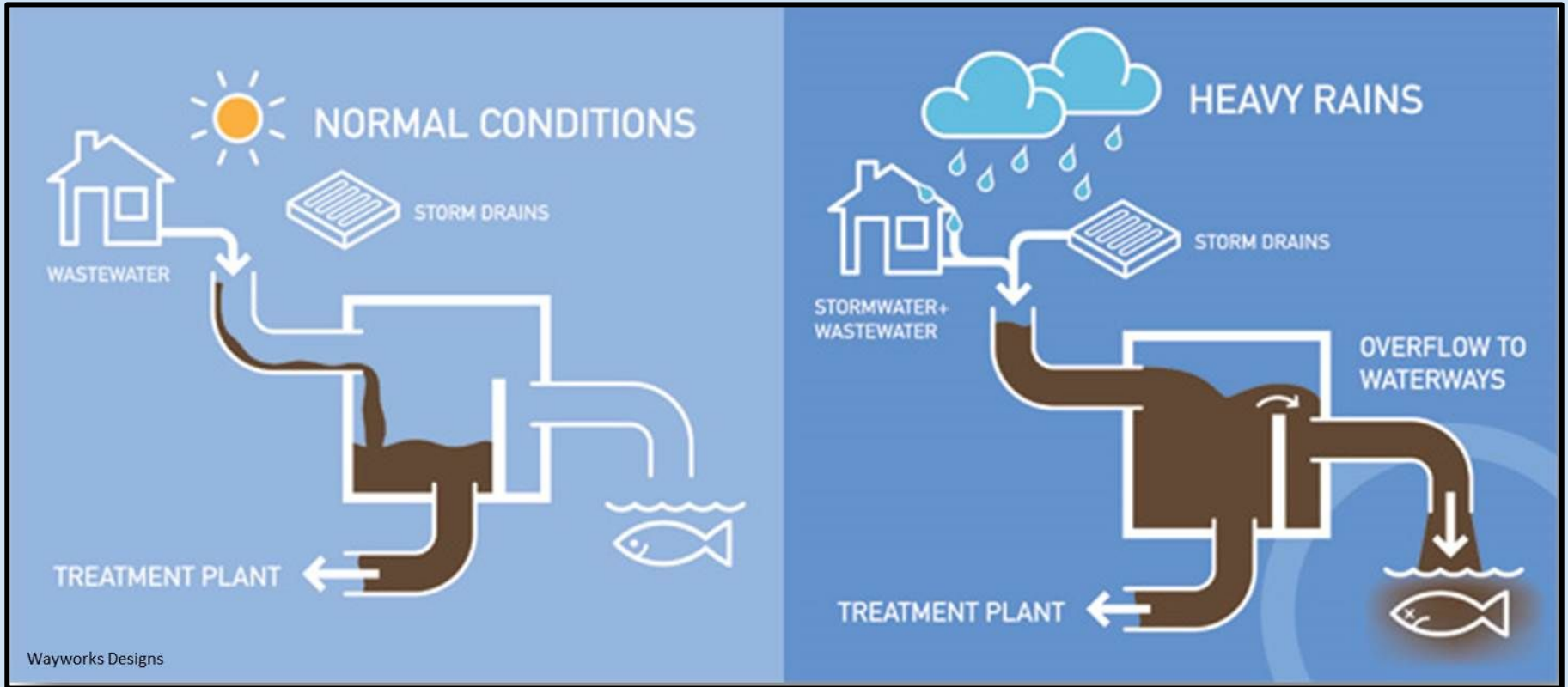




LOREL SHAW
DOES FEAR AFFECT FECEES?
GOSNELL LAB 2019



COMBINED SEWAGE OVERFLOW

