



DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY • BRUNSWICK, GA 31520 • 912.264.7218
COASTALGADNR.ORG

MARK WILLIAMS
COMMISSIONER

DOUG HAYMANS
DIRECTOR

Shrimp Advisory Panel

6:00PM June 1, 2023, Susan Shipman Center
(arrive in-person or call by 5:45PM)

Telephone number for call: 301-715-8592

You may be asked to enter the Meeting ID and/or Passcode when you dial in.

Meeting ID: 868 2251 3219

Passcode: 421222

If you would like to join by computer:

<https://us02web.zoom.us/j/86822513219?pwd=ajJESjdRcmgwVkxIRGpzSk9jMnhjQT09>

- 6:00 Welcome & SAP Member Roll Call
- 6:10 Fishery Independent Data and Food Shrimp Season Opening Recommendations
- 6:40 Black Gill Research Update (2013 Shrimp Fishery Disaster Funds) - Dr. Marc Frischer
- 6:50 Vessels and Railways: Assessing Commercial Fishing Infrastructure in Coastal Georgia
Dr. Jennifer Sweeney Tookes (GSU) and Bryan Fluech (UGA MarEx/GA Sea Grant)
- 6:00 Other Business and Public Comment

Summary of Results for White Shrimp, May 2023 Assessment - R/V Reid W. Harris, (Gonad information is for female White Shrimp)

	SECTOR	Long-term Data (2003 - 2023)	2023Data	Difference (%)
CPUE	CREEKS	1.6	0.8	-47.40
	SOUNDS	2.2	1.4	-37.82
	BEACHES	0.9	1.0	14.83
	ALL SECTORS	1.5	1.1	-30.91

Advanced Gonad Stage (%)	CREEKS	22.9	9.8	-13.11
	SOUNDS	44.5	33.0	-11.51
	BEACHES	82.1	83.2	1.16
	ALL SECTORS	41.9	38.2	-3.71

Count Size* (Heads On)	CREEKS	24.3	24.8	2.06
	SOUNDS	20.8	19.0	-8.38
	BEACHES	16.7	15.3	-8.29
	ALL SECTORS	21.2	19.3	-8.84

*Positive count size differences (in yellow) indicate smaller sized shrimp.

Water Temperature (°C)	CREEKS	24.4	23.7	-2.67
	SOUNDS	24.2	23.8	-1.62
	BEACHES	24.0	22.1	-7.95
	ALL SECTORS	24.2	23.2	-4.06

Salinity	CREEKS	25.6	25.0	-2.38
	SOUNDS	27.9	27.5	-1.44
	BEACHES	30.8	26.2	-14.93
	ALL SECTORS	28.1	26.2	-6.65

Summary of Results for White Shrimp, April 2023 Assessment - R/V Reid W. Harris, (Gonad information is for female White Shrimp)

	SECTOR	Long-term Data (2003 - 2023)	2023Data	Difference (%)
CPUE	CREEKS	3.4	2.8	-17.58
	SOUNDS	3.3	3.9	19.24
	BEACHES	0.7	0.7	-9.22
	ALL SECTORS	2.5	2.5	-0.51

Advanced Gonad Stage (%)	CREEKS	3.8	5.5	1.68
	SOUNDS	14.9	32.8	17.92
	BEACHES	72.5	50.0	-22.50
	ALL SECTORS	12.5	21.8	9.26

Count Size* (Heads On)	CREEKS	31.2	28.0	-9.98
	SOUNDS	26.9	22.0	-17.83
	BEACHES	17.1	16.6	-2.69
	ALL SECTORS	27.9	23.8	-14.61

*Positive count size differences (in yellow) indicate smaller sized shrimp.

Water Temperature (°C)	CREEKS	20.6	20.8	1.39
	SOUNDS	20.4	20.8	2.03
	BEACHES	19.8	22.6	8.89
	ALL SECTORS	20.2	21.1	4.05

Salinity	CREEKS	23.0	22.1	-3.59
	SOUNDS	25.9	25.6	-0.98
	BEACHES	29.5	29.1	-1.43
	ALL SECTORS	26.1	25.6	-1.90

Summary of Results for White Shrimp, March 2023 Assessment - R/V Reid W. Harris, (Gonad information is for female White Shrimp)

	SECTOR	Long-term Data (2003 - 2023)	2023Data	Difference (%)
CPUE	CREEKS	3.8	3.8	0.21
	SOUNDS	3.3	3.6	10.00
	BEACHES	0.3	0.4	8.05
	ALL SECTORS	2.5	2.6	3.75

Advanced Gonad Stage (%)	CREEKS	0.0	0.0	0.02
	SOUNDS	0.1	1.0	0.88
	BEACHES	2.4	17.2	14.79
	ALL SECTORS	0.13	1.1	0.94

Count Size* (Heads On)	CREEKS	43.6	37.0	-15.21
	SOUNDS	34.0	26.1	-23.30
	BEACHES	23.3	25.2	8.14
	ALL SECTORS	38.5	31.3	-18.75

*Positive count size differences (in yellow) indicate smaller sized shrimp.

Water Temperature (°C)	CREEKS	16.4	18.3	11.77
	SOUNDS	16.3	18.2	11.47
	BEACHES	15.5	18.0	16.15
	ALL SECTORS	16.0	18.1	13.03

Salinity	CREEKS	22.1	22.9	3.55
	SOUNDS	24.6	26.4	7.05
	BEACHES	28.9	30.9	6.90
	ALL SECTORS	25.1	26.7	6.16

Summary of Results for White Shrimp, February 2023 Assessment - R/V Reid W. Harris,
 (Gonad information is for female White Shrimp)

	SECTOR	Long-term Data (2003 - 2023)	2023Data	Difference (%)
CPUE	CREEKS	3.0	1.7	-41.57
	SOUNDS	3.5	2.6	-24.77
	BEACHES	0.8	0.7	-12.85
	ALL SECTORS	2.5	1.7	-31.84

