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AFS Estuaries Section News Winter 2024/2025 Newsletter

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President's Message

Hello Estuary Section membership,

I want to start by thanking all of you that renewed your section membership! As of this month, we have 106 active members, this is a little lower than the past few years so if you know an AFS member, consider inviting them to part of this section. This section is unique in that it provides a “home” for folks working in or near our coastal fisheries. Member benefits include priority for Student Travel awards, promotion of meeting symposia, and most important, network with fisheries scientists with common expertise!

In terms of the Section, members are busy planning for San Antonio, we will highlight Estuary section supported symposia in the next newsletter. If you are contributing to a session that you would like us to promote, please email us at afs.estuaries@gmail.com.

We are pleased to announce the open competition for this years Student Travel awards. Please help distribute the newsletter and information to prospective students. Our hope is that these awards will provide opportunity to students that might now otherwise have resources to attend the meeting.

Finally, we are organizing elections for section officers to be held this June. We are seeking nomination for all positions (2-year terms) to include President-elect, Treasurer, and Secretary. If you have never served in AFS leadership, this is a great opportunity to volunteer and be part of defining and implementing priorities at the section and parent Society level.

Best,

Justin Stevens

AFS Estuaries Section President

Student Travel Award Winner Article

Using Fish Scales to Track Atlantic Tarpon Movements

Blake Munz, MS Student
Texas A&M University, Corpus Christi
Advised by Dr. Benjamin Walther

Summary of topic/importance:

My research focuses on the stable isotope ecology of Atlantic Tarpon scales (Figure 1) in the Gulf of Mexico. Specifically, I am looking at carbon and nitrogen ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) stable isotope ratios to assess lifetime movement and dietary patterns of these fish. Historically, tarpon have been culturally and economically important amongst coastal Gulf of Mexico communities, but unfortunately experienced a drastic population decline around the early 1960's. This led to their classification as Vulnerable by the IUCN and the implementation of catch-and-release regulations here in the United States. Moreso, the Gulf of Mexico population is considered Data Deficient emphasizing the need for more studies on this species. Atlantic Tarpon are a highly mobile, highly tolerant fish capable of traversing the entire fresh-to-saltwater gradient, and because of this their lifetime movements are poorly understood. Calcified structures of fish, such as scales, incorporate chemical signatures from the ambient environment into incremental growth bands and their diets, ultimately creating a permanent lifetime chemical record for the individual which can be used to infer movements between habitats along with concurrent diet shifts. This project is utilizing a unique set of archived Atlantic Tarpon scales from the late 1950's off the coast of Boca Grande, FL to gain insight into the life history of these past fish. While the catch-and-release regulations appear to have provided some stability to this population, there is still more work to be done. Therefore, the results will help establish a historical baseline of Atlantic Tarpon movements in the eastern Gulf of Mexico which can be compared to contemporary fish to see if and how movements have changed, to ultimately direct and improve current management strategies.



Figure 1: Size reference for Atlantic Tarpon scale.

Methods:

The archived fish scales were collected in the late 1950's off the coast of Boca Grande, Florida and were eventually given to us by Kathy Guindon of the FWC – Fish and Wildlife Research Institute. Scales had some demographic information and those that were pristine (meaning no signs of regeneration or damage), with sex and length were selected for analysis. Scales were then subsampled and analyzed for $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotopes (summarized in Figure 2). All statistical analyses were performed in R for three main categories of analysis: Within individual variation, between individual variation, and between group variation (males vs. females).

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Student Travel Award Winner Article

Using Fish Scales to Track Atlantic Tarpon Movements, *Continued from page 3*

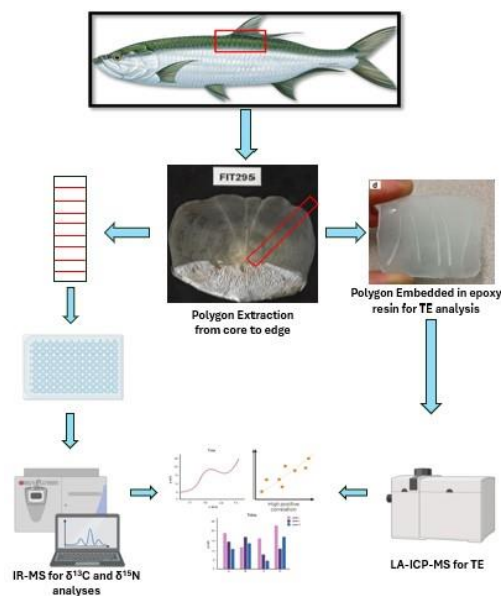


Figure 2: Methodology for Stable Isotope Analysis (left) of this study.