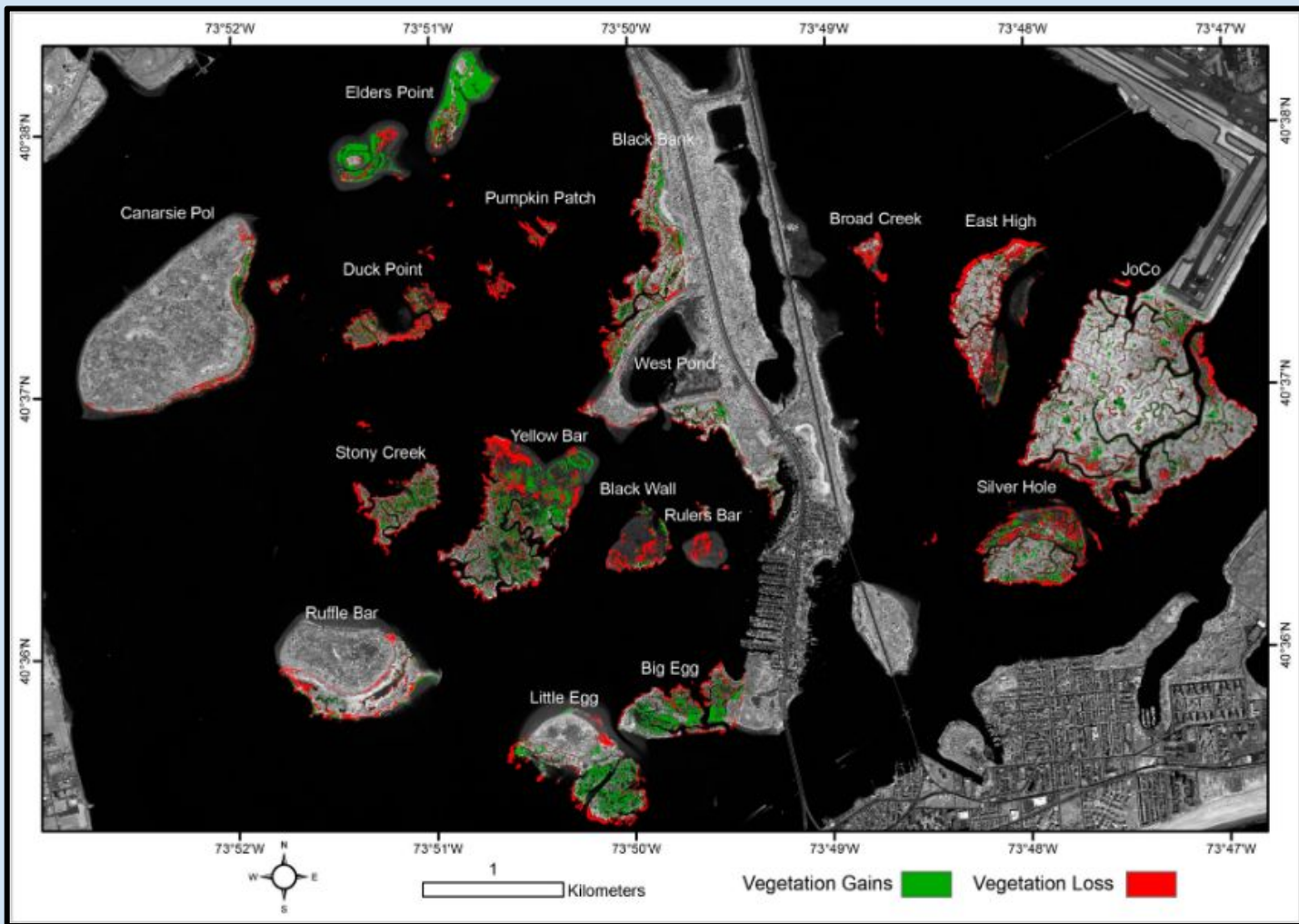


SALT MARSH RESTORATION

- Decline
 - Pollution
 - Fill-in
- Importance
 - Filtration
 - Habitat
 - Cordgrass