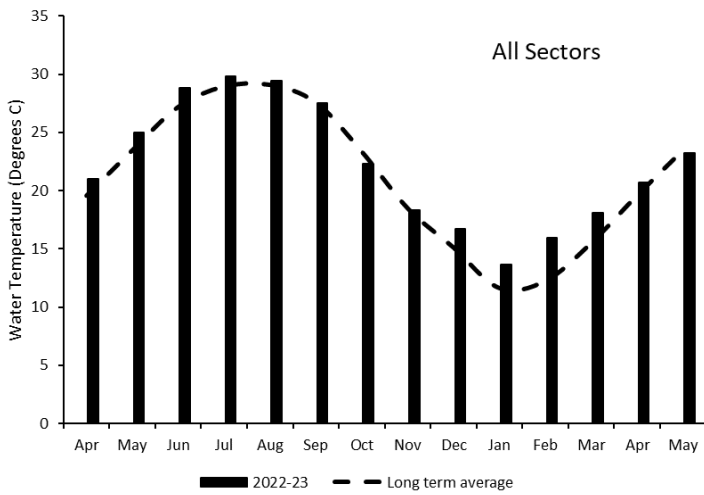
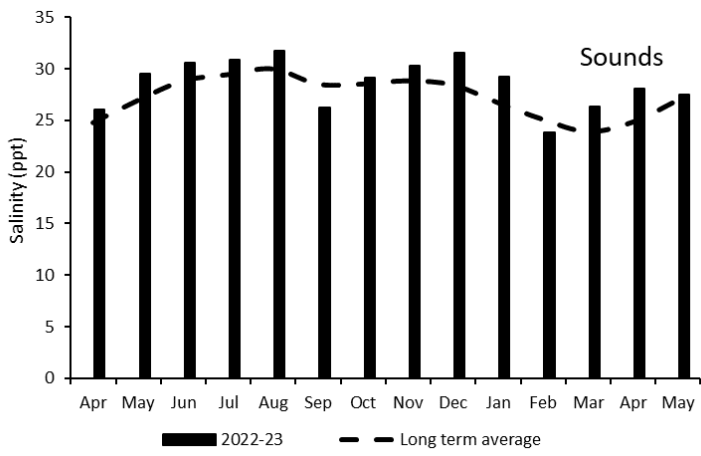
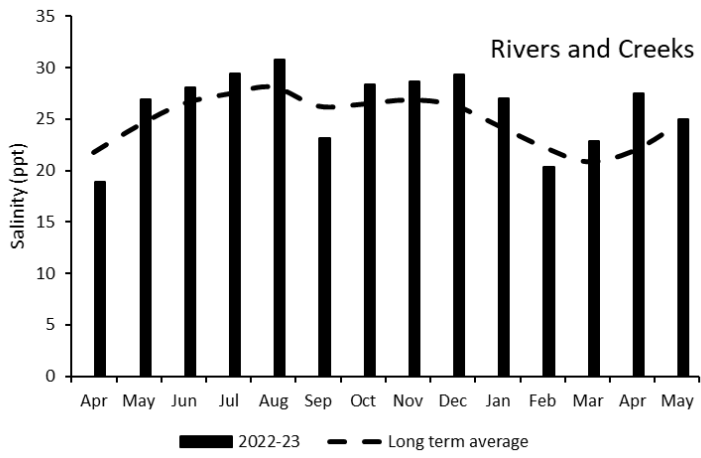
Advanced Gonad Stage (%)	CREEKS	0.01	0.0	-0.01
	SOUNDS	0.0	0.0	0.00
	BEACHES	0.0	0.0	0.00
	ALL SECTORS	0.01	0.0	-0.01

Count Size* (Heads On)	CREEKS	53.0	37.2	-29.82
	SOUNDS	42.8	32.3	-24.42
	BEACHES	30.4	19.2	-36.82
	ALL SECTORS	45.8	32.2	-29.60

*Positive count size differences (in yellow) indicate smaller sized shrimp.

Water Temperature (°C)	CREEKS	13.3	16.2	22.41
	SOUNDS	13.1	16.1	22.79
	BEACHES	12.7	15.5	22.16
	ALL SECTORS	13.0	16.0	22.34

