

# Effect of Santee Crayfish (*Procambarus blandingii*) on Algae

---

Siddharth Sengupta

TEATOWN ENVIRONMENTAL SCIENCE ACADEMY  
HONG KONG INTERNATIONAL SCHOOL

# Background Information

- Eutrophication
  - Invasive Crayfish
  - Mesocosms
  - Leaf Litter
-

# Why?

## INTRODUCTION

- Rusty (Invasive) Crayfish
  - Most Abundant
  - Not many studies
-

# Hypothesis

---

The native *Procambarus blandingii* (Santee Crayfish) will prefer to eat algae over alternative food options

# Methods

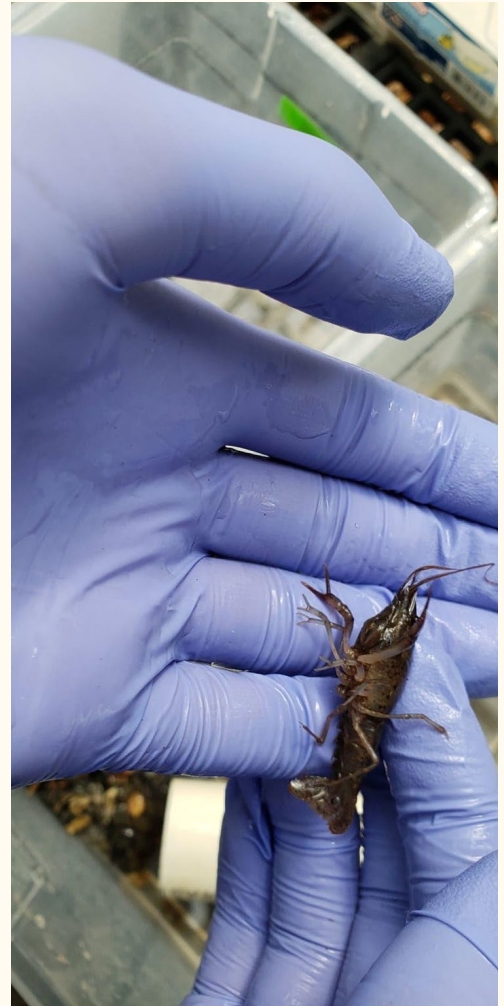
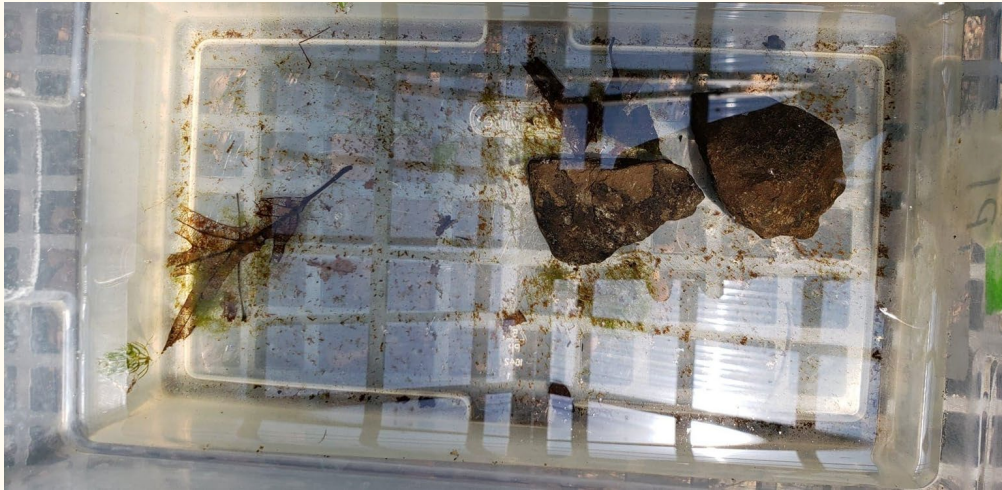
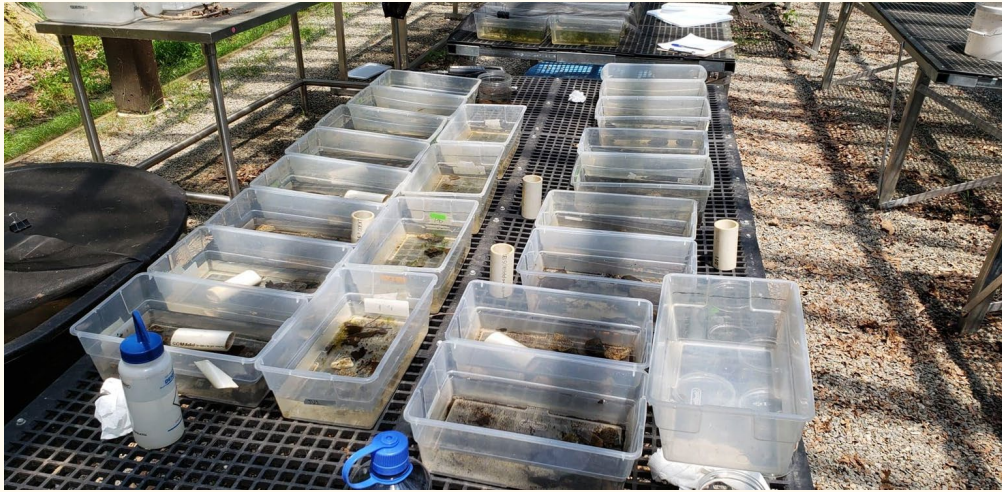
## Initial Mesocosms

