



# The Northeast Fish Rapper

Newsletter of the Northeastern Division of the American Fisheries Society



## President's Message

NED President Susan Cushman

"Restore:

-Bring back (a previous right, practice, custom, or situation); reinstate

-Return (someone or something) to a former condition, place, or position"

-Google Dictionary

**F**or me, the last year has been a time of restoration. I'm sure it has been for many of you as well. While

I am not sure we will ever be able to fully recover to pre-COVID ways of life, my focus as president of the Northeastern Division (NED) has been to restore our work and service to the American Fisheries Society (AFS) and its members as much as we possibly can. In the world of professional societies, most conferences and activities have moved back to *in-person*—a term we never used before COVID. While many monthly and quarterly committee meetings still occur on video platforms, the interaction of people in the same space (much like species) is so important. Attending the 2022 AFS Annual Meeting in Spokane, Washington was a wonderful example of this—one that I will never forget for many reasons. While the 2021 meeting in Baltimore was great



too, the attendance in Spokane made it feel more like the *in-person* conferences that seemed to be more consistent with pre-COVID times even though we wore masks the entire time. One reason for this was interaction between so many fisheries colleagues that I met, reconnected with, and have gotten to know over the years. This type of interaction is something that can only be experienced at a professional society conference—different than standing in the hallways of your office building or interacting with students in a classroom or even doing fieldwork. As an outgoing, extroverted person, I not only enjoy these social interactions and conversations among participants, I realize I

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need it. And I know many of you do too.

Over the last year, a large part of the work among the NED Executive Committee was dedicated to planning the Joint Meetings of the Southern New England Chapter and NED in Boston, MA. In case you didn't know, the NED annual meetings are now held in conjunction with annual chapter meetings, rotating around the division every year. I was thoroughly impressed with the level of strategic thinking, preparation, and organization for a professional society meeting, led by the program chair, Sara Turner. Not only did I learn new ways of doing things, I met a new group of people primarily from the Southern New England Chapter. The meeting had over 250 attendees and was a great success. We held a hybrid NED business meeting, gave out many awards to deserving students and fisheries colleagues, and held the AFS Governing Board meeting the day after. Not only was the venue perfect, but the opportunity to reconnect with so many regional fisheries professionals from the NED including NED past presidents, officers and governing board members from other divisions including the Western Division and Southern Division, as well as the high quality research presentations in contributed sessions made it an absolutely wonderful experience. In the end, all of the planning efforts and time commitment to put this meeting on was well worth it.

Since my day job is teaching, I thought it would be helpful to pass along suggestions for how to run a great meeting:

- 1) Start planning early! Monthly calls with a core planning group are crucial to making sure that all major elements of planning a professional society conference are taken care of.
- 2) Set up subcommittees to plan various aspects of the meeting including location, program, budget, fundraising, student and community involvement, judging, and awards.
- 3) Ponder and seek out new ways of doing things. One of the challenges that we face these days is the cost of meetings venues and even catering and restaurants. As fisheries professionals, we need to consider the cost of attending these events. While we want to encourage people to come attend the meetings, it is becoming increasingly difficult to make events affordable. Going out to restaurants or

## Congratulations to our 2023 NED Award Winners!

**Dr. Lian Guo**

*Special Achievement Award*

**Scott Schlueter**

*Meritorious Service Award*

**Abigail Archer**

*President's Award*

**Dr. Eric Schultz**

*Dwight A. Webster Memorial Award*

other venues for socials may be something that we've done in the past, however banquet room style socials work just as well!

- 4) Find a place that has walkable venues or set up transportation so that participants can easily and safely get to and from various establishments in town.
- 5) Give out awards to people who deserve them. Giving awards to celebrate careers and professional work, as well as achievements by students, provides the opportunity for many to celebrate the advancement of our field, and make people feel good about their time and efforts over the years. Recognizing the hard work that your favorite professor, adviser, supervisor, staff member, or technician is worth it. It can be a lot of work to put these nominations and portfolios together, however, acknowledging your appreciation for them and seeing the smiles and tears of joy is heart-warming.

Another major component of my work has been to restore the NED committee and business structure. While many of us still worked in various capacities throughout COVID, many of the “normal” practices and customs of NED business didn’t happen (and rightly so) due to the survival mode that we all entered. My work this past 6 months has sought to check in with committee chair positions and roles, fill vacancies, and re-think the way we do things in the NED. As I continue to send out requests to the listserv about vacant positions, please consider stepping up and getting involved with the amazing group of fisheries professionals. It is the members like you who make the AFS what it is, and volunteers are critical to the mission of our society.

As I look to the warm summer months, filled with dreams of fishing, fieldwork schedules, and fun times, I also look forward to meeting more and seeing the familiar NED members at the AFS Annual Meeting in Grand Rapids, MI in August. In October, the 2023 NED meeting will be held with the Atlantic International Chapter, and I hope to see some of you there! We need each other, in the fisheries world and beyond, and we need the American Fisheries Society to find places to come together, talk, share, present, persuade, and discuss the issues in our work, and to solve problems that our natural resources face today and will in the future ➡



## UPCOMING MEETINGS

### Latin America and Caribbean Fisheries Congress

May 15-18, 2023  
Cancun, Mexico

### AFS Quebec Symposium

May 25, 2023  
Redpath Museum—McGill University  
Montreal, Quebec

### Pennsylvania Chapter Summer Social

July 22, 2023  
Raystown Field Station  
Hesston, Pennsylvania

### 153rd AFS Annual Meeting

August 20-24, 2023  
Grand Rapids, Michigan

### Atlantic International Chapter

October 15-17, 2023  
New Brunswick, Canada

### Atlantic Salmon Ecosystems Forum

January 9-10, 2024  
Orono, Maine

### 9th World Fisheries Congress

March 3-9, 2024  
Seattle, Washington



## CHAPTER UPDATES

### Pennsylvania Chapter

*Matthew Shank*

The Pennsylvania Chapter held our spring technical meeting in Lock Haven, PA from February 23-24, 2023. The Commonwealth University Watershed Ecology Center (WEC) board of directors hosted the meeting and we enjoyed the fabulous facilities of the Lock Haven campus. There were 115 meeting attendees over the two-day conference. Day 1 featured a plenary talk by Dr. Casey Bradshaw-Wilson of Allegheny College, 12 podium presentations, 12 poster presentations, a Chapter business meeting, and an evening social. Student winners of a fish-themed Kahoot! trivia game were awarded prizes donated by Chapter

members. Day 2 featured workshops on mayfly taxonomy, mussel ecology and identification, and R for fisheries professionals. Special thanks to our meeting sponsors and all presenters and workshop facilitators who contributed to an extremely successful meeting.

