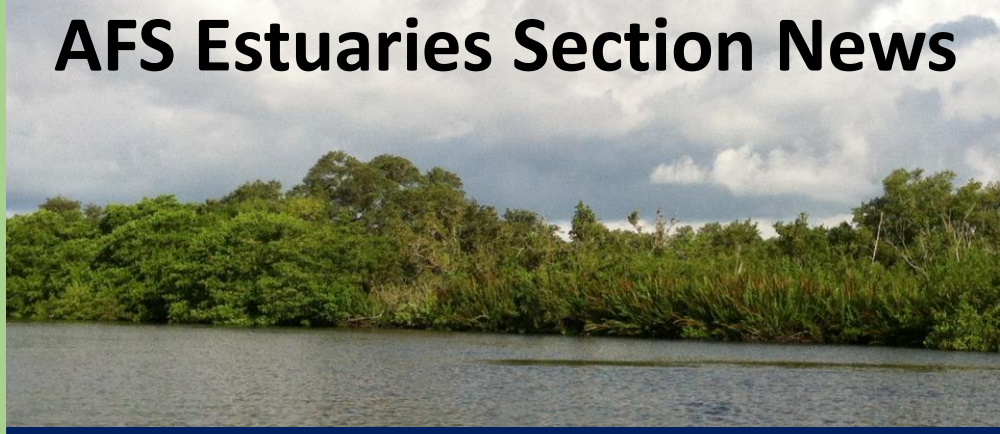
# AFS Estuaries Section News



## President's Message

It's not often that something in the world happens at such a massive and impactful scale that most other things seem to fall away. The coronavirus did that this spring, and continues to have a hold on our lives. I hope that all of you and your families have remained healthy and safe, but I know we have all been impacted in various ways. AFS has been impacted by the virus as well, deciding to cancel the in-person Annual Meeting in Columbus, OH and instead host a virtual meeting. AFS is currently working hard to plan the Virtual Annual Meeting , which is tentatively scheduled for September 14-25, 2020. Like me, you may have been looking forward to going to Columbus to participate in all the normal activities of an annual meeting – reconnecting with friends and colleagues, presenting a talk, connecting with Estuaries Section members at our business meeting. While that won't happen in Columbus and I will miss those activities this year, I fully supported the decision to cancel the Columbus meeting and move to a virtual gathering this year. Now, I am interested and excited to see how the Virtual Annual Meeting develops. I'm still planning to present on something - the development of experimental gears to sample for larval Delta Smelt in the San Francisco Estuary. I'm intrigued and excited to try my hand at a presentation in a virtual conference. We already know that such an event can be a success thanks to the hard work of people who put together the recent Virtual Spring Conference. You can watch recordings of the Virtual Spring Conference at this link . And among the successes of the Virtual Spring Conference was the fact that they raised over $11,000 for the Hutton Program! (I am excited to share a fantastic article

*Continued on Page 2*

**Summer 2020**

**Newsletter Editor**

Geoff Smith
geoffreyhsmith@gmail.com

**Webmaster**

Abigail Archer
aarcher@barnstablecounty.org

**Section Officers**

**President**
Catherine Johnston
ckjohnston80@gmail.com

**President-Elect**
John Mohan
jmohan@tamu.edu

**Treasurer**
Konstantine Rountos
krountos@gmail.com

**Secretary**
Jim Vasslides
jvasslides@ocean.edu

*Continued from Page 1*

written by a past Hutton Scholar, Braeden Thompson, later in this newsletter. Braeden participated in the Hutton Program in 2019 while working with Estuaries Section member Dr. Mary Fabrizio at the Virginia Institute of Marine Science.) Lessons learned from the Virtual Spring Conference are sure to contribute to a successful virtual AFS annual meeting this fall. I encourage you to consider the opportunity to participate in the Virtual Annual Meeting – the abstract deadline has been extended until June 30 so you still have the chance to submit something. And stay tuned for information over the summer about the AFS Estuaries Section's plans for a virtual business meeting. We usually host our business meeting on the Sunday preceding the Annual Meeting. Instead, the Estuaries Section executive committee is discussing how we will hold a virtual business meeting some time before September to keep in touch with you all! We will keep you posted.