- Replicated lake environment through mesocosms
    - 10 control
    - 10 variable
  - Lasting for 10 days
  - Other food
-

# Methods

## Improved Mesocosms

- Replicated lake environment through mesocosms
    - 10 control
    - 10 variable
  - 2 Trials (4 days each)
  - Other food
-



# Methods

## Measurements

- Algae ( $\mu\text{g/L}$ )
    - Average of 5 just to be safe
  - pH
  - Temperature ( $^{\circ}\text{C}$ )
  - Dissolved Oxygen ( $\text{mg/L}$ )
-





# Results!

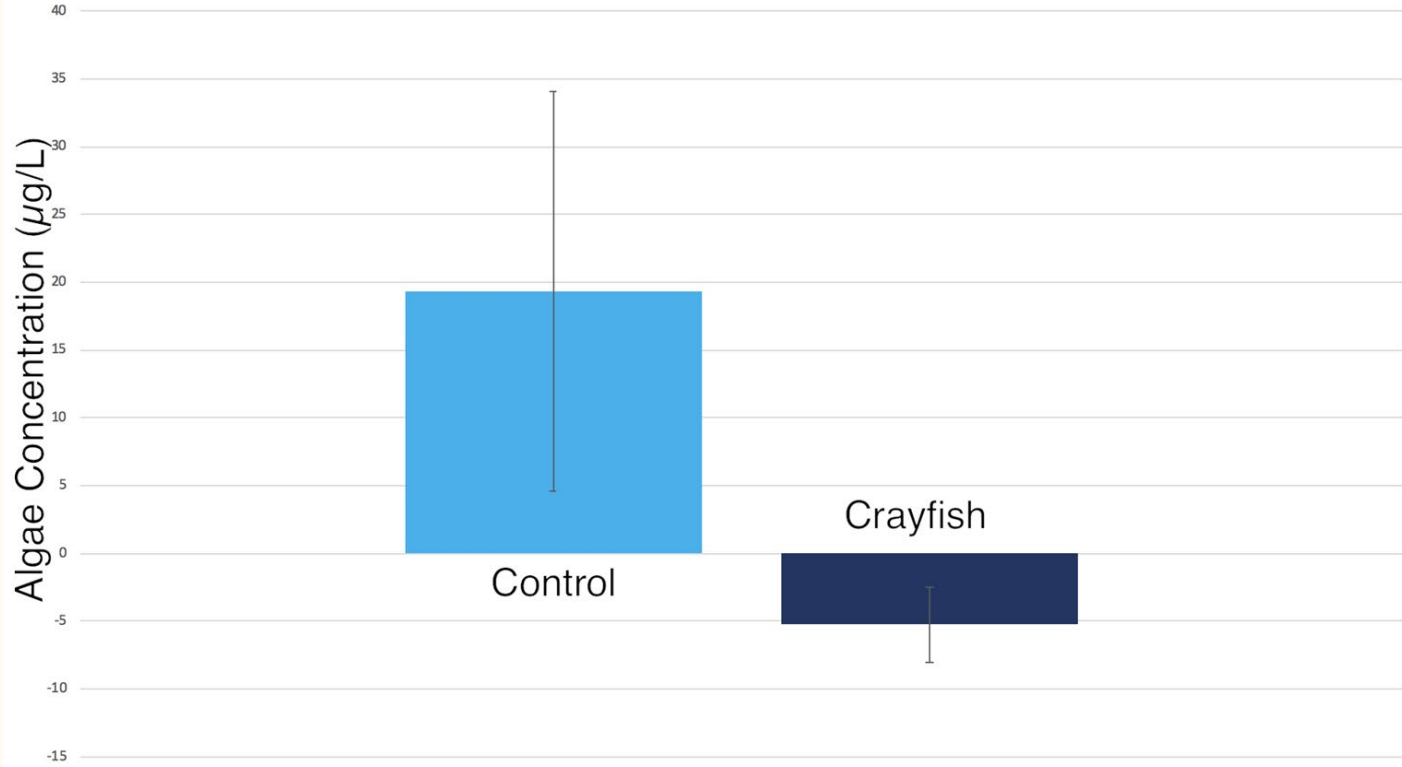
---

The data strongly support the hypothesis that Santee Crayfish prefer to eat algae.

# Results

- T-Test
    - Percent Change Algae
    - Change in Algae
    - Dissolved Oxygen
-

CHANGE IN ALGAE CONCENTRATIONS BEFORE AND AFTER THE TRIALS



# Discussion

- Data provided support for hypothesis
  - Future Research
    - Implication for eutrophication?
    - Does depth have an effect?
    - Does competition have an effect?
  - Problems
    - Algae Probe
    - Water Temperature
    - Crayfish died
-

# Conclusion

- Data support the statement “Crayfish (in mesocosms) eat algae”
-

# Acknowledgements

Thank you to:

- Family
  - TESA Instructions (Dr. Amy Karpati, Charlie Luisi, Eva Thaddeus, Erin Baker)
  - TESA Students
-



# Questions?





# Effect of Santee Crayfish (*Procambarus blandingii*) on Algae

---

BY SIDDHARTH SENGUPTA