Our 2023 Cooper Award winner was Sierra Rider of Bucknell University. The Chapter awarded Sierra a certificate and \$500 to further her research. The top 3 student podium and poster presenters were given cash awards totalling \$1200. Dakota Raab from the PA Fish and Boat Commission provided an illustration of a rainbow darter for use in the Chapter's new logo (pictured on next page). This logo was featured on hats, t-shirts, and stickers that were sold to raise funds for our student awards.



*Trivia winners Kristen Crable and Logan Kreutzberger of Penn State University*



*2023 Cooper Award winner Sierra Rider with Steve Seiler from Commonwealth University*





*Podium presentations during Day 1 of the 2023 PA chapter meeting at the Durrwachter Alumni Conference Center*

The PA AFS summer social will be held at Juniata College's Raystown Field Station on Sunday July 22<sup>nd</sup>! Mark your calendars and see our [website](#) for more info on this family friendly event. Follow us on twitter [@afs\\_pa](#) to keep up to date with PA AFS news.



*The new PA AFS logo designed by Dakota Raab*

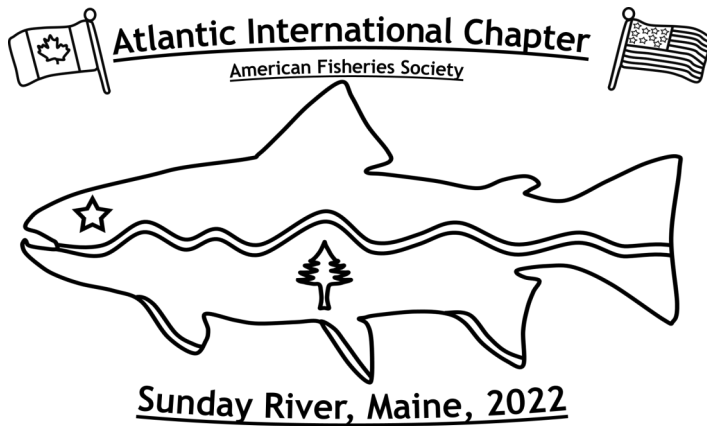
## Atlantic International Chapter

*Russell Easy*

Pulling out of the pandemic, slowly, we are returning to in-person activities and re-establishing those ties that were weakened during the more active COVID days. A new President (Russell Easy) and Vice President (Tyson Morrill) were established this fall and are currently working together to support the student subunits and planning for the 2023 annual meeting. The 2022 meeting of the AIC was a huge success. Held in September in Newry, Maine, attendance was outstanding for this generally small conference with 28 talks and 6 posters. Our next meeting will be held in New Brunswick from October 15–17th. Please note this deviation from our normal meeting schedule as we plan to partner with the Northeastern Division for the 2023 meeting.

The AIC's student subunits have been busy this spring. The UMaine subunit is planning for their annual 5K and Rainbow Smelt Surveys. The UNH subunit is planning outreach initiatives working and with Tyson (AIC VP) to foster connections with various state agencies. And Quebec is organizing a research symposium later in May. Check out the *Subunit Updates* section to learn more!

We are in talks and excited about welcoming the University of New England as a new student subunit. I was informed by organizer Michael Nguyen that



*Highlights from the AIC annual meeting.*

**Top:** Meeting logo featured a brook trout outline and elements from Maine's original state flag. **Right:** Attendees pose with their conference t-shirts. **Bottom:** AIC leaders look official during the business meeting

their subunit is official and now has access to \$750 start-up funds. They plan on advertising their subunit in undergraduate marine science courses throughout the spring. Their first meeting held this month was a fish ID and dichotomous key workshop.

### Longtime AIC member Scott Decker hangs up his waders

After 36+ years serving the fisheries profession in the Northeast, Scott Decker has announced his retirement effective May 1, 2023. Scott began his career with the NH Fish and Game Department in 1986 as a fisheries bio-aide after completing his Master's research at UNH. Scott spent 13 years in the Region 1 office of Fish and Game in Lancaster, NH and became the Regional Fisheries Biologist and Coldwater Program Leader during this time. In 2000, he moved to the headquarters office in Con-



cord to become the first Fisheries Habitat Program Leader for the Department. He has served for the last 18+ years in the role of Fisheries Program Supervisor. Scott attended his first Atlantic International Chapter meeting in 1989 held at Tall Timber Lodge in Pittsburg, NH and subsequently joined AFS in 1990. Over the years, Scott served on a number committees and in leadership roles at the chapter, division, and society levels of AFS. Scott has been a Certified Fisheries Professional since 2004 and eventually chaired the AFS Professional Certification committee for several years, a role which he most enjoyed as he was a strong proponent of AFS Certification. After retiring from NH Fish and Game, Scott plans to continue serving a role in natural resources protection as a project manager for the Merrimack River Watershed Council.

## Southern New England Chapter

*Aubrey Ellertson*

**T**he Northeastern Division and Southern New England Chapter of the American Fisheries Society hosted a joint meeting in Boston from January 8-10<sup>th</sup>, 2023. The meeting consisted of a full day of workshops and two days of





*A huge thank you to the SNEC-NED planning committee meeting for a great time in Boston!*

presentations, including keynote speakers and student awards. Three research talk sessions concurrently ran throughout the meeting, including a special session titled *Diadromous Fishes: New Tools, New Findings, New Hope*. This meeting engaged with 258 attendees, and we had a total of 88 talks and 29 posters. Three workshops “Closing the Gap for Women and Underrepresented Groups Within Fisheries”, “R for Fisheries Science”, and “Small Fishways”, brought together 60 participants to engage with respected professionals in our field. A huge thank you to Dr. Alex Haro, fish biologist with the Fish Passage Design and Analysis Team at the S.O. Conte Anadromous Fish Research Center (Eastern Ecological Science Center, U.S. Geological Survey), and Leslie Jonas, Co-founder and Vice Chairwoman of the Nature Land Conservancy for

their insightful and inspiring words during the plenary sessions.

Thanks to the generosity of our members, SNEC supported two students in their travel to Spokane, Washington for the AFS annual meeting last fall. Those two travel award recipients were acknowledged during the SNEC Business meeting. Asha Ajmani is a PhD student at UMass Amherst and a Fellow at the Northeast Climate Adaptation Science Center, and Katrina Zarella Smith is a PhD Candidate in the Jordaan Fisheries and Aquatic Ecology lab at UMass Amherst. Thank you to all the folks who made the AFS SNEC/NED meeting in Boston possible!

