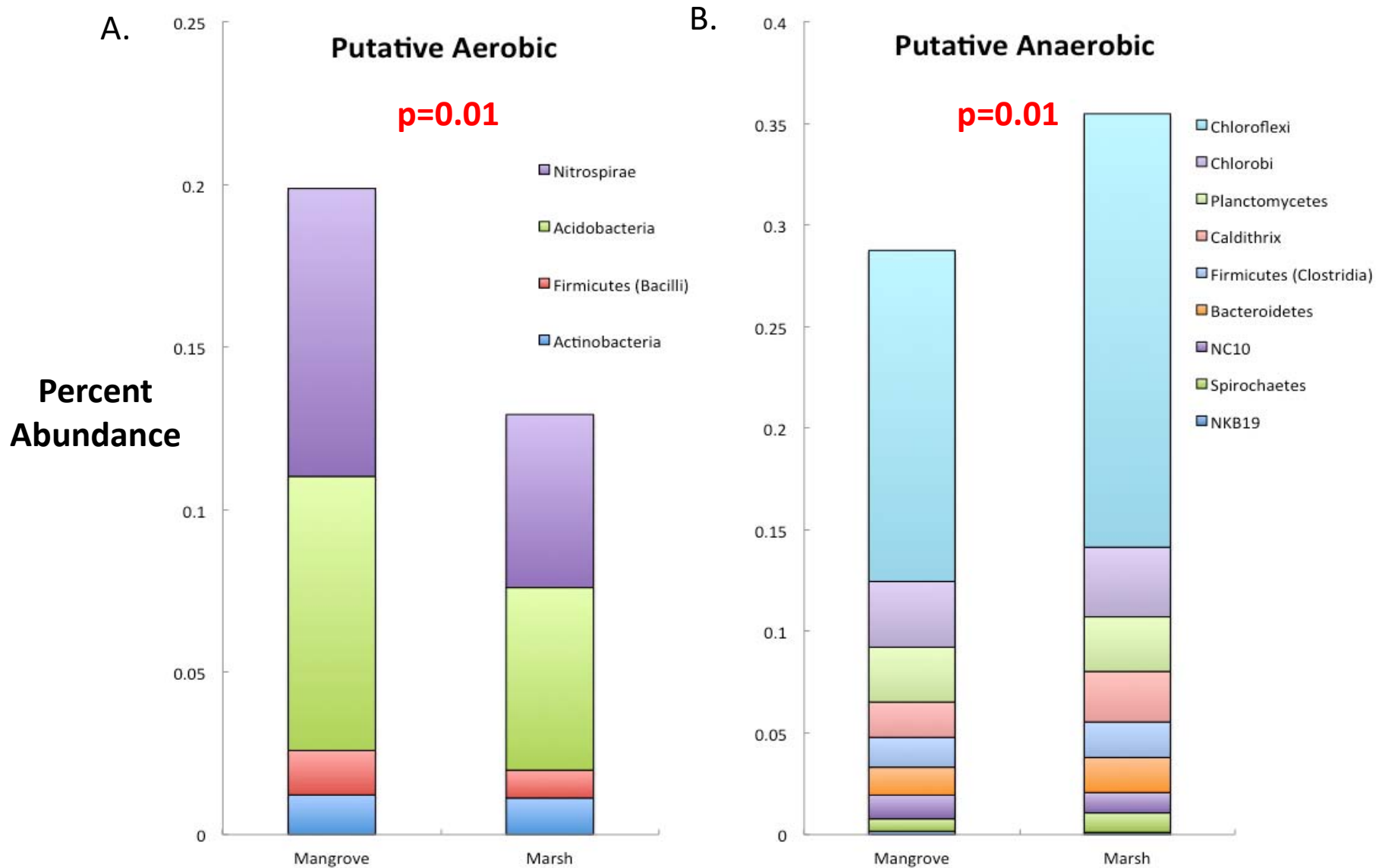
C.R. Barreto, E. Morrissey, D.D. Wykoff, and S.K. Chapman