*Catherine Johnston*
*Estuaries Section President*

# Feature Article

## Valuing Land Conservation to Support Estuarine Biotic Health in the Gulf of Mexico – a Hierarchical Approach

**Andrew Shamaskin, 2019 PhD Estuaries Section Travel Award Winner**

Advisors: Kristine Evans and Anna Linhoss

Mississippi State University

Department of Wildlife, Fisheries and Aquaculture – Quest Lab

Fisheries are a fundamental component of the economy and culture within the Gulf Coast Region of the United States. Each year, millions of recreational anglers come to the Gulf Coast to fish, and around 20 percent of the seafood caught in the United States comes from this region, generating billions of dollars in direct and indirect revenue. As such, it stands to reason that local, state, and federal agencies give a lot of focus to managing and supporting their fishery resources, and the health of the more than 35 estuaries along the Gulf Coast is no small factor in fisheries productivity.

The focus of my research is to identify a quantifiable link between land use and estuarine biotic health, and then develop an index of land conservation value that is based on those modeled relationships. The ecological implications of land use for estuaries are for the most part well understood. However, when it comes to land conservation, the implications for estuarine health are often ineffectively considered, if at all. What I feel is central to that discrepancy is the lack of an empirical approach to define the value of land as it relates to estuarine biota. Such an approach would give land conservation professionals a means to value conservation actions based on how an area of interest associates with a component of estuarine biotic health.

To quantify the link between land use and estuarine health, I developed models that can predict the impact of coastal and near-coastal landscapes on the expected species richness of aquatic biota from trawl samples within estuaries. This work relied on existing geospatial data, including landcover, rainfall, and thousands of trawl samples, which was then thrown into a Bayesian hierarchical modeling framework. The results revealed patterns of association that were expected, but nonetheless critical first steps to providing empirical evidence for how land conservation can

*Continued on Page 4*

*Continued from Page 3*

support estuarine fisheries. My follow-up to this study is the development of an index of land conservation value as it pertains to estuarine biotic health as elucidated by my model results.

My research presented in Reno is part of a larger ongoing collaboration between Mississippi State University and the US Fish and Wildlife Service, aptly named the Strategic Conservation Assessment (SCA) of Gulf Coast Landscapes project, which seeks to facilitate in conservation planning efforts along the Gulf Coast of the United States. The SCA project is developing a suite of online land conservation planning tools that can provide information about the ecological and socioeconomic benefits of conserving lands throughout the Gulf Coast Region. The conservation planning tools by the SCA project will enable planners to identify areas for land conservation that are optimal for their priorities, and strengthen project proposals for funding consideration from the RESTORE Council, which manages dispersal of funds from settlements related to the Deepwater Horizon oil spill.

A meeting of the SCA project with stakeholders in land conservation in Spanish Fort, Alabama. The outcomes of this meeting and many others help to prioritize aspects of land conservation, such as estuarine species richness, that are of particular interest to Gulf Coast communities.

# 2020 Student Travel Award

The Estuaries Section of the American Fisheries Society (AFS) is pleased to offer financial awards to students in support of their attendance at the virtual AFS 2020 Annual Meeting. The amount of the award will depend on the registration fee charged by AFS for attendance to the virtual meeting. Priority will be given to students who are presenting their own research at the virtual conference, are AFS Estuaries Section members, and have a demonstrated financial need.