In addition to our winter meeting, the SNEC AFS chapter has held monthly Discussion Groups on topics related to Diversity, Equity, and Inclusion in the fisheries profession. During the monthly DEI discussion group, individuals read or watch a resource selected by a rotation of discussion leaders, and then there is ample time for discussion to address the issues presented during the discussion and what our chapter could do to improve the issues discussed. So far, we have discussed topics such as: biases in teaching/mentoring and scientific publications, navigating microaggressions, how to host an inclusive conference, indigenous land acknowledgment, bystander training, promoting respect and equity in the workplace, and much more!

For more information about the SNEC chapter, please check out our webpage [here](#)!



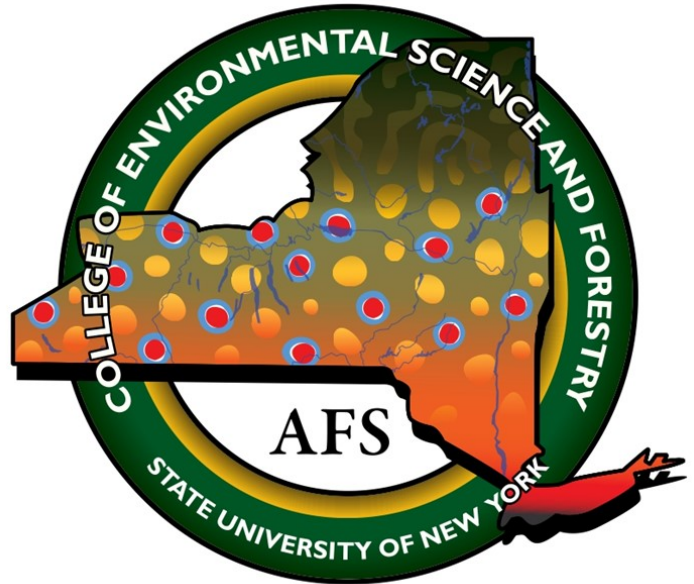
*Leslie Jonas delivers one of the plenary talks in front of a sold-out crowd at SNEC-NED joint meeting*



# SUNY-ESF Chapter

Conner Grant

**W**ith COVID restrictions behind us, the SUNY College of Environmental Science and Forestry (ESF) Chapter has hit the ground running! With a strong foundation left by past president Jack Marshall, we have rebuilt to become an active group of 25+ members! We were awarded for our efforts in 2021 with the recognition as “Club of the Year” at ESF’s Student Organization Leadership and Awards Reception (SOLAR)! While the focus in 2021 was on rebuilding the chapter, we have concentrated our efforts this year on ensuring that students involved in our organization leave ESF prepared to have successful careers upon graduation. We established a weekly



meeting schedule highlighted by presentations from researchers and professionals from across the nation such as Dr. Ryan Thoni and Dr. Jenny Gumm, who spoke about describing newly discovered Himalayan fishes and the restoration and protection of the Devil’s Hole Pupfish, respectively. Furthermore, we have hosted a variety of events and workshops to strengthen our members’ fisheries skills and to prepare them for success within the field upon graduation.

To begin our fall events, in October our chapter hosted a trap net workshop with the Onondaga Bio-monitoring Project, where members learned the process in setting, retrieving and sorting through a trap net. Members also learned the process of data collection as the collected nets were used as part of the monthly biomonitoring survey. We were pleasantly surprised when the nets were found to have over two thousand fish in them, I’m sure the crew appreciated our help counting those! Later that month we hosted a creek clean up on Onondaga Creek with the ESF Bass Team, Trout Bums club and Syracuse Creek Rats, a local organization dedicated to the restoration of Onondaga Creek. In one afternoon we were able to remove half of a dumpster worth of garbage from the creek, including four bicycles. We feel it is essential to not only work to give students experiences in fisheries techniques but also to teach them the importance of taking care of our local systems and environment. To end the month, our group travelled to a local creek for a backpack electrofishing workshop. Students learned the process and necessary safety precautions need-



*Members backpack electrofishing a local creek in October 2022*



ed while backpack shocking and got to see some really cool fish species, such as Northern Hognose Sucker and Fantail Darter!

Spring is now upon us! To begin the semester, our group traveled to the SNEC-NED annual meeting in Boston this January. This was the first time any of us had been to such an event as part of the COVID generation and we had an incredible time! We would like to thank everyone from the planning committee for putting on such a great event and being so welcoming! The opportunity to connect with so many incredible researchers and professionals gave us many opportunities to gain important insight into the field. Looking forward, we plan to attend the NY Chapter annual meeting, and the NED meetings if close enough. In February, our chapter hosted an ice fishing trip to a local lake. This is always a popular event, and a great opportunity to get some students who previously had never ice fished interested in our group. We had a great time out on the ice and students caught a variety of fish, including some exceptionally large Largemouth Bass! In March, we hosted a resume workshop with Career



*Members pose with a Largemouth Bass during February's ice fishing trip*



*ESF AFS officers at the SNEC-NED Annual Meeting in January*





*Top: Students and professionals mingle at the Environmental Biology Department Professional Mixer*

*Bottom: President, Conner Grant, demonstrates how to extract otoliths from a Yellow Perch*



Services to prepare students for their application to summer positions or graduate school/permanent positions in the case of graduating students. We just hosted an Environmental Biology Department Professional Mixer along with the ESF subunit of the Wildlife Society and Career Services. The event was a massive success with over 100 attendees, giving students the opportunity to practice their networking skills and gain connections within their fields. With the success of the mixer we have agreed to host the event annually! We also recently hosted an otolith workshop with Dr. Karin Limburg, in which students were given a brief presentation and taught how to extract and age otoliths from Yellow Perch collected at the ice fishing event. This was an incredible opportunity for students to learn in a hands-on environment from one of the world's leading "otolithologists". We have once again been nominated for an award at ESF's SOLAR Awards, so you'll have to stay tuned for next year's newsletter for the result! Looking ahead, our chapter will be heading to the NYSDEC Oneida Fish Hatchery for a tour in April. We will also be hosting a joint electrofishing weekend workshop with the SUNY Cobleskill subunit in which we will be give members the opportunity to get out on an E-boat on Otsego lake and backpack shock in the nearby streams. This is the first collaborative event between our two groups, and we hope to maintain a close relationship to share our unique resources with each other! To complete our semester we will be hosting an Earth Day Creek Clean up once again with the ESF Bass Team, Trout Bums club and Syracuse Creek Rats. As an Earth Day Event, this will be school wide and we hope to get a large group out to clean up a whole dumpster of gar-



bage this time around!

As an entirely student run chapter we are proud of all we have been able to accomplish this past year and look forward to continue expanding upon this work to strengthen AFS's presence at ESF!