Salinity	CREEKS	23.4	20.4	-12.88
	SOUNDS	26.2	23.9	-8.86
	BEACHES	29.9	27.0	-9.49
	ALL SECTORS	26.4	23.8	-9.87



Black Gill Research Update (2013 Shrimp Fishery Disaster Funds) -

Marc E. Frischer

Shrimp Advisory Panel Meeting, June 1, 2023

Project Co-PI: Jeb Byers,

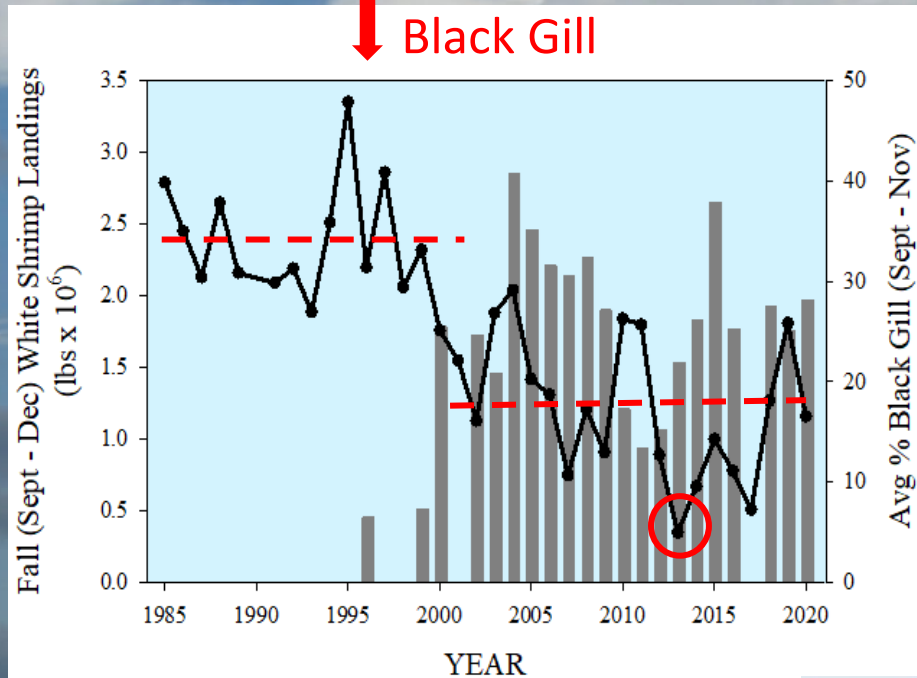
PhD Student – Megan Tomamichel



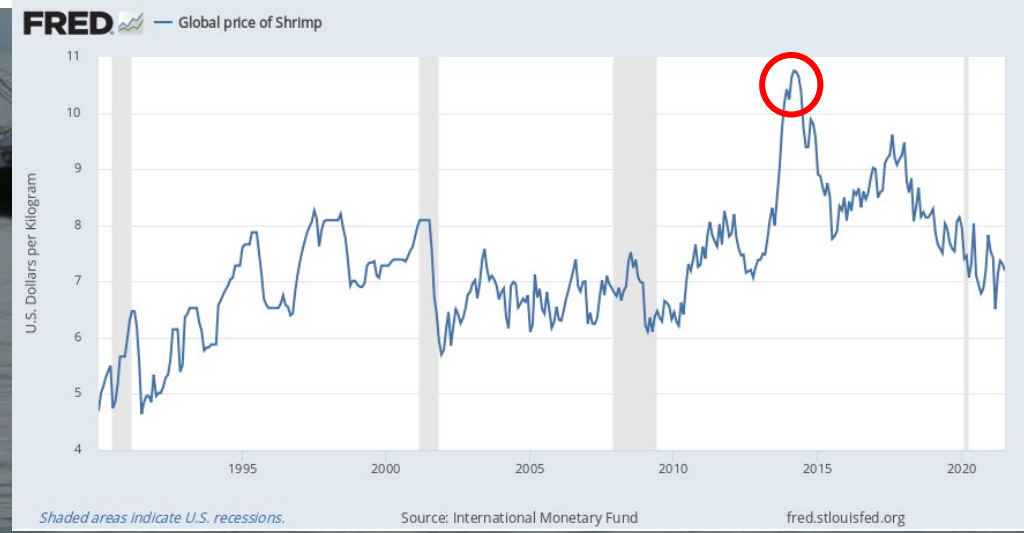
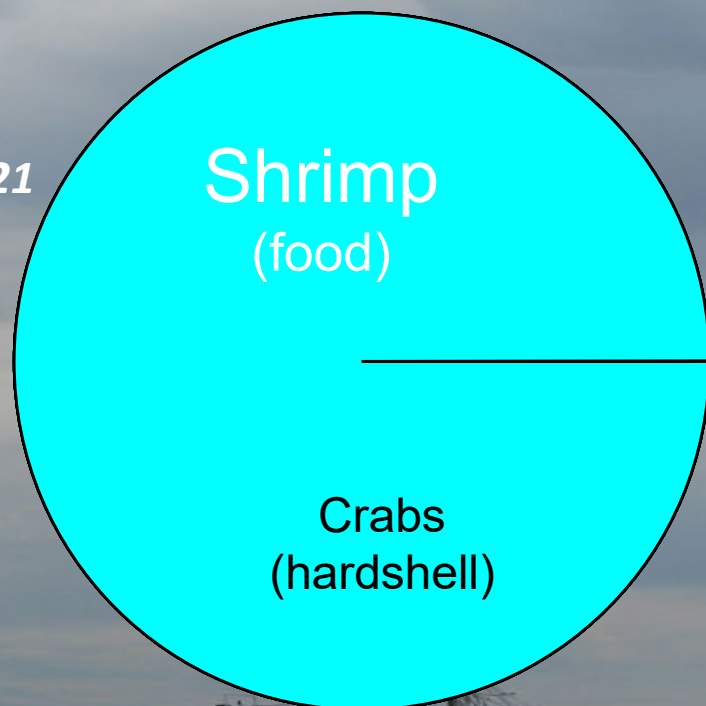
**NOAA
FISHERIES**



