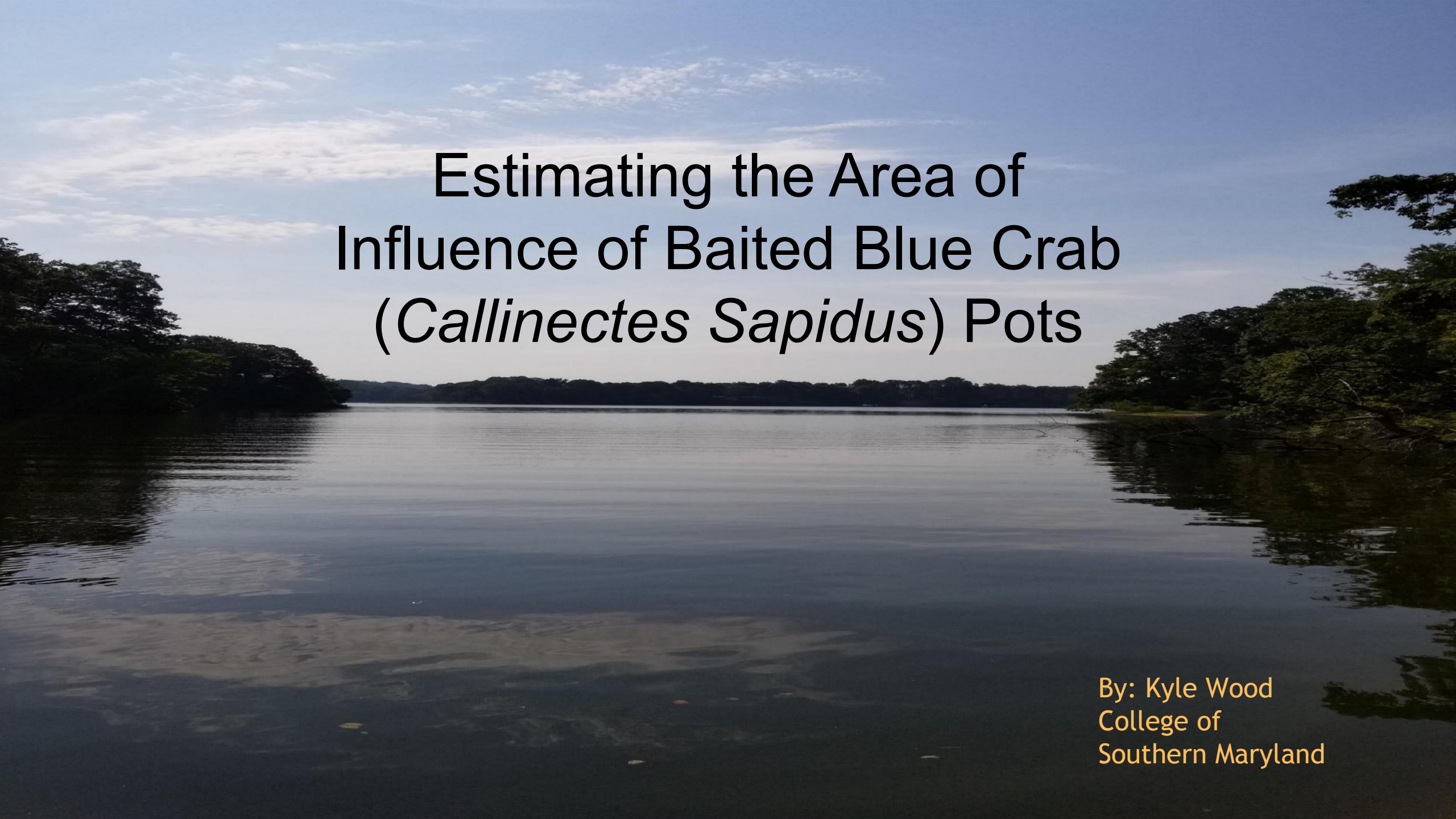