## New York Chapter

*Samantha Carey*

The New York Chapter of the American Fisheries Society held their annual meeting this past February at SUNY Stony Brook at the Wang Conference Center! This meeting was our first in-person gathering since 2019 due to COVID! Although the last two meetings were held virtually, and we were still exposed to new scientific research and fishy colleagues, it was great to have an in-person meeting with our folks in New York and the adjacent states. We had over 220 attendees with 1/3 being students (graduate, undergrad & high school). During the meeting, the NY Chapter holds an annual Student Awards Raffle which raffles off donations from around the state thanks to generous local businesses, crafters and more. Attendees can purchase raffle tickets and all proceeds go to future student academic



awards. This year we raised just over \$2000 to help next year's awardees! Multiple awards were handed out over the course of the meeting, and some include Klumb-Spindler Student Travel Award, Dave Bryson Memorial Award, Conservationist of the Year Award, Professional Achievement Award, Best Student Poster and Best Oral Prestation.

The chapter held two workshops this year—Mussel Identification and Aquatic Invasive Species Identification. The Mussel ID workshop had a total of 25 attendees with some interest from folks outside of the chapter! The Aquatic Invasive Species workshop was held during our 2023 annual meeting with 40 folks attending in total. The workshop was held by the Long Island Invasive Species Management Area (LIISMA).

Over the next year, the chapter hopes to bring in new members with new exciting events, streamline our annual meeting registration and update our website and user interface! The chapter's Native Fish Committee has become active again and the chapter has a very active Women in Fisheries (WiF) group. The group is currently working on a mentor/mentee program which has been successful over the last year and are always looking to include others. If anyone has any questions or would like more information, please contact Samantha Carey, NYCAFS President ([samcarey16@outlook.com](mailto:samcarey16@outlook.com)).



## STUDENT SUBUNIT UPDATES

### Penn West

*Dr. David Argent*

In the fall of 2022 we were officially recognized as the Penn West Student Chapter of the PA Chapter of AFS (Formerly the CalU chapter)! We are slowly rebuilding since Covid, but since the fall of 2022 we have participated in several events:

We had the opportunity to help Izaak Walton League and Marianna Outdoorsman's Associations

with trout stockings in local streams. We also helped the Pennsylvania fish and boat commission with steelhead trout collected. In addition, seven of our students attended the Pennsylvania chapter meeting in Lock Haven.

As a group we assisted with data collection on several research projects involving fish, macroinvertebrates, and habitat. We had the honour to host guest lecturer Dr. Andrew Furness, who discussed snakehead implications. We also had a fun canoe trip down the Yough River, visited hatcheries at rolling rock club and USFWS facility at Lamar, and trained on several culvert surveys.



*A cold outing at the Avonia Beach Park*



*A much warmer outing with a friendly fish*



*All smiles when stocking trout into several local streams!*

### Quebec

*Ramela Koumrouyan*

Since the start of the year, we posted a talk about fish anatomy and pathology given by one of our members, Nicolas Decelles, who graduated with a degree in veterinary sciences. The symposium had good attendance and interesting discussions stemmed from it. Our



next big plan is to host a symposium on May 25 to showcase fisheries and aquatic conservation research from our members to the general public and encourage club engagement. We'll also have a keynote speaker and host a panel of researchers from different work fields (academia, government, industry, NGO). The symposium will highlight the benefits of AFS, provide developing researchers with different ways to get involved with AFS, and provide students with networking opportunities in the fisheries field.

Beyond our bigger educational events, we've also been hosting more casual get-togethers at the Thomson House to catch up and chat or have fish trivia games. Hopefully, we'll be soon spreading news and posters about our upcoming symposium!

### AFS Quebec Symposium May 2023

The American Fisheries Society Quebec subunit is proud to organize a symposium featuring prominent research from student members, panel speakers from various working fields and a keynote speaker on our theme of environmental stressors.

## AMERICAN FISHERIES SOCIETY QUEBEC SYMPOSIUM



Join us for our annual symposium including keynote speaker, career panel, student presentations, and snacks!

Interested in being a speaker? AFS is looking for pannelists and presenters! Send us your abstracts by **April 20th** to get involved!

May 25th: 12-4 pm  
@ Redpath  
Museum

Please RSVP by sending us an email!! Deadline to register is May 1st.

For more information contact  
quebecstudentafs@gmail.com





Quebec symposium information

If you're interested in attending, presenting your research or sharing your experience on the panel, please fill out this [form](#).

Abstract submission deadlines are at the end of the day on **April 20**, and registration deadlines are **May 1st**. For more updates on the Quebec subunit, check out the [linktree](#) to follow us on social media and join our mailing list!

## Rutgers

*Lauren Cook,, Charlotte Bramich, Elizabeth Bouchard, and Samantha (Sam) Alaimo*

**A**fter over two years of virtual meetings, RU AFS has had a fantastic time coming back together in person! We kicked off our first meeting of the year with Fish Trivia Night, where undergrads and grad students played a friendly competition about fisheries and won prizes. Subunit members, including former president Kiernan Bates, attended the Mid-Atlantic



*Fish trivia night!*





Subunit members with advisor Daphne Munroe and MAC AFS officers (left to right: Johnny Moore (MAC AFS President); Daphne Munroe (RU AFS Advisor); Sophia Piper; Sam Alaimo, Elizabeth Bouchard; Lauren Cook; Hails Tanaka; Heidi Yeh; Alex Ambrose; Jim Vasslides (Former MAC AFS President); and April Croxton (AFS National President))

Chapter meeting in November, where Alex Ambrose, Elizabeth Bouchard, Lauren Cook, and Heidi Yeh gave oral and poster presentations. Lauren won Best Student Oral Presentation with their “crappy” talk about Atlantic menhaden poop! The subunit enjoyed networking with other academics, grad students, industry, and government professionals in the Mid-Atlantic. We especially enjoyed all the other fantastic student presentations, and we had a blast



Former RU AFS president (and now RU Marine Field Station employee) Kiernan Bates showing off some of her latest work!

connecting with the newly-formed University of Delaware student subunit!

This spring we are hosting a virtual “R for Fisheries Science” workshop planned, led by former Rutgers graduate student Joe Caracappa (now a postdoctoral fellow at NOAA Fisheries). We will also continue our tradition of tabling at Rutgers Day, the biggest public outreach event hosted by the University. We will have games and crafts to teach visitors about the importance of New Jersey fish, shellfish, and fisheries!

## UMaine

*Daison Weedop, Cody Dillingham, Sarah Vogel, and Rylee Smith*

The UMaine Subunit made a lot of fun new memories over the past year, and we enjoyed revisiting many familiar activities that have become traditions at UMaine!