**Application Procedures**

Interested students must submit:
1) Curriculum Vitae
2) Letter of application (1 page) describing:
   (a) Educational and professional background, including involvement with AFS
   (b) Description of research and how it will be presented at the meeting (or if not presenting, how their research will benefit from attending the meeting)
   (c) Interest in pursuing a career related to the goals of the Estuaries Section https://estuaries.fisheries.org/2017/05/01/welcome/
   (d) Statement of financial need. The letter must include all contact information including mailing address, telephone number(s) and e-mail address.
3) Brief email of advocacy from a supervisor, an academic advisor, or other appropriate faculty member at the student's college or university. This letter should state:
   (a) Why the student deserves the award
   (b) Corroborate the need for the award

Complete application packages (in a single PDF document) should be sent via email with "Estuaries Section Student Travel Award Application" as the title to: Catherine Johnston (ckjohnston80@gmail.com). Questions may be directed to Catherine Johnston (ckjohnston80@gmail.com) or John Mohan (jmohan@tamu.edu).

Applications must be received no later than 5:00 PM Eastern Time on Wednesday, July 15, 2020.

**Selection Procedures**

All applications received by July 15, 2020 are reviewed by a committee representing the Executive Committee of the Estuaries Section. The applications will be judged on the relevance of the research work to the mission of the Estuaries Section, the student's involvement with AFS, how the student's career goals align with the goals of the Estuaries Section, and financial need.

**Awards and Notification**

Those selected for awards will be notified by telephone or e-mail no later than August 15, 2020. Once notified, if you are giving a talk please submit the abstract and time information to Catherine Johnston (ckjohnston80@gmail.com) so we can promote your work.

To help alleviate some of the upfront costs for awardees, the Estuaries Section may send your check prior to the conference. For this to occur, two things are required: (1) a letter stating that you, the student, need the money prior to the conference and that you, the student, will reimburse the Estuaries section in full if you do not attend the conference for any reason signed by yourself and your major advisor; and (2) the student must submit proof of payment of the registration fee for AFS.

The awardees will be recognized at the Estuaries Section virtual meeting business meeting (exact time and venue TBD). The awardees will also be asked to write an article about their research for publication in the Estuaries Section newsletter. Awardees will also be asked to serve on a future travel award selection committee.

# Perspective from a Hutton Scholar

## Exploring My Passion for Marine Science from a Fisheries Perspective

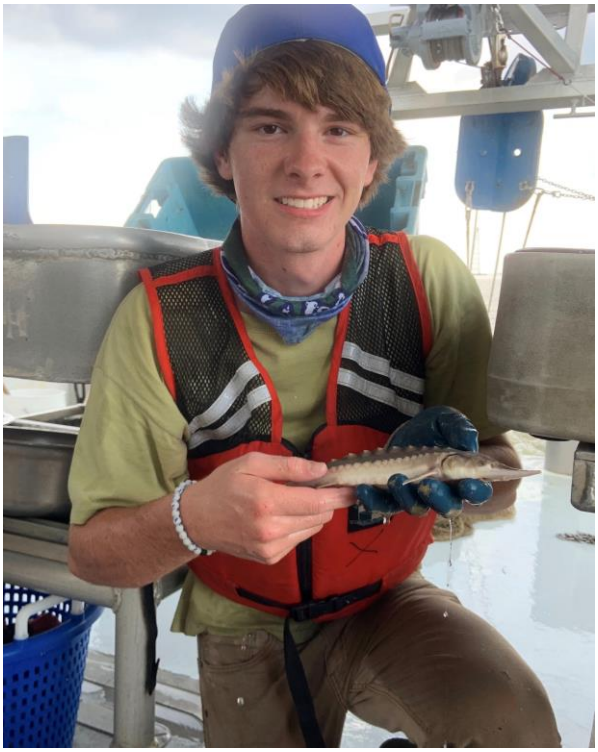
**Braeden Thomas, Hutton Scholar**

Mentor: Mary Fabrizio

Virginia Institute of Marine Science

As a high school student with a profound interest in marine science, I have always cherished any opportunity to explore my passions in this field. In the summer of 2019, I was given one of these opportunities through the Hutton Junior Fisheries Biology Program. Although my prior experience with fisheries biology was limited to a few articles I had read, the time I spent at the Virginia Institute of Marine Science under the tutelage of my mentor, Dr. Mary Fabrizio, would expand my horizons, significantly influence my college and career paths, and serve to transform how I perceived the world of fisheries science.