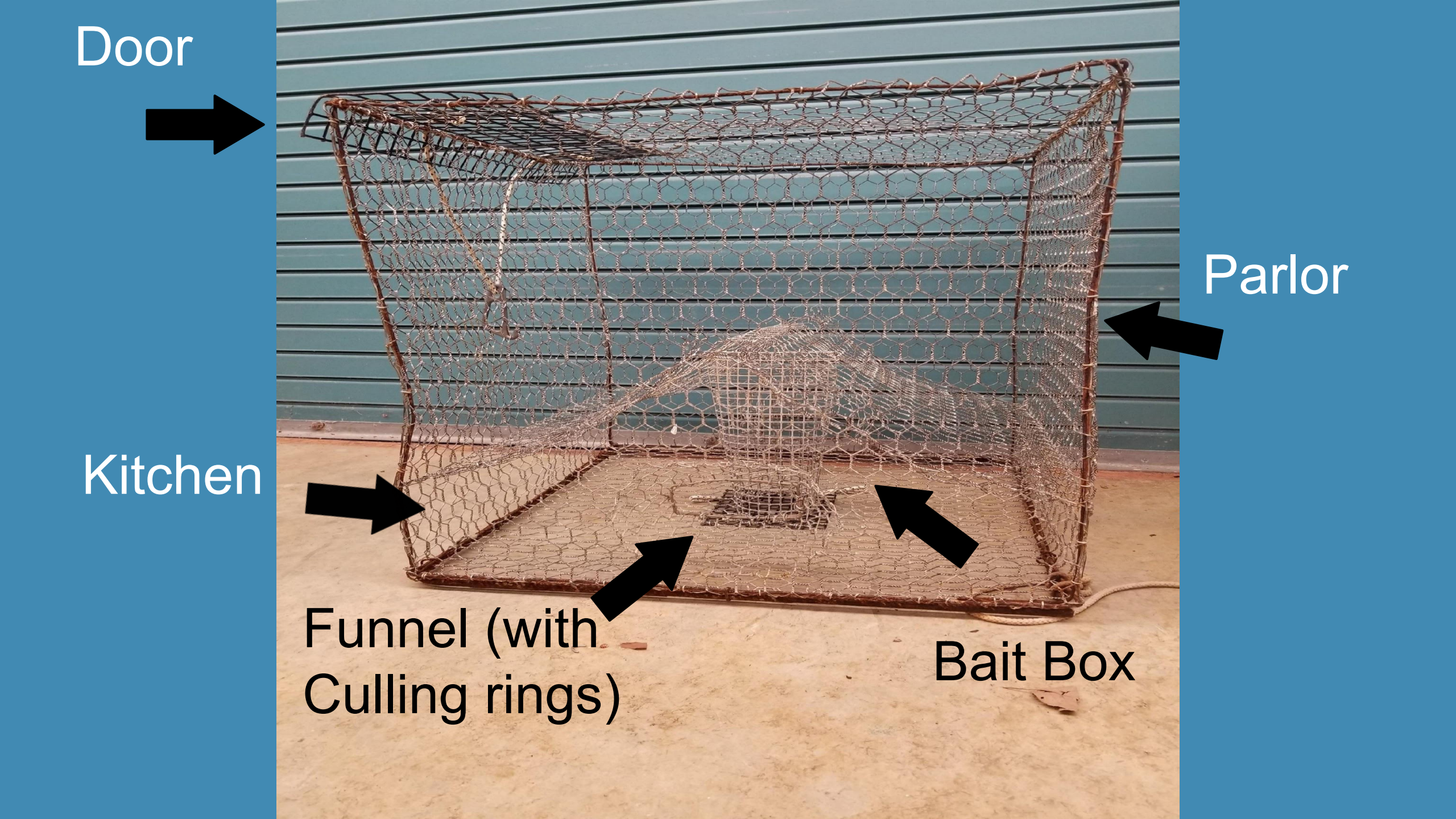