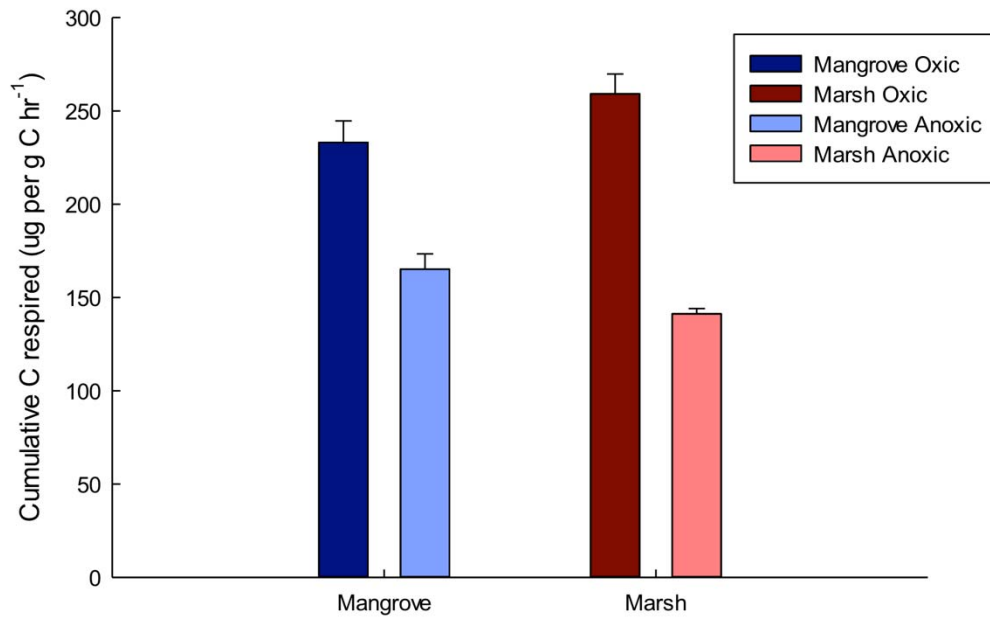
# Principle Coordinates Analysis comparing microbial community composition in Mangrove vs. Marsh soils



# Putative Aerobic and Putative Anaerobic Bacteria in Mangrove vs. Marsh Soils

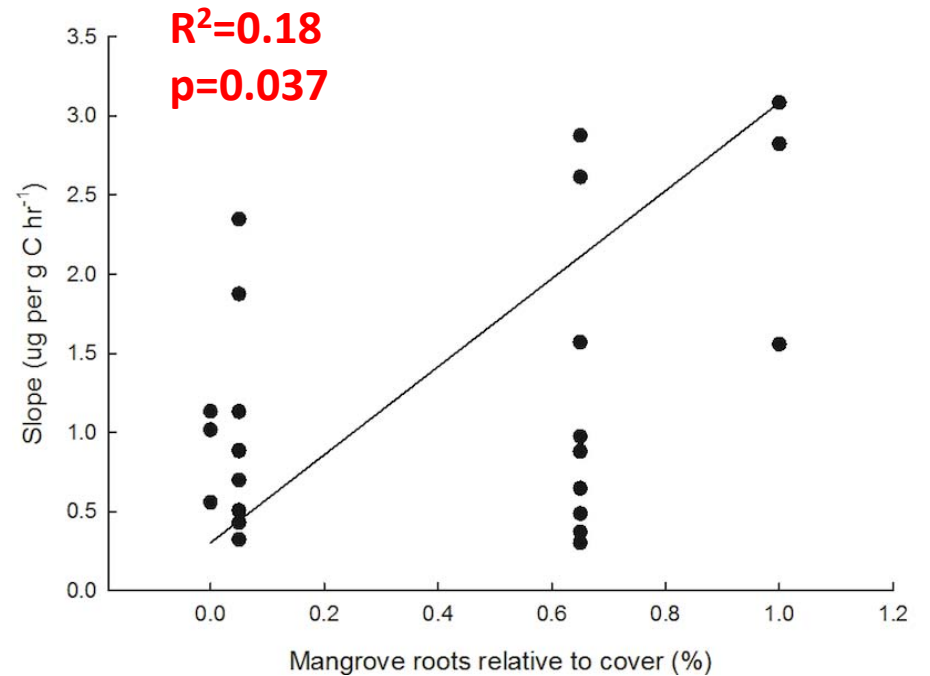


# Average Cumulative Carbon Respired Over a 68 Day Incubation



Effect of oxygen,  $p < 0.01$

# Substrate-Induced Respiration (SIR) Assay







# Conclusions

- Our findings on microbial community structure suggest that mangrove roots may be aerating anoxic marsh soils.
- Our SIR assay and incubation suggest that this introduced oxygen may release more carbon into the atmosphere.
- Our study shows that microbes could serve as bioindicators of wetland soil oxygen status.



# Thank you!



## Poster #81



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