Main Results:

Differences in $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ within individual fish ranged from 2.2-8.5‰ and 1.1-6‰ respectively, suggesting diverse lifetime habitat and resource use. Two salinity thresholds (oligohaline and mesohaline) were determined, and the results showed only 22% of fish crossed into oligohaline habitats, while 91% utilized mesohaline habitats at least once in their life. A complex repeated measures ANOVA showed that both $\delta^{13}\text{C}$ or $\delta^{15}\text{N}$ values significantly increased over time, but between sex comparisons indicated no significant differences in either $\delta^{13}\text{C}$ or $\delta^{15}\text{N}$ isotopic values.

Result applications:

This study is the first to use stable isotope analyses of Atlantic Tarpon scales for Florida representatives and these results can be used as a historical baseline of Atlantic Tarpon lifetime ecological interactions in Florida waters. Future studies can be done on modern day representatives to compare with these results to see if movement or dietary behaviors appear to have changed over the last 65 years to help inform and direct management of this species. This study also helps further validate the use of fish scales as a proxy for movement and dietary behavior studies.



Figure 3. Map of sample sites. Port O'Connor, Texas (Left; not included in these results) and Boca Grande, Florida (Right).

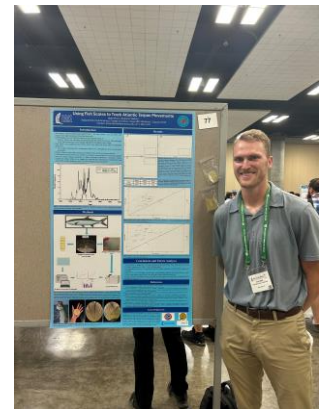


Figure 4. Atlantic Tarpon Scale Under a Microscope Displaying Incremental Growth Bands (Top) and Regeneration (Bottom).

2024 Honolulu, HI Summary

Below is a quick recap of the Honolulu AFS meeting from our Treasurer, Konstantine Rountos

- **Sponsored symposium (Co-sponsored by ES)**
 - Tuesday's co-sponsored full day session titled "Coastal Systems in Flux: Fish and Fisheries in a Multi-stressor World" was very well received.
 - Each talk averaged ~29 people in the audience
 - Each discussion period (which followed each speaker block) had about 10-15 people.
- **Student Travel Award recipients**
 - I met up with Lily and Blake to congratulate them in person on behalf of the ES. They were both extremely appreciative of the opportunity from the ES. They also did a fantastic job on their presentations.
 - I told them to spread the word about the Travel Award opportunities to their colleagues.
- **Stakeholder Engagement Day Social (Co-sponsored by ES)**
 - A total of 44 people attended the event at the Hard Rock Cafe.



New Estuaries Logo

We have a new logo!



Thank you to our President-elect Mike Curtis and his wife, Shannon Martin, for designing our new logo! We think it looks great and are looking into possibly putting on some merchandise (stickers, shirts, etc.) in the future.

Q&A with Past Student Travel Award Winner

Please introduce yourself and when you were awarded an Estuaries Section Travel Award.

My name is Lynn Waterhouse. I am the Assistant Unit Leader, Fisheries, with the U.S. Geological Survey Minnesota Cooperative Fish and Wildlife Research Unit. When I was awarded an Estuaries Section Travel award I was working on my MS degree at Virginia Institute of Marine Sciences (VIMS) at the College of William and Mary.

What were you working on at that time?

My MS degree at VIMS was with Dr. John M. Hoenig and Dr. Mary Fabrizio. My work was going to focus on estimating population abundances and survival of Queen Conch in the Turks and Caicos Islands. Due to some funding constraints I pivoted to a largely theoretical project that focused on modifying tagging models to account for changing detection of tags, while diving we noticed that biofouling occurs pretty rapidly on Queen Conch and we had concerns that the tag visibility would vary by how long they had been in the water.

Did you continue to be involved with the Estuaries Section after this meeting?

I did, at the meeting I volunteered as the secretary because there were no other volunteers during the business meeting. Eventually I served as the president. For the first three 'Monsters of' fundraising symposium I helped organize them, I really enjoyed hearing those talks and they were a nice fundraiser for various sections.

Are you still involved with AFS? With the Estuaries Section?