Estimating the Area of Influence of Baited Blue Crab (*Callinectes Sapidus*) Pots

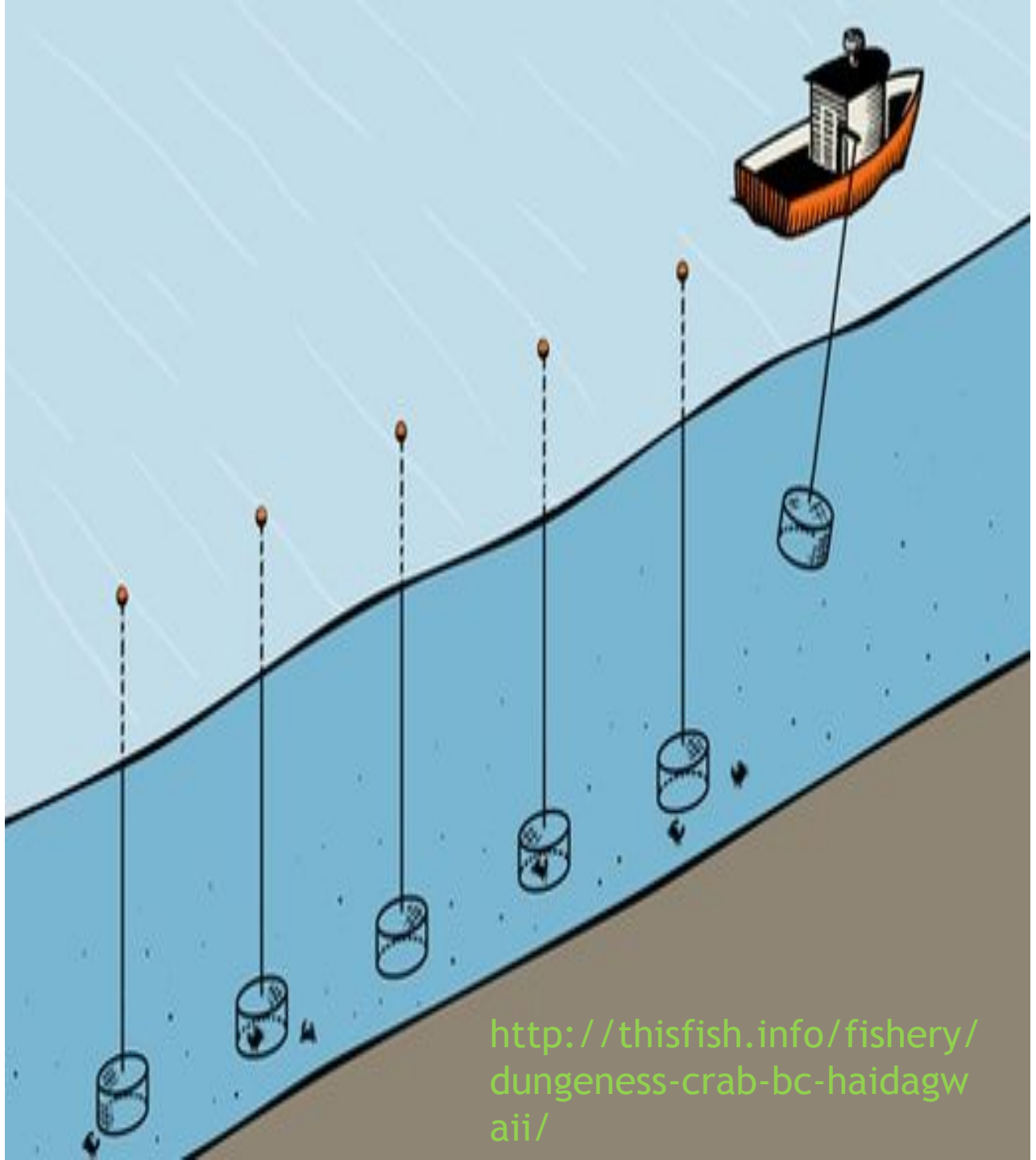
By: Kyle Wood
College of Southern Maryland

The Chesapeake Bay has one of the largest sources of Blue Crabs (*Callinectes Sapidus*) in the United States with annual landings between 21-66 million pounds! The economic value ranges from $24 to $79 million annually (NOAA, 2000-2016).


Door
Parlor
Kitchen
Funnel (with
Culling rings)
Bait Box

Objectives:

- Estimating what distance do baited Blue Crab pots stop affecting each other



☐ “Single Pot”

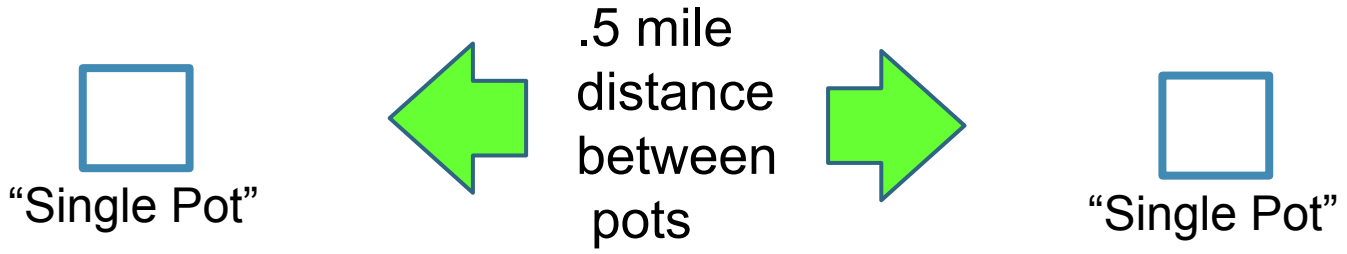
☐ “Single Pot”