Field and lab experience are priceless to a high school student. During the eight weeks I participated in the Hutton Program, I was introduced to multiple sampling methods and analysis techniques. I engaged in several ongoing fisheries surveys, including the Juvenile Fish Trawl Survey, Summer



Flounder and Black Sea Bass Fyke Net Survey, and Juvenile Striped Bass Seine Survey. Each survey served to deepen my familiarity with the fish species of the Chesapeake Bay. I find that the diversity of my experiences in the Hutton Program gave me a unique understanding of several of the fisheries-related issues currently being addressed by fisheries managers.

One such issue with which I became familiar during my time at VIMS is the growth and range expansion of invasive blue catfish populations in Bay

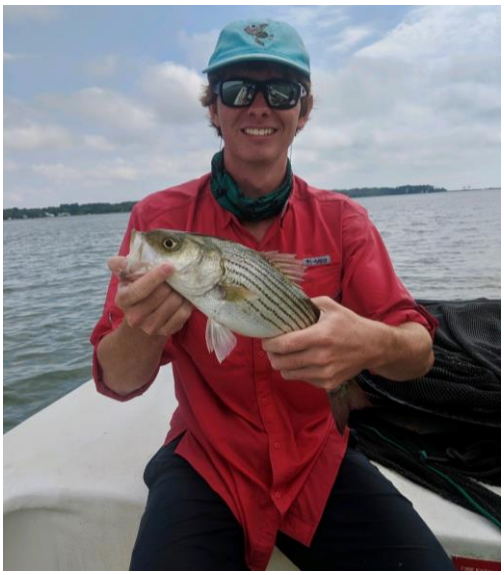
*Continued on Page 7*

# Perspective from a Hutton Scholar

*Continued from Page 6*

tributaries. I found myself immersed in the diverse perspectives surrounding this fishery as I engaged in numerous projects related to blue catfish populations in this region. I remember removing and analyzing the gut content of this species and began to comprehend the impact of a piscivorous diet on native fish populations. I was also fortunate to learn about salinity and other factors that influence blue catfish range expansion. The knowledge and interests I gained from these studies of blue catfish manifested into a senior-year research project, in which I explored the relationship between salinity and relative fitness of blue catfish populations in the James River.

My experiences in the Hutton Program were varied; whether I was retrieving a fyke net from shoulder-deep water in the Piankatank River, or processing blue catfish otoliths for microchemistry analysis, there was never a dull moment during my time at VIMS. Though I learned much from my field and lab experiences, one of the greatest takeaways from my Hutton experience came on my final day, as many of the individuals whom I had worked with over the summer took me out to lunch. While we ate, we shared perspectives and debated management strategies for several species of fish in the Chesapeake Bay. It was then that I realized I had been afforded the opportunity to learn from and work alongside a group of people who were passionate enough about their careers to let their work spill over into their breaks. That is something that I have always valued in any field of work, and because I shared in their enthusiasm for fisheries science, I knew that this discipline could be a life-long pursuit for me.



# Estuaries Section Treasurer's Report

respectfully submitted on 06/10/2020 by
Dr. Konstantine J. Rountos (Treasurer)

| Date | Balance | Credit | Debit | Note |
|---|---|---|---|---|
| 12/19/19 | 4,526.54 | | | Treasurer's Report (2019/2020 Winter Newsletter) |
| 02/03/20 | 4,079.52 | | 447.02 | Check #132 (50% of cost for 2019 AFS Business Meeting w/MFS) |
| 06/08/20 | 3,804.52 | | 275.00* | Fee to IRS.gov for submitting Form 1023-EZ (Fee for submitting the form to start the tax exempt status renewal process) |
| 06/10/20 | 3,804.52 | | | Current balance |

*The Estuaries Section Executive Board is diligently work with AFS and the IRS to renew lapsed tax exempt status.

## Check us out online!

Website: http://estuaries.fisheries.org

Twitter: @Estuaries_AFS

Facebook: http://www.facebook.com/EstuariesSectionAFS

LinkedIn: https://www.linkedin.com/groups/7443198