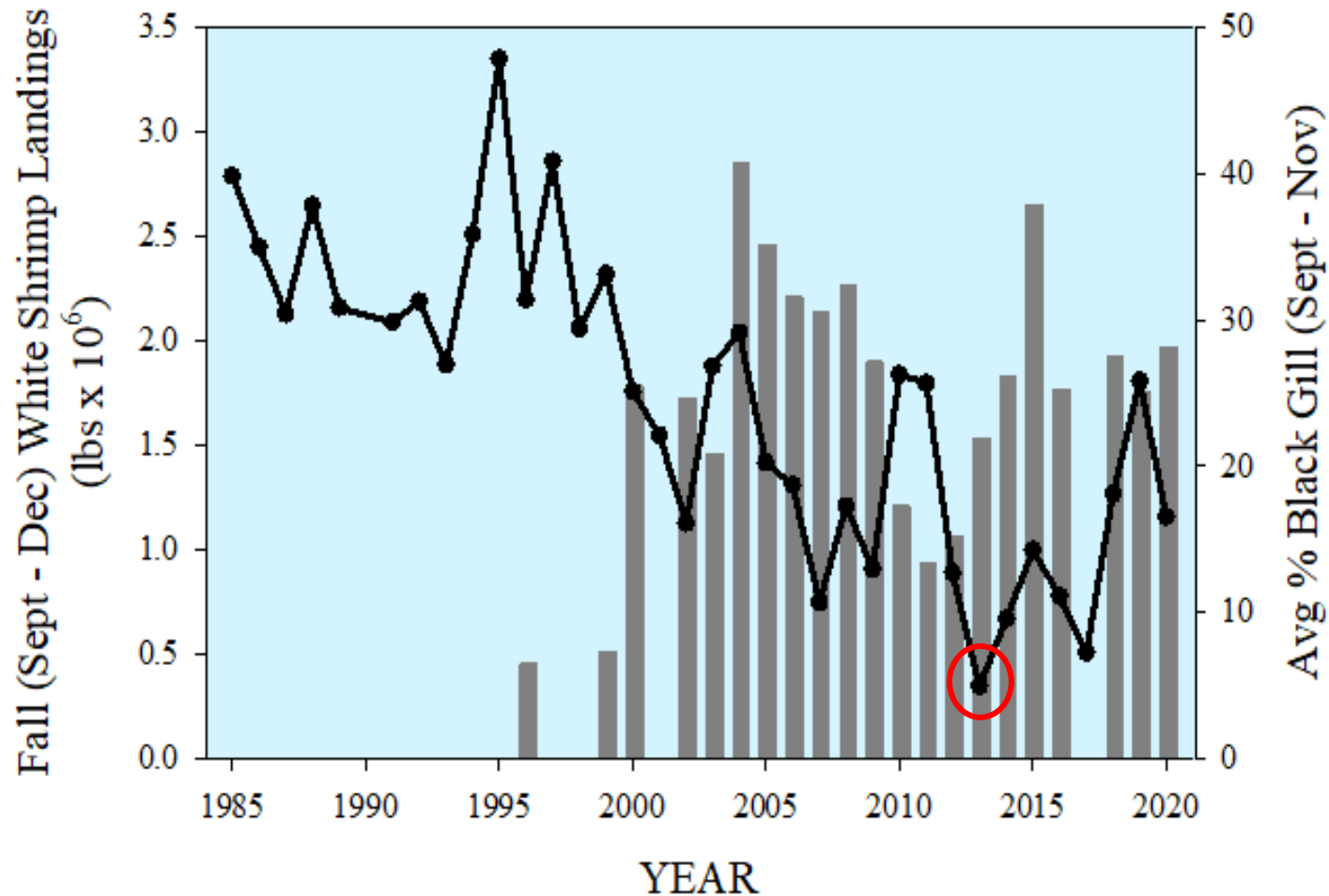
Georgia's Fisheries & Black Gill

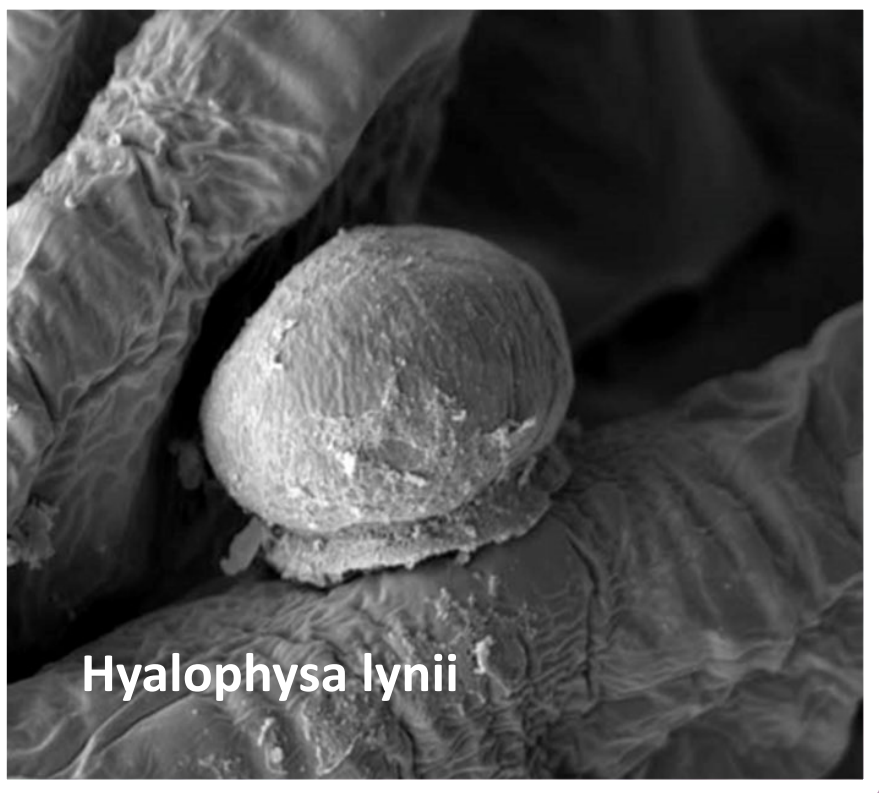


Economic value 2021
\$23,598,968



Understanding the causes of this variability may lead to better seasonal forecasts that may help us to manage the fishery to avoid economic catastrophes such as the one that occurred in 2013





Hyalophysa lynii

The Influence of Environmental Factors in Shrimp Black Gill: Management and Fishery Adaptation Options?

GA CRD Project funding from the 2013 Disaster Relief Payout

Data Sets:

- Fishery Independent (GA CRD EMTS program) – CPUE + environmental data (1976 – present, monthly by location and species)
- Fishery Dependent (GA Landings – 1957 – present, monthly, statewide)
- Long-term environmental data (temperature, salinity, oxygen, rainfall, river discharge. Some date back to early 1900's)

Black Gill monitoring:

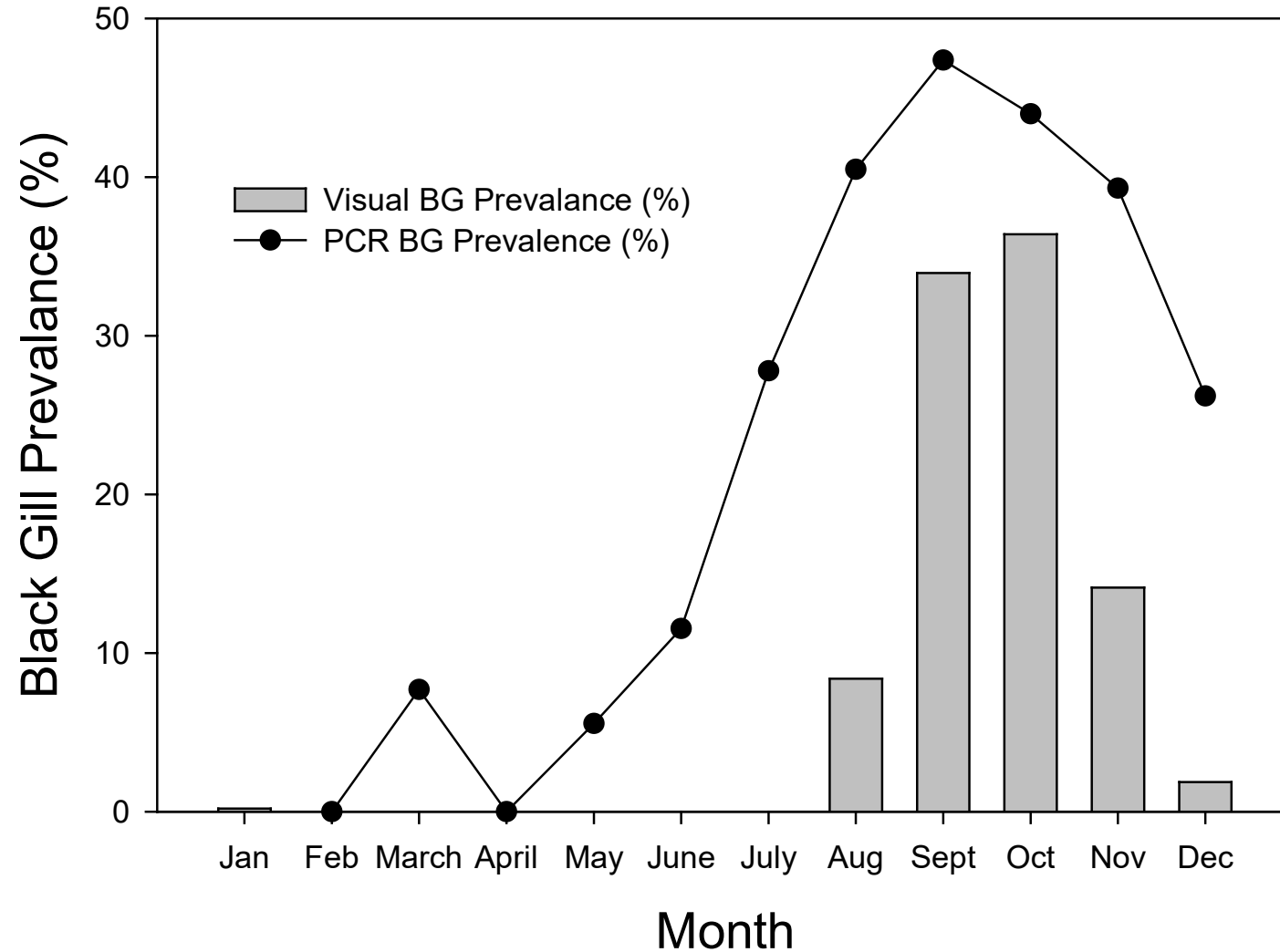
- Visible (GA CRD EMTS program) - 1996 – present, monthly by location
- PCR (MAREX educational trawl program and GA CRD EMTS) - 2014 – 2021, at least monthly