☐ “Single Pot”

☐ “Single Pot”

☐ “Single Pot”

Miller (1990)
Brethes et al. (1985)
Watson et al. (2009)



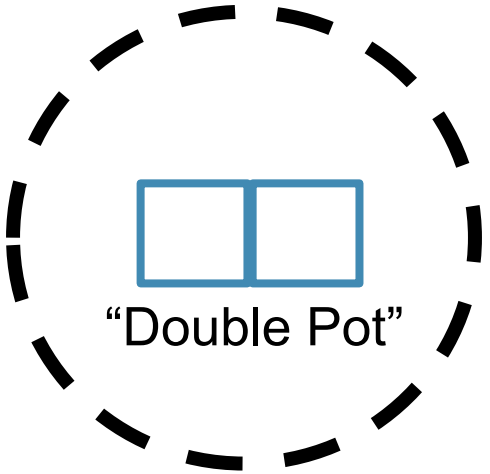
“Double Pot”

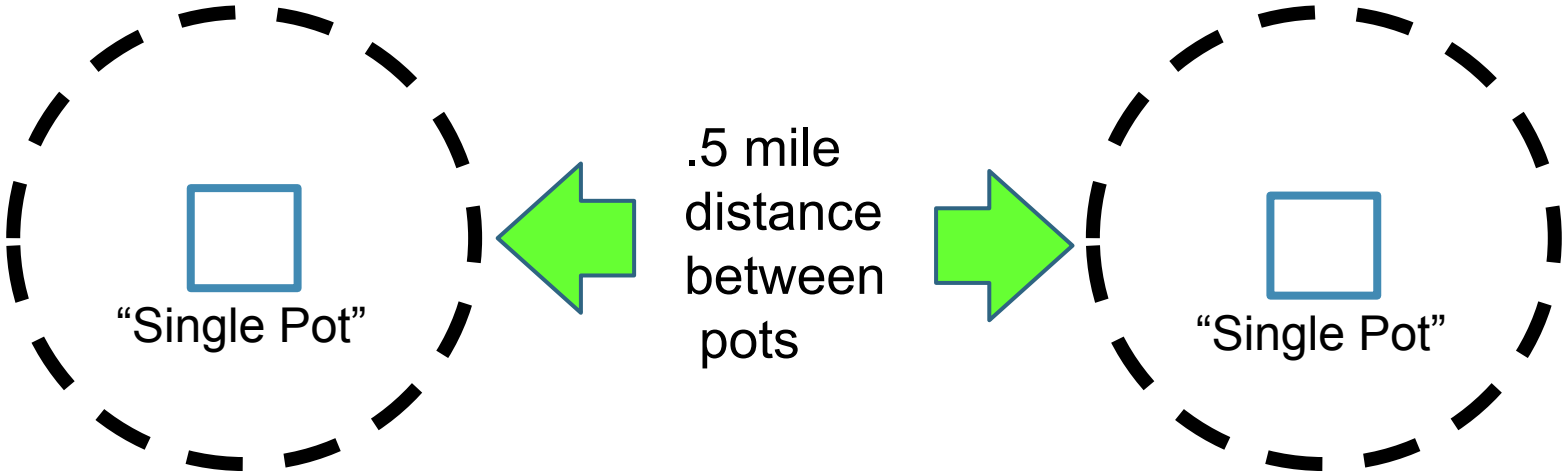
“Single Pot”

“Single Pot”

