

# Megumi Oshima

## Email

[megumioshima@gmail.com](mailto:megumioshima@gmail.com)

## Phone

843.902.9841

## Website

[www.megoshima.netlify.com](http://www.megoshima.netlify.com)

## Github

[www.github.com/mcoshima](https://www.github.com/mcoshima)

## EDUCATION

### Ph.D. Coastal Sciences

Emphasis: Fisheries and Fisheries Management  
The University of Southern Mississippi  
2016 - 2020

### B.S. Marine Science

B.S. Biology  
Coastal Carolina

## TECHNICAL SKILLS

R Programming

RStudio

RMarkdown

Shiny

R Package Development

Github

ShinyDashboard

Bayesian Statistics

TMB

Stock Synthesis 3

## PROFESSIONAL PROFILE

I am a quantitative fisheries doctoral candidate with experience conducting population dynamics modelling and assisting with assessment efforts for Gulf of Mexico Blue Crab management. I am looking for a challenging environment to utilize my quantitative modelling skills to support sustainable management of Gulf, Atlantic, and Caribbean fish resources.

## EXPERIENCE

### Graduate Assistant

8/25/16 – Present

The University of Southern Mississippi  
20 Hours/Week

- Test current and alternative harvest control rules under conditions with interspecific competition
- Develop a hierarchical Bayesian surplus production model
- Network analysis to investigate trophic interactions
- Novel methods to synthesize stomach content data using linear regression and resampling
- SEAMAP Groundfish Trawl Survey
- Reproductive histological analyses
- Develop R code for estimating reproductive parameters (e.g. L50 and fecundity)

### Research Technician II

06/01/16 – 08/25/16

The University of Southern Mississippi  
40 Hours/Week

- Experiment with innovative methods for estimating growth parameters of fish populations
- Assist teaching "Introduction to R" short course for state and federal agencies

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## EXPERIENCE continued

### **Fisheries Technician and Education Specialist**

South Carolina Department of Natural Resources  
40 Hours/Week

02/15/16 – 05/15/16

- Fishery-dependent monitoring of American Shad in the Santee Copper River for assessment
- Educational tours of the St. Stevens fish passage
- Fishery-independent sampling in local rivers, gillnetting and electrofishing

### **National Science Foundation-Research Experience for Undergraduates Biological Discovery in Woods Hole**

Marine Biological Laboratory  
40 Hours/Week

06/01/14 – 08/23/14

- Neurological experiments to investigate pain and nociception in Longfin Squid (*Loligo pealeii*)
- Behavioral experiments investigating effects of injury on schooling and anti-predator behavior Longfin Squid (*Loligo pealeii*)
- Presented findings at Undergraduate Research Symposium and published results in Behavioral Processes

### **Co-editor of Korallion Journal**

Coastal Carolina University  
10 Hours/Week

09/1/13 – 12/4/13

- Peer-review articles written by students and synthesize into a journal for publication

### **NSF GK-12 Fellowship Undergraduate Research Assistant**

Coastal Carolina University  
20 Hours/Week

06/15/13 – 12/04/13

- Toxic algae exposure experiments determining fish lethality processes
- Toxic algae culturing
- Fish collection (seine net) from local marshes for experiments

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## PUBLICATIONS

Leaf, R.T., and **Oshima, M.C.** (2019). Construction and evaluation of a robust trophic network model for the northern Gulf of Mexico ecosystem. *Ecol Inform.* 50 13-23.

**Oshima, M.C.**, and Leaf, R.T. (2018). Understanding the structure and resilience of trophic dynamics in the northern Gulf of Mexico using network analysis. *Bull Mar Sci.* 94(1) 21-46.

**Oshima, M.**, di Pauli von Treuheim, T., Carroll, J., Hanlon R.T., Walters, E.T., and Crook, R.J. (2016). Peripheral injury alters schooling behavior in squid, *Doryteuthis pealeii*. *Behav. Proc.* (128) 89-95.

**Oshima, M.**, 2014. Relationships and distribution patterns of parasitic *Dissodactylus primitivus* and echinoid host *Meoma ventricosa* found in Discovery Bay, Jamaica. *Korallion. Coastal Carolina University Studies in Coral Reef Ecology.* MC Oshima, D Frietas and EJ Burge, eds. IV: 2-6.