Climate Data:

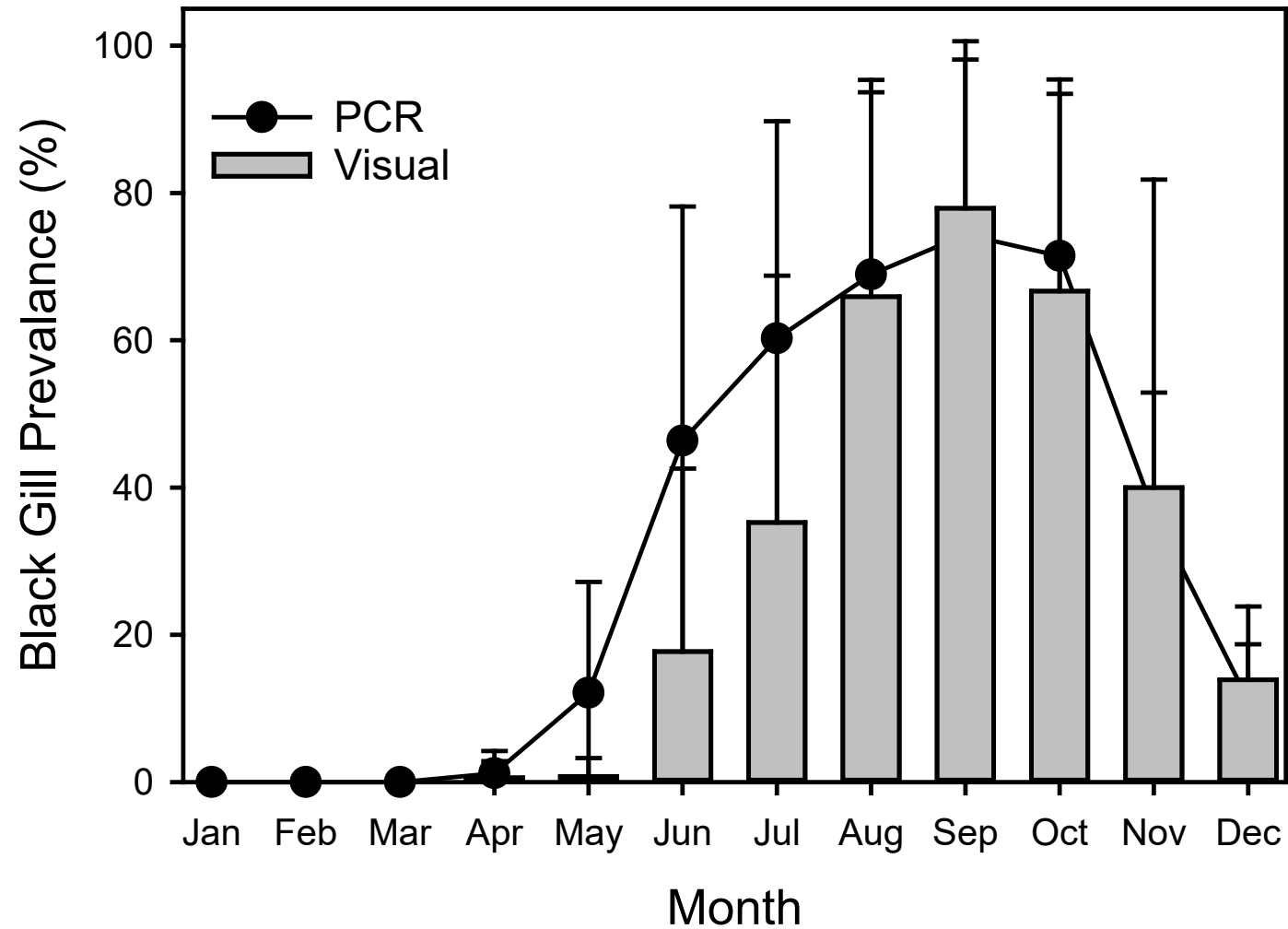
- Climate indices (e.g. ENSO, AO, PDO, etc)
- Drought indices (e.g. PDI, PHDI, NADM, NCEI, etc)

Understanding The Relationships between the Fishery (Landings), Shrimp Stocks (CPUE), and Environmental Conditions. Forecasting and Adapting Fishery to Ongoing Changes (Black Gill & Climate)

Seasonal Occurrence and Detection of Black Gill (2014-2015)