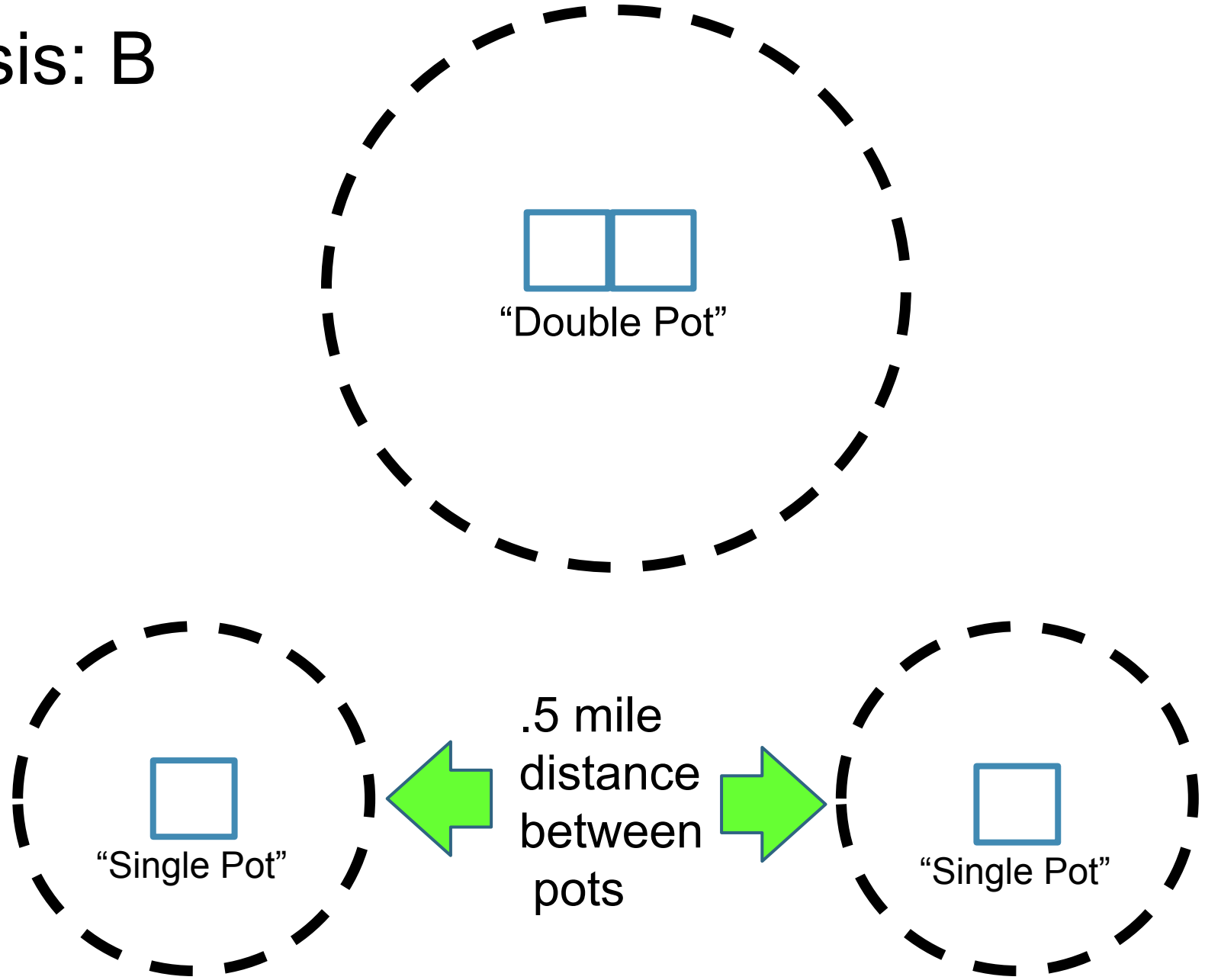
Hypothesis: A

Area of influence:





Hypothesis: B



Replicated 2x2 Latin Square Design

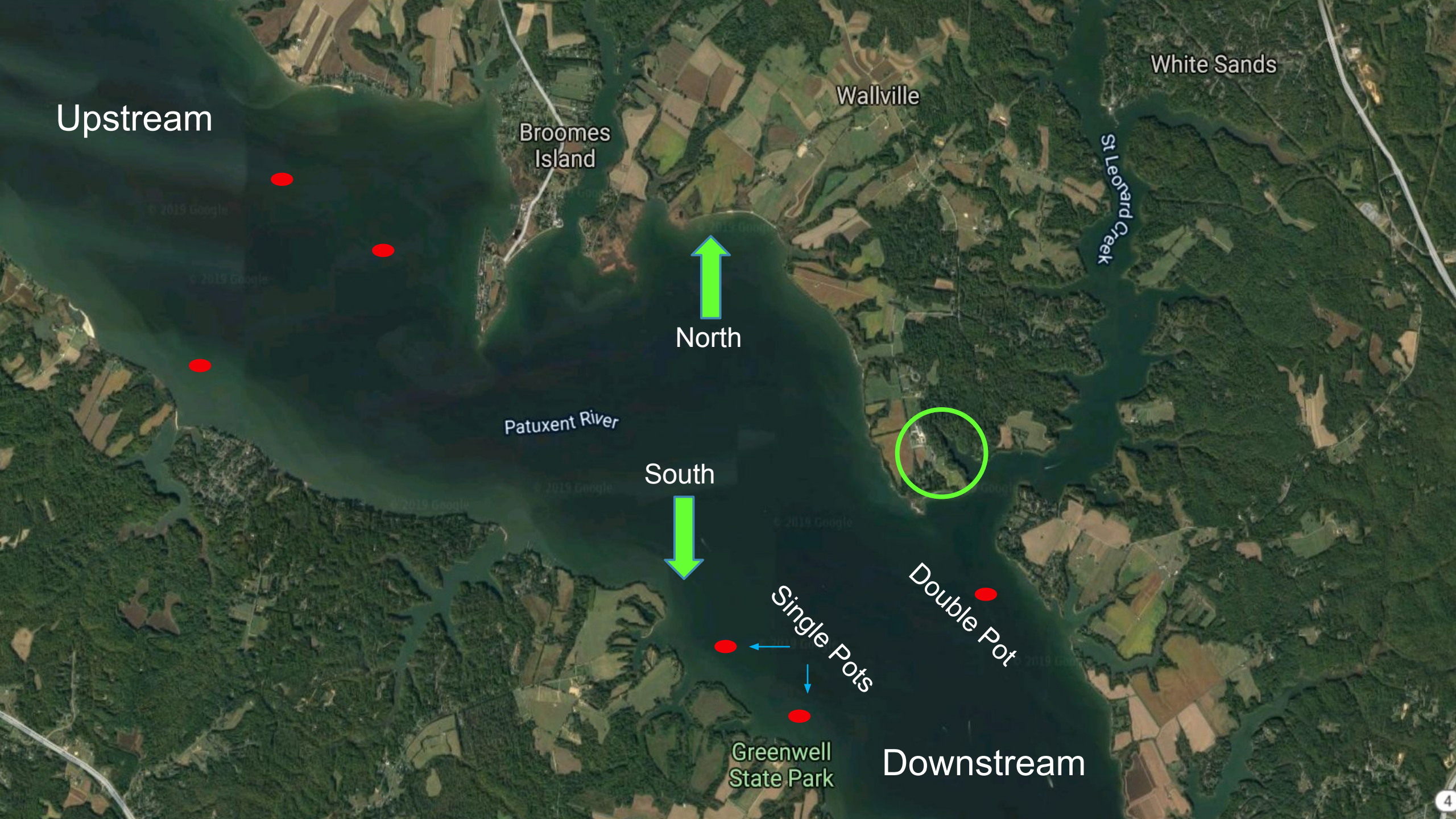
D= Double Pot
S= Single Pot

A

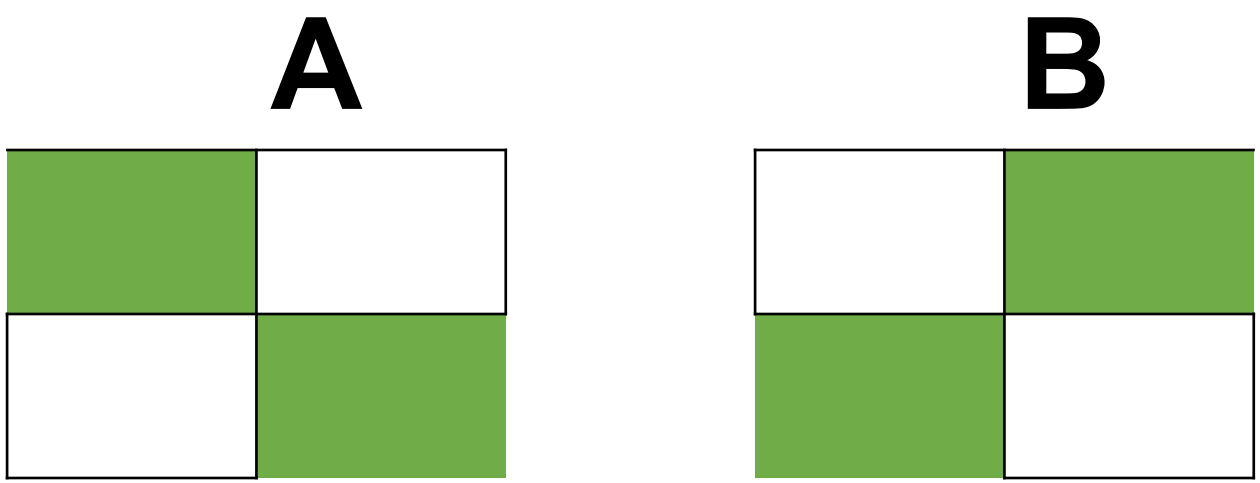
	North	South
Downstream	D	S
Upstream	S	D