UMaine AFS officers accepting the Outstanding Subunit Award at National AFS

In August, a large group of students made their way to Spokane, Washington for the National AFS meeting and had a lot of fun presenting their research while also getting the chance to release salmon into the Spokane River. We were able to reconnect with several UMaine Subunit alumni in Spokane and accept the Outstanding Subunit Award, which were exciting bonuses! Then, in October,



many of our graduate and a few undergraduate student members traveled to Newry, Maine for the Atlantic International Chapter meeting. We are thankful to the event coordinators who facilitated virtual presentations for some of our members who fell sick and couldn't attend in-person. The fall semester included our popular fish printing and fly-tying events. We also defended our title in our annual candlepin bowling tournament against our long-standing rivals from the UMaine Student Chapter of The Wildlife Society. We are looking forward to a rematch next fall! The spring semester kicked off with our annual ice fishing excursion to Hermon Pond during Maine's Free Fishing Weekend. The ice fishing trip is one of our most popular events and provides an opportunity for our members to dip some poles in the water and test their ice fishing skills. In early March, we had a great time hosting Dr. Tobias Kock from the USGS Columbia River Research Laboratory in Washington state. He shared with us some of his important research on Pacific salmon in the Columbia River and was generous enough to give a brief demonstration of the cutting-edge technology that he uses in his research.

As the spring semester comes to an end, we are looking forward to the last few activities for this year. We are excited to assist Maine's Department of Marine Resources with their rainbow smelt spawning surveys again this spring, and we are



*UMaine Student Subunit at the candlepin bowling event*

gearing up for the 8th annual UMaine 5K spawning run. The spawning run is our biggest event of the year, and many of our members bring their running shoes out of storage early to begin training for the race. Our hybrid format was well received last year, so that option will be making a return this year. The 5k helps to fund our favorite activities, student scholarships, and outreach events throughout the next year.

For additional information and updates, check us out on Twitter (@UMaineAFS), Facebook (@UMaineAFSStudent), or Instagram (@UMaineAFS)!



*UMaine AFS ice fishing event*

## UMass Amherst

*Emily Doherty*

In the UMass Student Subunit of the American Fisheries Society, we have been spending our time informing students of and immersing them in fisheries science. We have gone on several field trips to fish hatcheries in the area, including McLaughlin Fish Hatchery in Belchertown. We hold meetings in Holdsworth Hall watching videos and movies involving commercial and recreational fishing, as well as just fish in general. We have trivia nights and coloring nights as well with snacks and music to get more people interested that may not have thought to come in the first place. We share career and internship opportunities with members of the club over email and share any scholarship or course options. We have also had some guest speakers, and plan to have another one in the coming weeks. Once we become a Registered Student Organization, we will be setting up workshops and fundraisers to get T-Shirts for our club. We participated in a campus cleanup last spring and plan to do it again once the weather gets nicer!



*Picture taken of one of our members using a purse seine to sample juvenile fishes in the Great Bay, NH.*

We were so excited to send many students to both the Atlantic International Chapter Conference in Maine and the Southern New England Chapter conference in Boston. We love how our location right on the edge positions us to maintain a presence among both chapters and to interact with material and researchers throughout New England and Canada. As we continue to grow and become more familiar with funding opportunities, we have been able to embrace larger projects.

An upcoming collaboration with a local underprivileged school will be a great experience to get students talking about the beauty of ecology with young people and can even get our AFS name solidified in the community. And we are excited to brainstorm even more projects like this in the future!

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## University of New Hampshire

*Nathan Hermann*

This past year at the University of New Hampshire has been exciting for the American Fisheries Society Student Subunit. We continue to target undergraduate students to become more involved and more interested in what fun can be had in the world of fisheries.

Our members have primarily been graduate students who are already informed, so we have tried to teach younger members at the University how they can belong too. With lectures and seminars around campus, we have worked to get our name on campus as a club with awesome benefits from the broader regional and national parent society.





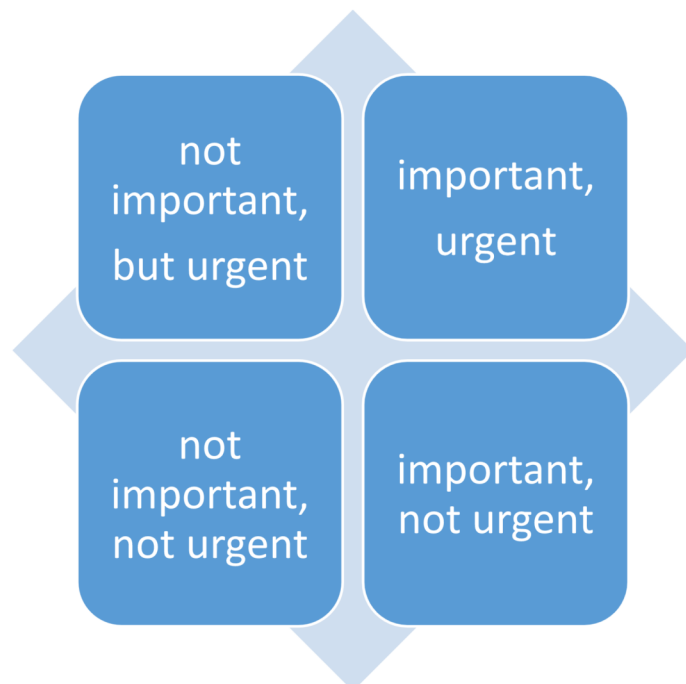
# FISHERIES NEWS

## Time Management for Fishery Scientists

**Dr. Richard McBride, Supervisory Research Fishery Biologist at NOAA Fisheries' NEFSC**

Everyone benefits from improving their time management, even fishery scientists. Here I list three tips that work for just about anyone, and I finish with a few notes on how to boost your time management for yourself and your team.

1. Take charge of your to-do list. If you have a love-hate relationship with your to-do list, change that, by instilling it with your own priorities. A well-known strategy, attributed to former [U.S. President Eisenhower](#), is to put each proposed task in a matrix of urgent vs. important (see Figure). Work tasks that align with mission-driven goals of your team or your agency are important, because these are easily recognized as time well spent. Work tasks that align with your own career goals are also important, for example: building relationships, highlighting your creativity, contributing to your sense of well being, or advancing your knowledge, skills, or abilities.



*Tasks are urgent when they have consequences if unmet, associated with a specific and approaching deadline.*

ties.