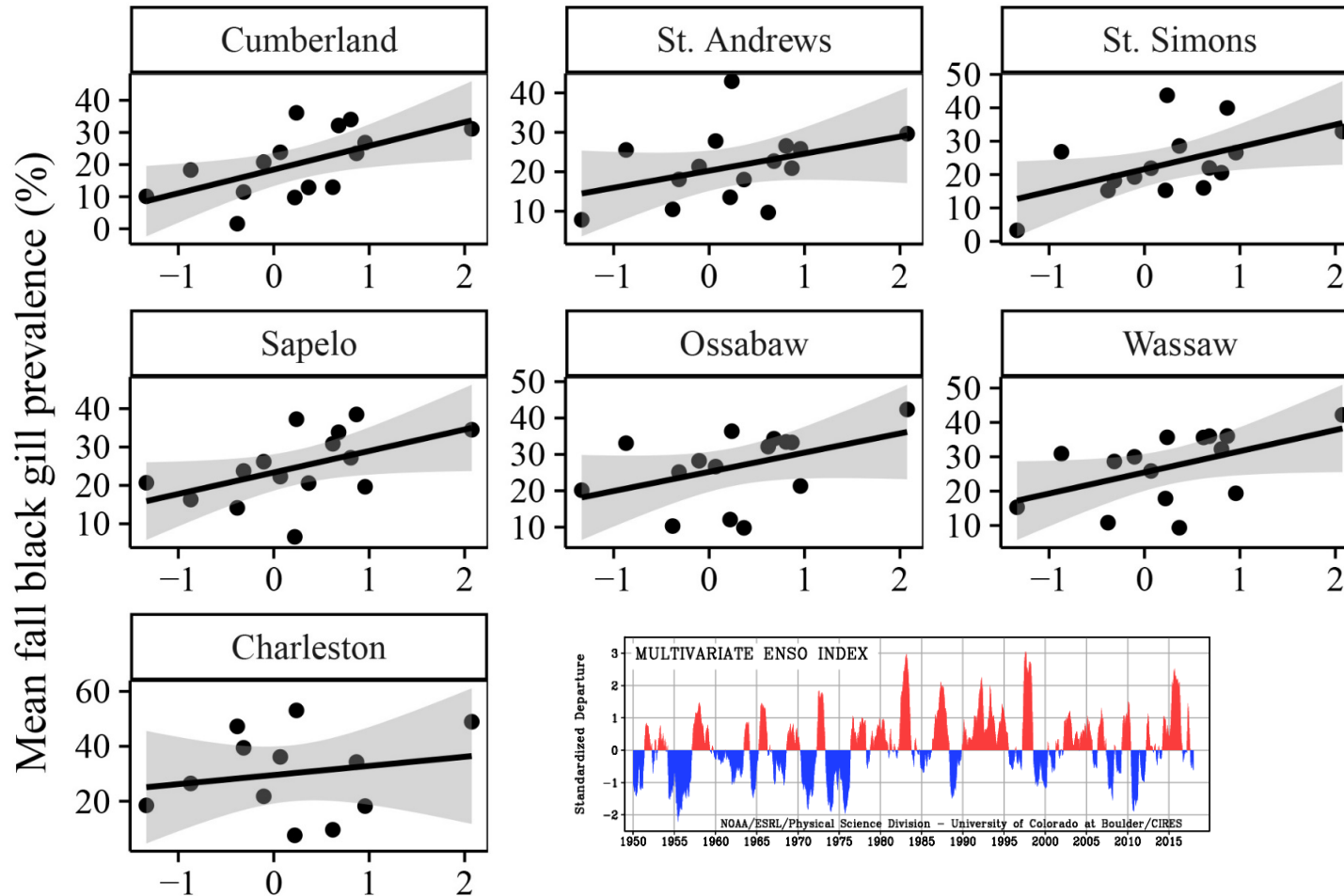
Seasonal Occurrence and Detection of Black Gill (2016-2020)



Recent Changes in
Prevalence and
Intensity of Black
Gill Infections

Environmental Drivers?