B

	North	South
Downstream	S	D
Upstream	D	S


Upstream
Broomes Island
Wallville
White Sands
St Leonard Creek
North
Patuxent River
South
Single Pots
Double Pot
Greenwell State Park
Downstream

Preliminary Analysis Results



Single Pots Totaled Catch=

Double Pots Totaled Catch=

White

Preliminary Analysis Results

A

30	16
21	50

B

20	29
	22

Single Pots Totaled Catch=

Double Pots Totaled Catch=

White

Preliminary Analysis Results

A

30	16
21	50

B

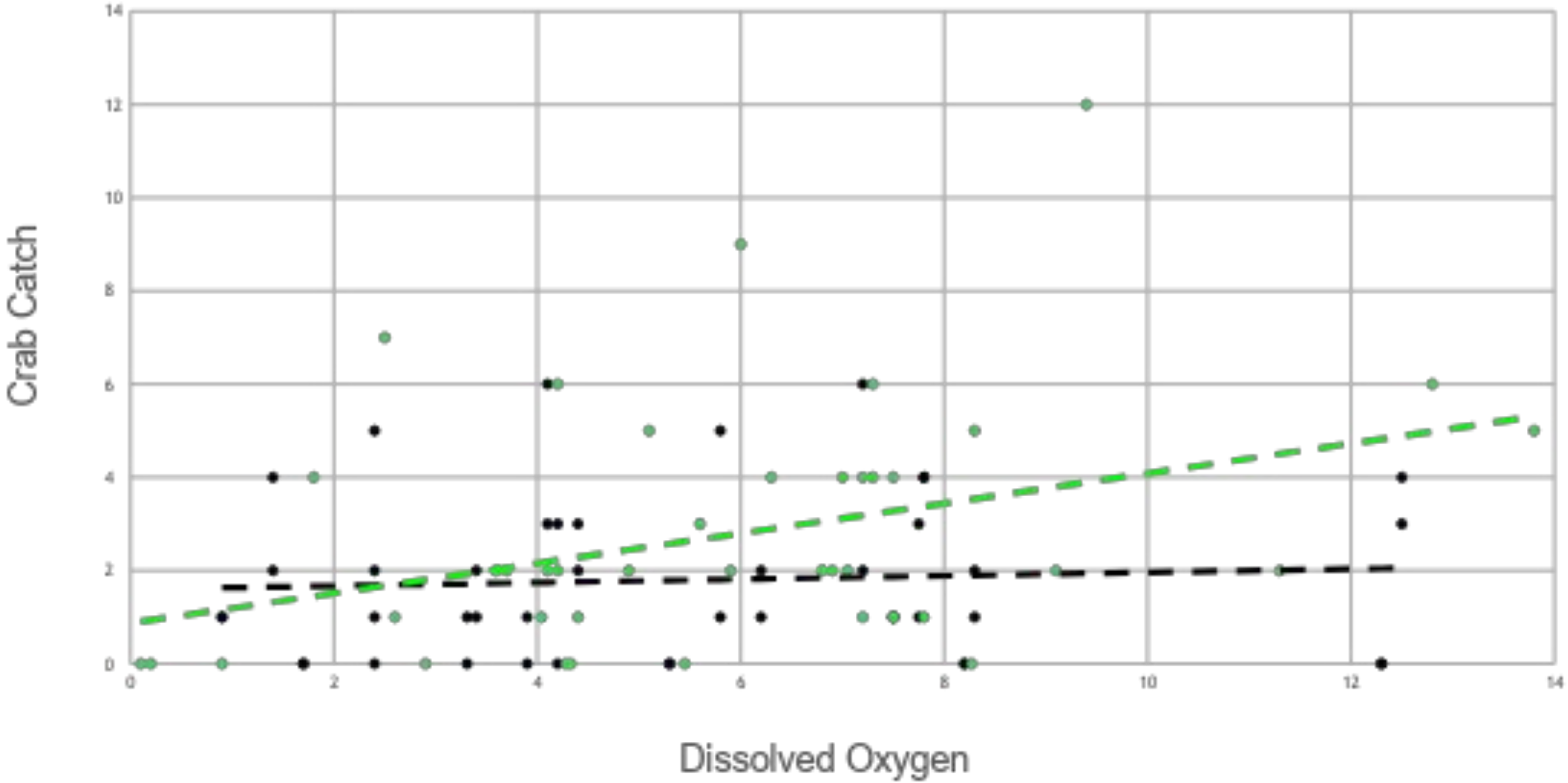
20	29