<https://www.nps.gov/gate/learn/nature/marshrestoration.htm>

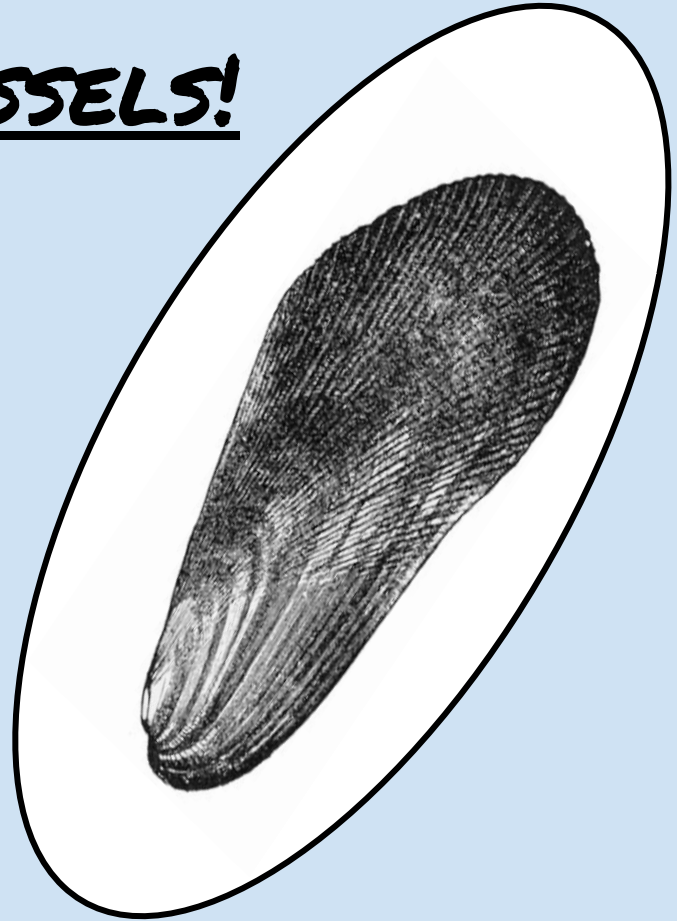




RIBBED MUSSELS!

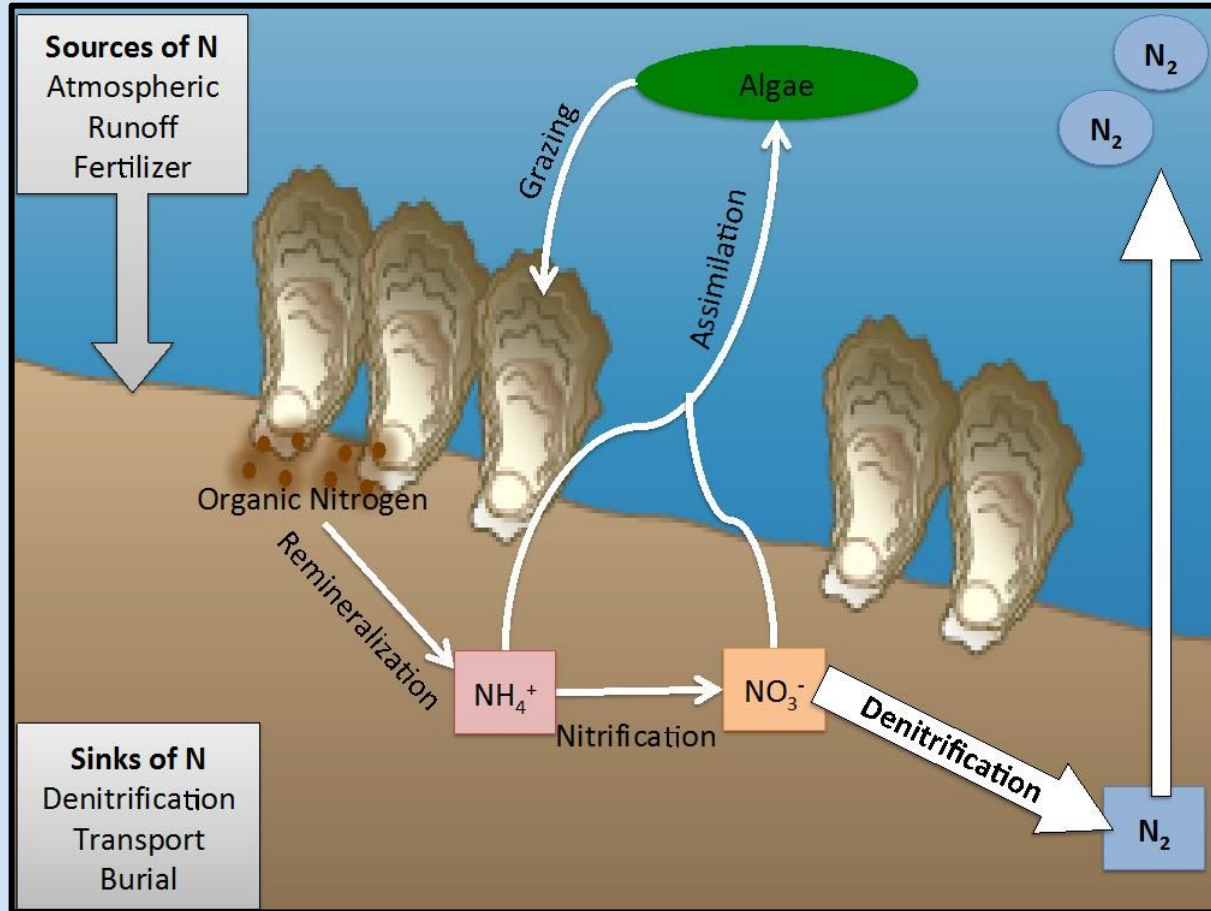
- Mutualism with Cordgrass
- Important for
 - Water Filtration
 - Shoreline Protection
 - Denitrification