Black Gill Prevalence Correlated with Climate Conditions



Cooler/Drier Winter

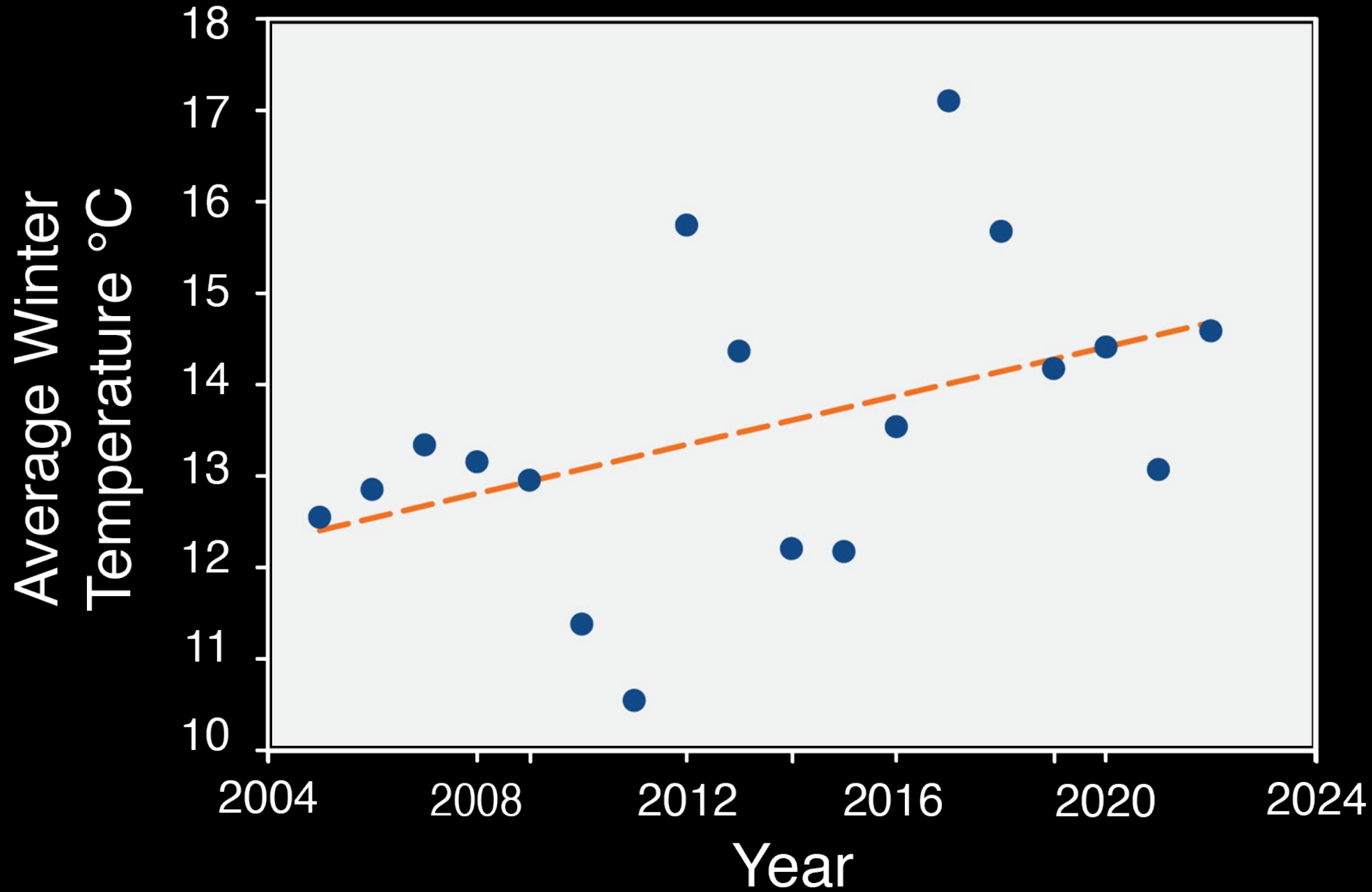


ENSO

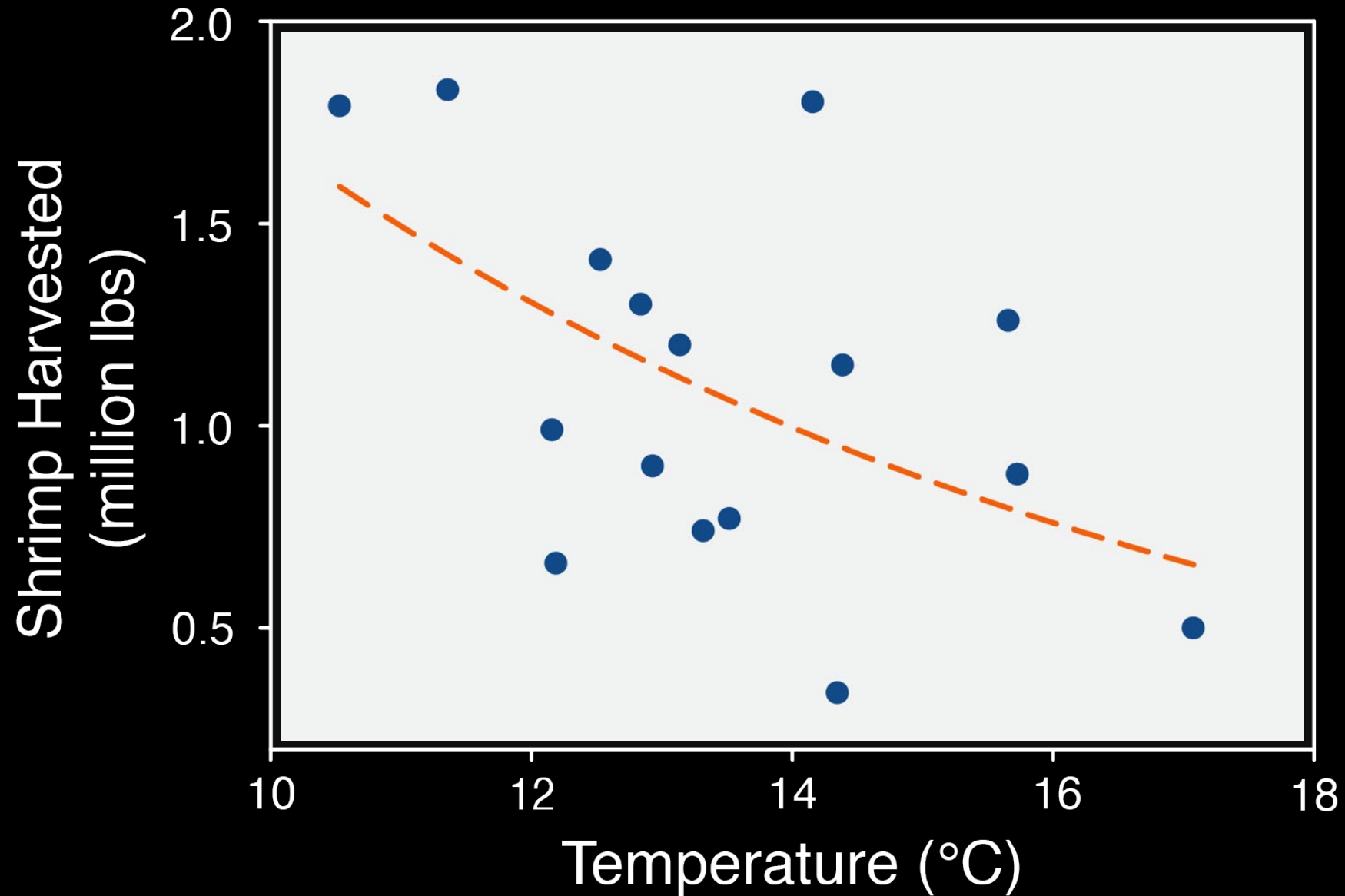


Warmer/Wetter Winter

Kendrick et al (2021)