Prioritizing tasks that are both important and urgent focuses your to-do list, but alone, this does not eliminate all the other tasks straight away. Tasks that are important but not urgent have secondary priority. These tasks need enough attention that they don't become urgent. Tasks that are not important but urgent, may need attention, but how and when? Perhaps they can be addressed at your next regularly scheduled meeting, instead of arranging a specific meeting that interrupts everyone's workflow. Or, better still, such unimportant (to you), urgent tasks can be redirected or delegated to someone else who is seeking or needing that sort of opportunity. Finally, to state the obvious, tasks that are not important and not urgent should be avoided. Perhaps you can collect them somewhere, like rubber bands or twist ties in a kitchen drawer, in case they are needed later, but more likely cleaned out from time to time. This last category is where you should learn and practice saying 'no thank you' in a tactful manner.

This approach can be used throughout your career, even as opportunities you accept or reject at one part of your career may be different at another part of your career, as one moves from a gathering to a pruning mindset ([Cravens et al. 2022](#)). Sorting your tasks with an urgent-important matrix will transform an aimless to-do list into a structured decision-making tool.

"The secret to getting ahead is getting started," said Mark Twain, "The secret of getting started is breaking your complex, overwhelming tasks into small manageable tasks, then starting on the first one." Breaking up any one project into a series of smaller tasks may make your to-do list look longer, but the process can help you schedule a series of right-sized tasks onto your calendar to meet a series of manageable deadlines. For example, early in our career, the prospect of writing your first manuscript or presenting a lunch-hour seminar can be daunting. Break such a task down following [Cice-ro's step-by-step method to develop a persuasive speech](#). As our career progresses, you will have fewer and shorter chunks of time to work on large projects, which forces you to schedule these small tasks into the 1- or 2-hour blocks left on your calendar each week. Rather than fret over these disjunct

work periods, go with it. Breaking up a project into smaller, serial bits makes particular sense for creative or analytical work. Beveridge (1950) pointed out that progress in science “occur[s] not only when one is consciously puzzling the problem but also not uncommonly when one is not thinking of anything in particular, or even when one is mildly occupied with something different.” Taking the time to spread out a series of small tasks encourages these unplanned ‘ah hah’ moments that add to the final product.

2. Rein in your inbox. With the COVID-19 pandemic, physical inboxes are little more than a quaint memory, if you ever used one at all. Good riddance. Nonetheless, navigating your virtual inbox requires a strategic approach. One solution is to learn more about the tools available to you. In my career, I have had new software thrust on me every 5-10 years for the last 3 decades, so a continuous learner mindset is necessary. Today, your virtual inbox allows you to filter mail with a few keystrokes, set office hours, automate send, etc. – all sorts of useful features to manage your time. Be proactive and find tutorials on whatever software is in front of you.

Another solution is to discern the nature and the time required of each request, before you act. After all, it is too easy for others to hit ‘send’ and fill up your inbox to intimidating levels. If the sender has not made it clear whether a response is necessary, and if so, what is requested, asking 1-2 clarifying questions may be most timely and appropriate response. For example, if you think that more than a paragraph is needed to reply completely, your best move may be to identify resources needed – people, data, or equipment – and determine if the requester agrees before you expend the effort.

Finally, when ready to respond, consider this 3-point strategy to unload each email request quickly and effectively: 1) begin the subject line with a standard action term, such as Info, Request, Approval, Urgent, Action, etc., 2) begin the main body of your text with the pithy ‘bottom line up front’ conclusion, and 3) add the relevant background information at the end, for those that need to see the details. You can slip in a salutation or a personal note, whatever is customary, but your emphasis on using a crisp, business style approach to writing an email will be appreciated by those that are tired of deciphering cryptic emails. Elsewhere, in journal-

ism, this type of framework is used to prevent burying the lede of a story, which loses readers. Here, these solutions keep your inbox tidy and your responses more effective.

3. Personalize it. There is a more personalized aspect of time management too. Most everyone is familiar with the stereotypes of being an early bird or a night owl. Dan Pink, author of ‘When: The scientific secrets of perfect timing’ takes a deep dive on how to work with your personal chronobiology to optimize your individual productivity. For example, early birds should focus on analytical tasks and decision making in the early morning and save insight tasks for late afternoon, whereas night owls are best served by the opposite. Tracking where you spend your time could be revealing. One place to start is to ask if you waste your most productive hours of the day on routine tasks, such as previewing emails?

4. Manage you teams’ time, too. For too long, I undervalued the value of regular, predictable meetings. Early in my career, I was content with a ‘kick-off’ meeting with clear guidance about the job and its goals, and then to be let loose. But not everyone is like that. And some jobs are complex or change over time, and would benefit from crowdsourcing ideas and feedback at some regular interval. The frequency and length of your meetings should be designed to optimize the level of communication per unit of time, whether they are 15-minute stand-up ‘huddles’ to start each day or as infrequent as 1-hour monthly meetings. If this approach is not keeping a lid on the need for other meetings all week long, consider having a ‘focus day’ for your team, where everyone is encouraged to work solo one day every week, fortnight, or month.

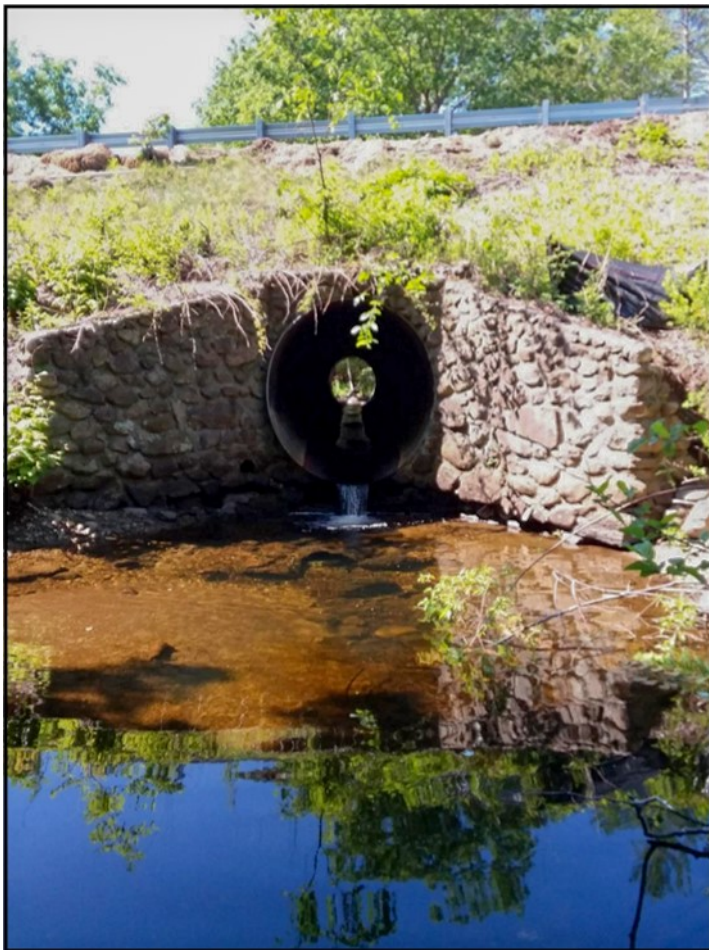
Time management is a persistent challenge shaped by shifting technologies and cultural norms. Most recently, the pandemic has opened up workflow flexibilities that are changing the concept of a physical-virtual workplace. New apps are everywhere, offering to take you to the next level. Be proactive about this. Take the time to ask ‘where does my time go’ to see if you can improve your own productivity or reduce stress at work. I am still working on these tips myself, but hey, I made enough free time to write this article, so some of it must be working.