During covid I took a break from attending AFS meetings and then I had 2 kids which also kept me away from conferences. AFS in Hawaii this year was my first time being at a meeting since 2019. My work was never really estuaries focused, the marine section was probably a better fit for me. Now I work on marine and freshwater problems so it might be time to come full circle and rejoin.

Where are you now? Are you still working in estuaries, or have you transitioned to another focus area?

As I mentioned I am the Assistant Unit Leader, Fisheries, with the USGS Minnesota Cooperative Fish and Wildlife Research Unit and we are based out of University of Minnesota in the Twin Cities. I still work on marine projects but have been shifting more and more to projects in Minnesota and the surrounding region (Great Lakes and Upper Mississippi River Basin).

What do you see as the main benefits to your involvement with AFS at various levels, including the Estuaries Section?

The immediate benefit was funding for me to attend the conference. After I became more involved in the society I really enjoyed getting to know people, especially those further along in their careers. It gave me great exposure to different agencies and careers. It was also always nice at the large meetings to see people I knew from the Estuaries Section, people often attend each other's presentations as a show of support, and it is always nice to see a friendly face in the crowd.

2025 Student Travel Award Competition

The Estuaries Section of the American Fisheries Society (AFS) is pleased to offer financial awards to students in support of their attendance at the AFS 2025 Annual Meeting. The Section will award one or more students with monetary support for attending the San Antonio, TX meeting in person.

The award amount will be announced soon. This award is intended to help cover registration cost for student members, aid with higher travel costs for this year's meeting, and pay for 2024 student membership dues for the Parent Society (\$30) and Estuaries Section (\$7).

Priority will be given to students who are presenting their own research at the 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:
 1. Educational and professional background, including involvement with AFS
 2. 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)
 3. Description of the relevance of the research work to the mission of the Estuaries Section
 4. Interest in pursuing a career related to the goals of the Estuaries Section
<https://estuaries.fisheries.org/2017/05/01/welcome/>
 5. Statement of financial need.
 6. 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:
 1. Why the student deserves the award
 2. 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: Justin Stevens (justin.stevens@maine.edu). Questions may be directed to Justin Stevens (justin.stevens@maine.edu) or Mike Curtis (michaelcurtis3@my.unt.edu).

Applications must be received no later than 5:00 PM Eastern Time on Friday June 6, 2025.

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2025 Student Travel Award Competition

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Selection Procedures

All applications received by the deadline 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 June 30, 2025. Once notified, if you are giving a talk please submit the abstract and time information to Justin Stevens (justin.stevens@maine.edu) 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 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.



Some of our past student travel award winners.

Announcements

Elections

- 2025 is an election year for the Estuaries Section
- The positions of President Elect, Secretary, and Treasurer will have elections held prior to the 2025 AFS annual meeting. Please note these are all 2-year positions, but the President Elect position is a 6-year commitment (2 years as President Elect, 2 years as President, and 2 years as Past President).
- If you are interested in running for one of these positions or would like more information about these positions please contact Estuaries Section President-elect, Mike Curtis (michaelcurtis3@my.unt.edu).
- We request that nominations for these positions be received by May 10, 2025.

Upcoming Meetings

- Aquaculture 2025 Triennial Meeting: New Orleans, LA
March 6-10, 2025



Aquaculture 2025
Innovation Through Technology

- ASLO 2025: Charlotte, NC,
March 26-31, 2025



**TAKING THE
AQUATIC PULSE**
AQUATIC SCIENCES MEETING
Charlotte, North Carolina, USA
26-31 March 2025

- Visit <https://fisheries.org/events-page/calendar/> for other fish related events and regional meetings info.

Estuaries Section Treasurer's Report

respectfully submitted on 03/11/2025 by
Dr. Konstantine J. Rountos (Treasurer)

Date	Balance	Credit	Debit	Note
08/05/24	5,557.52			2024 Estuaries Section Virtual Business Meeting
08/27/25	4,297.52		1,260.00	Check #995011 (Lily DeFrank – 2024 Travel Award)
08/30/24	3,037.52		1,260.00	Check #995010 (Blake Munz – 2024 Travel Award)
10/11/24	2,797.52		240.00	Inv. 45133 – Unit Web Service Fee
02/07/25	3,667.52	870.00		Deposit (2024 Section dues)
02/11/25	3,667.52			Current balance

Check us out online!

Website: <http://estuaries.fisheries.org>

X (Twitter): [@Estuaries_AFS](https://twitter.com/Estuaries_AFS)

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

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