12	22

Single Pots Totaled Catch=

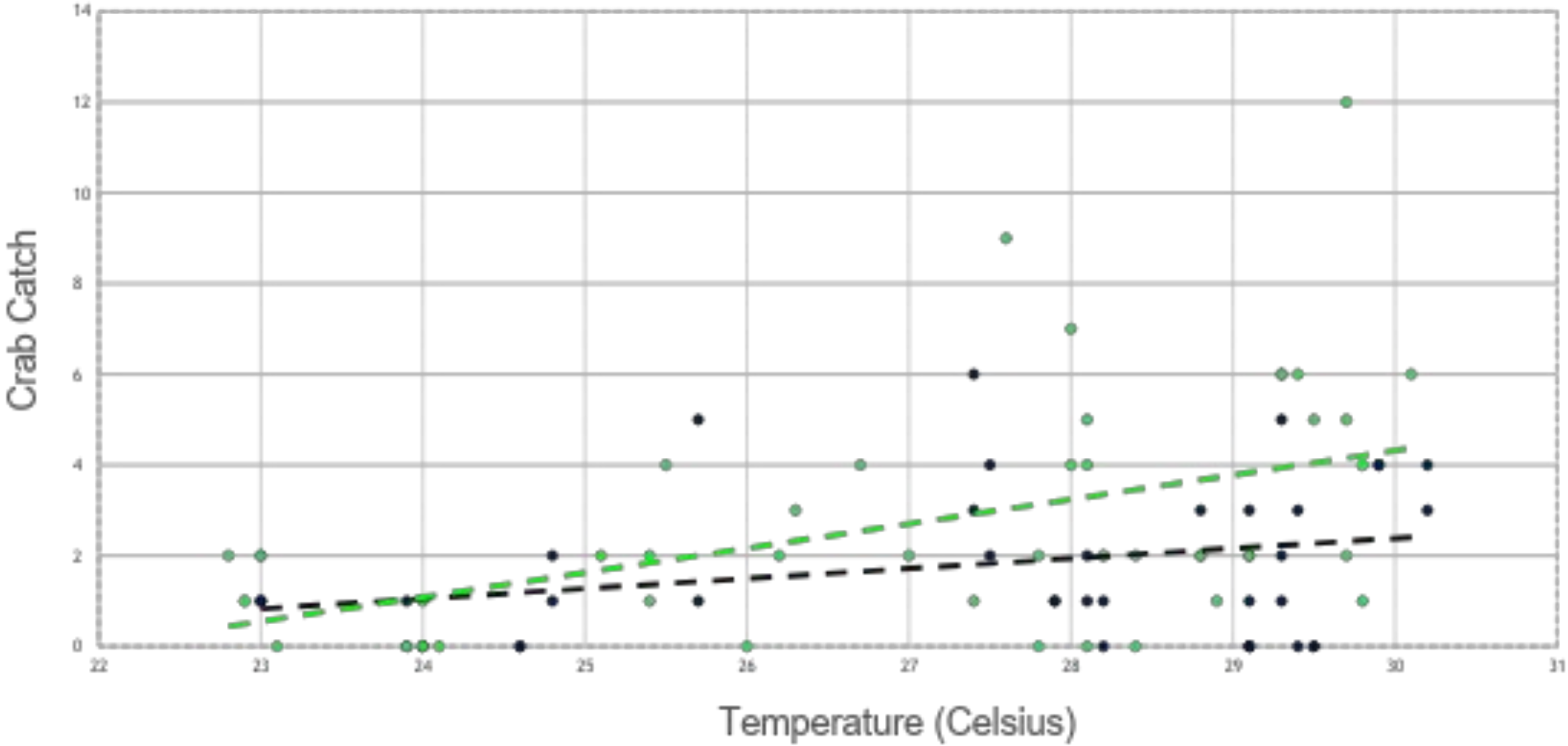
Double Pots Totaled Catch=

White

Potential Dissolved Oxygen Effect on Catch



Potential Temperature Effect on Catch



The Next Steps:

- Start “Phase 2” which would be asking the question “What is the distance that baited Blue Crab pots stop affecting each other?”
- Improve the experiment’s design
- Measure commercial watermen buoy distances on Chesapeake Bay


YAMA

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