## New Hampshire Stream Connectivity Project

**John Magee, Fish Habitat Program Coordinator,  
New Hampshire Fish and Game Department**

Hello fellow fish friends of the northeast. I wanted to tell you about a successful project we did to restore connectivity to a small stream in central New Hampshire. Perhaps you can use this in your toolbox for your work. We built two fish ramps: essentially rock ramps with a series of grade control weirs comprised of a line of boulders. Because there were only two fish species upstream (Brook Trout, *Salvelinus fontinalis* and Blacknose Dace, *Rhinichthys atratulus*) and several other small/medium stream species downstream, we saw this as a good opportunity to evaluate them for fish passage because we could rely on simple presence/absence data. These are the first of their kind in New Hampshire and a lot of engineering, biological, transportation, etc. folks wanted to know if this technique can be used elsewhere.



Downstream culvert pre-construction.

The ramps were designed by Tom Ballestero of the University of New Hampshire (UNH) and Peter Kehoe of the New Hampshire Department of Transportation (NHDOT). The ramps are each about 10-11 m in length and 10% slope. The culverts were both 28.5 m in length and had outlet perches of about 0.27 m. We conducted fish surveys pre- and post-construction. They worked! In a two-year post-construction period, at least six and four fish species successfully passed the downstream and upstream ramps/culverts, respectively. Based on the small size and species that we know ascended them, it's likely that both Blacknose Dace and Brook Trout also successfully ascended both culverts. Species that ascended the ramps/culverts are Blacknose Dace, Brook Trout, Longnose Dace



(Top) Placement of fabric and footer rocks at downstream weir. (Bottom) Placement of rubber liner, sand and top band of boulders at downstream weir. The rubber liner was intended to help keep flow on the surface and not go under the band of boulders.







*Rhinichthys cataractae*, White Sucker *Catostomus commersonii*, Common Shiner *Luxilus cornutus*, Fallfish *Semotilus corporalis*, and GS=Golden Shiner *Notemigonus crysoleucas*.



(Left) Placement of shotcrete along upstream side of top boulders at downstream weir. The shotcrete was used to ensure surface flow did not go between or under the top band of boulders. (Above) Downstream ramp and culvert looking upstream seven months after construction during typical early spring flow.

## RECENT PUBLICATIONS

### Fish Assemblages in the Penobscot River: A Decade after Dam Removal

*In Marine and Coastal Fisheries*

Kory A. Whittum, Joseph D. Zydlewski, Stephan M. Coghlan Jr, Daniel B. Hayes, Jonathan Watson, Ian Kiraly

**Abstract:** The Penobscot River Restoration Project in Maine was a large river rehabilitation project that culminated in the removal of the two lowermost dams and improvements to fish passage on several remaining dams. Fish assemblages were surveyed for 3 years prior to rehabilitation, 3 years after rehabilitation, and 8 years after rehabilitation. Approximately 475 km of shoreline were sampled via boat electrofishing, yielding 133,394 individual fish of 41 species. The greatest shifts in assemblage

structure occurred immediately after dam removal in formerly impounded sections, with an increased prevalence of riverine and migratory species. Long-term sampling documented changes within tributaries and tidally influenced river segments, where large schools of adult and young-of-the-year alosines increased in abundance. Upstream of the lowermost dam, the river remains dominated by lacustrine species, while adult anadromous fishes continue to be most abundant immediately downstream of the lowermost dam. Our results provide increased evidence that dam removals result in altered fish assemblages, which are now dominated by riverine and anadromous species in previously impounded habitats. Alosines in the Penobscot River have exhibited the greatest long-term response to river restoration efforts.

DOI: <https://doi.org/10.1002/mcf2.10227>



# Potential Repercussions of Off-shore Wind Energy Development in the Northeast United States for the Atlantic Surfclam Survey and Population Assessment

*In Marine and Coastal Fisheries*

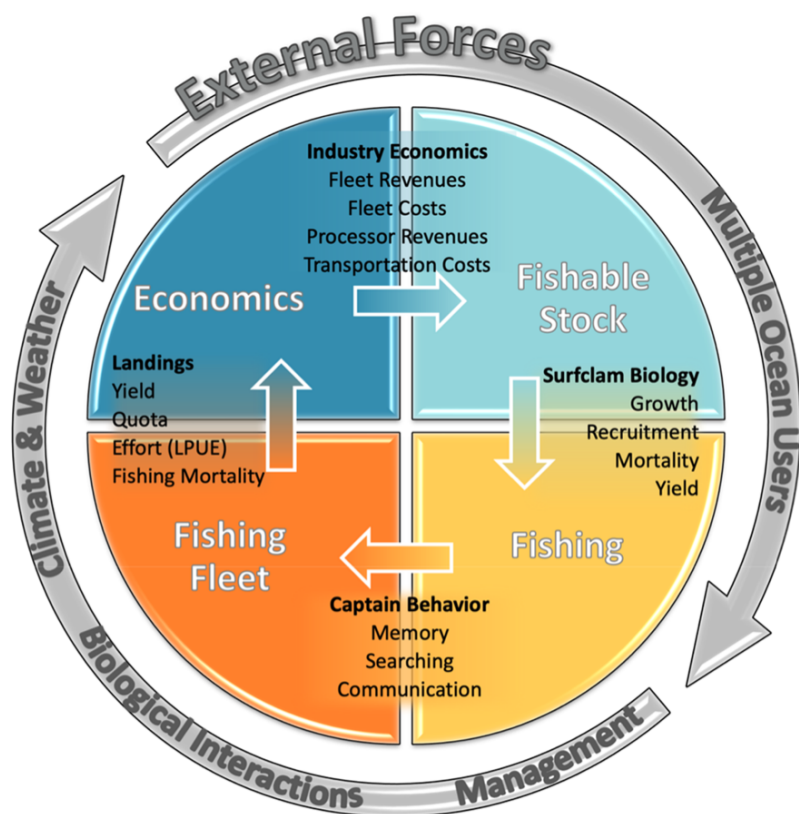
Sarah Borsetti, Daphne M. Munroe, Andrew M. Scheld, Eric N. Powell, John M. Klinck, Eileen E. Hoffmann