Not consumed by humans!



BIODEPOSITION + DENITRIFICATION

- Mussels filter feed and biodeposit
- Microbes convert biodeposits to N_2



PREDATORS

BLUE CRABS



<https://www.flickr.com/photos/44033358@N02/5857763755/>

OYSTER DRILLS

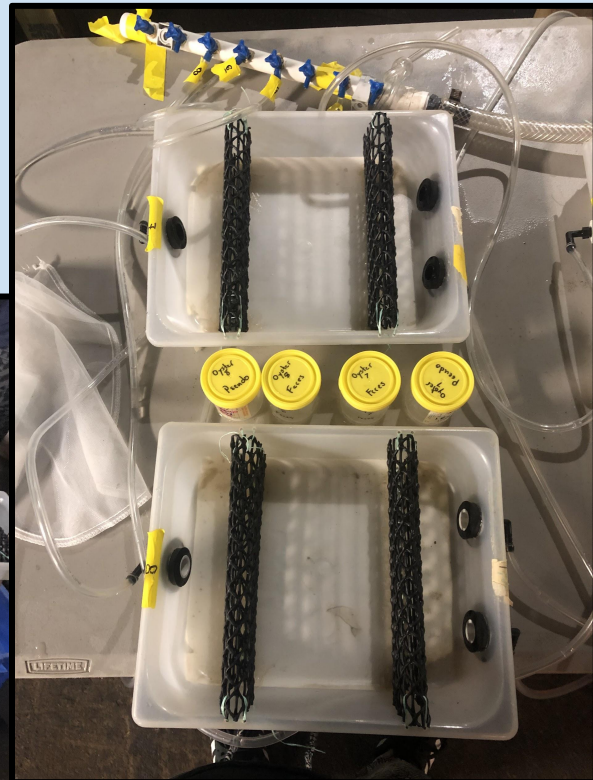


<https://www.flickr.com/photos/jsigeology/25125063421>

OUR EXPERIMENT

- Hypothesis
 - If predators are present in the system then the mussels will filter less
- What are we looking at?
 - Filtration
 - Biodeposition
 - Predator effect
- The experimental apparatus

APPARATUS



IN THE FUTURE

- Possible Continuations
 - How will oysters/mussels contribute to their natural environments?
 - How does the microbiome in the sediment affect denitrification in a system?

ACKNOWLEDGMENTS

- BUEE Program
- Dr. Stephen Gosnell
- Jennifer Zhu
- Fellow Researchers
 - Valerie
 - Victor
 - Brian

CONCLUSION

- Mussels provide important ecosystem services, especially water filtration and facilitation of denitrification
- Our goal is to study the effects of predators on the filtration and biodeposition performed by ribbed mussels
- This research promotes future research in the field and provides important information for community restoration

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