Warmer Winters = Fewer Shrimp



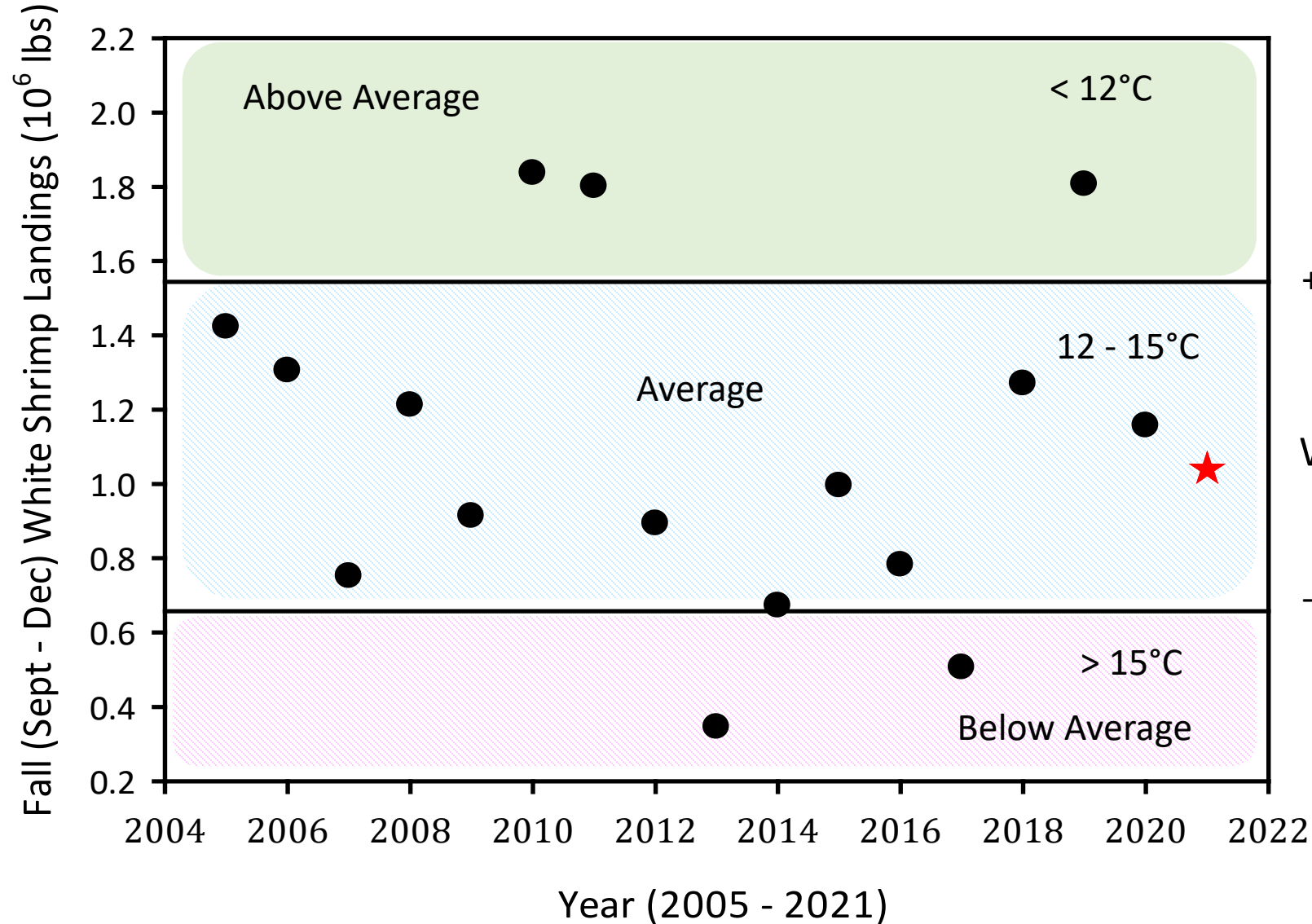
Possible Forecast Product

*GA Fall White Shrimp Harvest Based on Previous Winter (Avg) Temperature
(December – February)*

Predictability

=

Stability



+1 SD

Winter 2021 temp
13.08 ± 1.59 °C

-1 SD



VESSELS & RAILWAYS: ASSESSING COMMERCIAL FISHING INFRASTRUCTURE IN COASTAL GEORGIA

Bryan Fluech
UGA Marine Extension & Georgia Sea Grant

Jennifer Sweeney Tookes
Georgia Southern University



FUTURE FUNDING PRIORITIES



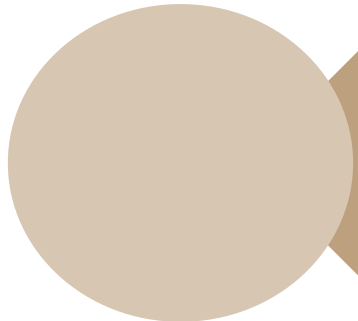
Priority #1

- Direct disbursements of maximum amounts



Priority #2

- Vessel repairs? Railway work?





PROJECT OBJECTIVE

Fill Vessel & Railway Data Gaps
to better inform present and future
GA DNR-CRD spending
of federal relief/disaster funding



PROJECT TASKS

Create survey about vessel needs & costs

- Consult Shrimp AP & CRD

Survey 25 vessel owners & 2 railways

Working status of vessel

- Maintenance & Repair Needs
- Associated time & costs

Craft collaborative price list & interested partners





SAP INPUT NEEDED

1. What parts will work?
2. What will be a problem?
3. How to avoid potential pitfalls of this approach?
4. Recommended interviewees (any volunteers?)



THANK YOU!

CONTACT US

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Jennifer Sweeney Tookes

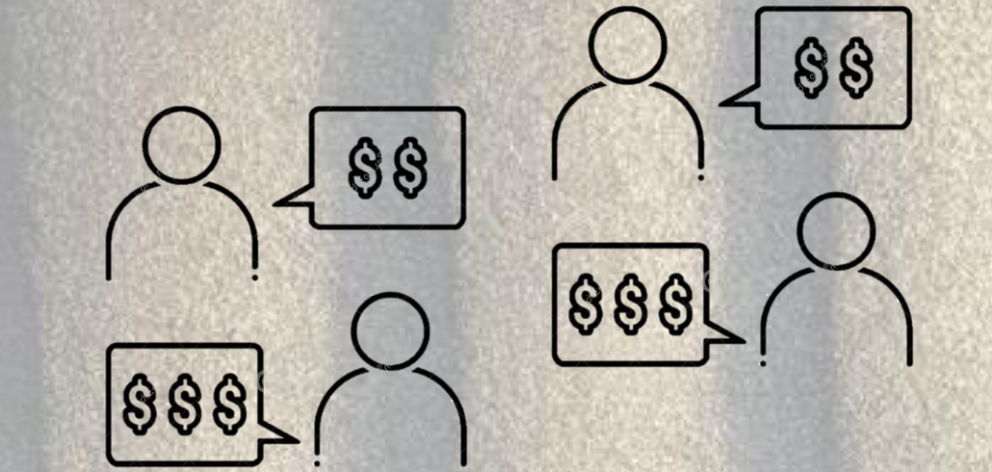
(912) 478-6587

(912) 567-6805

jtookes@georgiasouthern.edu



IF NEEDED



VESSEL OWNER ESTIMATES



RAILWAY ESTIMATES



MASTER PRICE LIST:
RANGE OF PRICES
& TIME FRAMES



FUTURE FUNDING PRIORITIES



Priority #1

- Direct disbursements of maximum amounts



Priority #2

- Vessel repairs? Railway work?



Priority #3

- Dock infrastructure?