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## ORAL PRESENTATIONS

Bays & Bayous Conference. Mobile, AL 11/28/18

**Oshima, M.C.** and R.T. Leaf.

*A hierarchical Bayesian surplus production for Blue Crab (Callinectes sapidus) in the northern Gulf of Mexico*

National Shellfish Association Meeting. Seattle, WA 03/21/18

**Oshima, M.C.** and R.T. Leaf.

*A hierarchical Bayesian surplus production for Blue Crab (Callinectes sapidus) in the northern Gulf of Mexico*

Mississippi Chapter American Fisheries Society Meeting. Oxford, MS 02/08/18

**Oshima, M.C.** and R.T. Leaf.

*A hierarchical Bayesian surplus production for Blue Crab (Callinectes sapidus) in the northern Gulf of Mexico* (Honorable mention)

2017 Annual Meeting of the American Fisheries Society. Tampa, FL 08/24/17

**Oshima, M.C.** and R.T. Leaf.

*Testing robustness of the northern Gulf of Mexico trophic dynamics using social network analysis*

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## ORAL PRESENTATIONS *continued*

Benthic Ecology Meeting. Myrtle Beach, SC <b>Oshima, M.C.</b> and R.T. Leaf. <i>Testing robustness of the northern Gulf of Mexico trophic dynamics using network analysis</i>	04/13/17
Mississippi Chapter of the American Fisheries Society Meeting. Biloxi, MS <b>Oshima, M.C.</b> and R.T. Leaf. <i>An examination of trophic interactions in the northern Gulf of Mexico: Past work, present understanding, and future challenges</i>	02/23/17
Alabama-Mississippi Sea Grant Consortium Bays & Bayous Conference. Biloxi, MS <b>Oshima, M.C.</b> , T.M. Daley, and R.T. Leaf. <i>An examination of trophic interactions in the northern Gulf of Mexico:</i>	11/30/16

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## GRANTS AND FELLOWSHIPS

<b>Graduate Competitive Travel Award</b> The University of Southern Mississippi	2018 \$450
<b>Lytle Coastal Sciences Scholarship</b> The University of Southern Mississippi	2018 \$554
<b>Tom McIlwain GCRL Fisheries Endowment Award</b> Gulf Coast Research Laboratory	2016/2017 \$922
<b>Marine Estuarine and Graduate Student Association Research Award</b> The University of Southern Mississippi	2017 \$250
<b>Division of Coastal Sciences Travel Award</b> The University of Southern Mississippi	2017 \$500
<b>American Fisheries Society Marine Fisheries Section Student Travel Award</b> American Fisheries Society	2017 \$250
<b>American Fisheries Society Southern Mississippi Student Subunit Travel Award</b> Southern Mississippi AFS Student Subunit	2017 \$250

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## PROFESSIONAL DEVELOPMENT

<b>Numerical Computing for the Natural Resources</b> The University of Washington, Andre Punt	08/18/18 – 08/22/18
<b>Introduction to Management Strategy Evaluation</b> ICES, Caroline de Moor & Jose De Oliveira	08/25/17 -08/30/17
<b>Intermediate Bayesian Inference Using Gibbs Sampling</b> American Fisheries Society Annual Meeting, Ben Stanton	08/19/17 – 08/20/17
<b>Techniques in Fish Reproductive Histology</b> The University of Southern Mississippi, Nancy Brown-Peterson	01/15/17 – 05/05/17
<b>Mississippi Boating Safety Course</b> The University of Southern Mississippi, Center for Fisheries Research and Development staff	04/27/17
<b>Applied Spatial Regression Analysis Workshop</b> The University of North Carolina Chapel Hill, Paul Voss	11/07/16 – 11/11/16

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## INVITED PRESENTATIONS

Alabama-Mississippi Sea Grant Consortium Bays & Bayous Conference Intergenerational Panel	11/28/18
Gulf Fisheries Marine Commission 69 <sup>th</sup> Annual Meeting Invited oral presentation	10/15/18
Hurricane Bowl Keynote Speaker	02/02/18

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## TEACHING

<b>Student Workshop Training Series</b> Computer Language Concepts, R Programming, Introduction to For Loops, RStudio Tips and Tricks	Summer 2018/2019
<b>Teaching Assistant</b> R Short Course	07/15/16

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## SERVICE

### **Library Representative**

University of Southern Mississippi Marine and Estuarine Graduate Student Association

2018 - 2019

2017 - 2018

### **President**

American Fisheries Society Southern Mississippi Student Subunit

2016 - 2017

### **Treasurer**

American Fisheries Society Southern Mississippi Student Subunit

2016, 2017

### **Fundraiser Organizer**

Jim Franks Merry Fishmas Fun Run

2017

### **Session Moderator**

MS Chapter of American Fisheries Society Meeting

2016

### **Volunteer**

NOAA SEAMAP Fall Groundfish Survey

2016, 2017, 2018

### **Community Outreach**

CCA Fishing Rodeo for Kids, Biloxi Seafood Festival, Bays and Bayous