**Abstract:** The Atlantic surfclam *Spisula solidissima* fishery, which spans the U.S. Northeast continental shelf, is among the most exposed to offshore wind energy development impacts because of the over-

lap of fishing grounds with wind energy lease areas, the hydraulic dredges used by the fishing vessels, and the location of vessel home ports relative to the fishing grounds. The Atlantic surfclam federal assessment survey is conducted using a commercial fishing vessel in locations that overlap with the off-shore wind energy development. Once wind energy turbines, cables, and scour protection are installed, survey operations within wind energy lease areas may be curtailed or eliminated due to limits on vessel access, safety requirements, and assessment survey protocols. The impact of excluding the federal assessment survey from wind energy lease areas was investigated using a spatially explicit, agent-based modeling framework that integrates Atlantic

surfclam stock biology, fishery captain and fleet behavior, and federal assessment survey and management decisions. Simulations were designed to compare assessment estimates of spawning stock biomass (SSB) and fishing mortality (F) for scenarios that excluded the survey from (1) wind energy lease areas or (2) wind energy lease areas and potential wind energy lease areas ("call areas"). For the most restricted scenario, the simulated stock assessment estimated 17% lower SSB relative to an unrestricted survey, placing it below the SSB target. The simulated F increased by 7% but was still less than the accepted F threshold. Changes in biological reference points were driven by the inability to access the Atlantic surfclam biomass within the wind energy lease areas. Deviations in reference points reflected the proportion of the population excluded from the survey. Excluding the Atlantic surfclam assessment surveys from the regions designated for offshore wind development can alter long-term stock assessments by increasing uncertainty in metrics that are used to set fishing quotas.

DOI: <https://doi.org/10.1002/mcf2.10228>



Components included in the Spatially Explicit Fishery Economic Simulator (SEFES) represent the fishable stock (light blue), fishing (yellow), fishing fleet (orange), and economics (dark blue). The primary processes that determine each component and links between components (inner arrows) and the external forces (outer arrows) that affect all model components (inner circle) are shown (LPUE = landings per unit effort). Full descriptions of SEFES are provided by Monroe et al. (2022) and Scheld et al. (2022). Figure is adapted from Munroe et al. (2022).

## Development and validation of two environmental DNA assays for American Eel (*Anguilla rostrata*)

*In Environmental DNA*

Gregory R. Moyer, Meredith L. Bartron, Heather S. Galbraith, Josh Grassi, Christopher B. Rees

**Abstract:** We developed and validated two species-specific qPCR markers to detect American Eel environmental DNA. Marker validation included assay design, specificity and sensitivity testing, and in vivo laboratory and field experiments. Markers AME1 and AME2 targeted 116 and 129 bp fragments of the mitochondrial NADH dehydrogenase subunit 2 and cytochrome b genes, respectively. Markers were 94%–100% homologous for all 49 aligned American Eel sequences. Specificity tests, with known DNA obtained from 149 individuals spanning 81 fish species, amplified DNA derived from American Eel tissue exclusively. Each marker also had high sensitivity with LOD and LOQ values of 2.8–50 copies. For each marker, pilot testing of American Eel in aquaria at increasing densities ( $n = 0, 1, 5, 10$  eels) showed a significant ( $p < 0.03$ ) negative relationship between mean qPCR cycle threshold value and number of eels per tank. Our in situ testing of water samples collected from 35 sites on the East Coast (from as far south as Maryland to as far north as Maine) revealed that sites known to contain populations of American Eel ( $n = 11$ ) were all positive for American Eel DNA, while sites where American Eel were presumed absent ( $n = 24$ ) failed to amplify American Eel DNA. In three cases, our assays produced positive detections in the lower portion of a water-shed but failed to detect American Eel upstream of a presumed impassible barrier in each of the same watersheds (all internal positive controls indicated no evidence of PCR inhibition in our field samples and all negative controls indicated no evidence of contamination). Our encouraging results of in vitro and in situ valida-

tion demonstrate the utility of using eDNA as a tool to aid in American Eel conservation efforts.

DOI: <https://doi.org/10.1002/edn3.369>

## Two Distinct Life History Strategies of Atlantic Sturgeon in the Ogeechee River, Georgia

*In Diversity*

Isaac Wirgin, Adam G. Fox, Lorraine Maceda, John Waldman

**Abstract:** Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) is an anadromous, widely distributed, highly migratory sturgeon subspecies that occurs in rivers and marine waters along the North American Atlantic Coast. This fish has shown widespread declines and has been afforded conservation protections, including some based in the U.S. on the delineation of Distinct Population Segments (DPS) under the Endangered Species Act. The management of Atlantic sturgeon will benefit from the knowledge of its population structure as well as the ability to uniquely identify individuals (in relation to population origin) that are vulnerable to anthropogenic stressors at sites outside of their natal estuaries. We used microsatellite analysis to estimate the genetic population structure of Atlantic sturgeon from 13 spawning rivers ranging from the St. Lawrence River, Quebec to the Satilla River, Georgia. Individual Based Assignment (IBA) testing was used to estimate the contribution of each population to mixed-stock aggregations in coastal waters and in a non-natal estuary. An unexpected finding was the discovery of two distinct genetic clusters of juvenile Atlantic sturgeon in the Ogeechee River, Georgia, with specimens in the two clusters differing significantly in terms of mean total length. Additionally, three distinct genetic clusters were detected within the Satilla River juvenile collection, along with two clusters within the Edisto River sample. In F1ST and



FST analyses, the extent of the pairwise genetic differentiation between the two genetic clusters in the Ogeechee River and the three in the Satilla River was greater than that between all other pairwise comparisons among rivers in the South Atlantic DPS. In contrast, we found no evidence of the genetic partitioning of juvenile sturgeon within the neighboring Savannah or Altamaha river populations. Using IBA, we found that the overall Ogeechee River population made a moderate contribution (8.3%) to the overall mixed-stock collections ( $n = 1512$ ) from coastal North Carolina to the Bay of Fundy. Surprisingly, all of the Ogeechee River-assigned specimens ( $n = 125$ ) in these mixed-stock aggregations were representatives of only one of the two Ogeechee River genetic clusters. These results suggest that the two Ogeechee River genetic clusters exhibit significantly different life history strategies, with one being resident and the second being highly migratory.

DOI: <https://doi.org/10.3390/d15030325>

# Have fishy news

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### Meet the Editors



**Matt Mensinger** is a PhD student at the University of Maine and President of the UMaine Student Subunit. His research aims to understand the risk of predation during Atlantic salmon smolt migration. He has been editing the Northeast Fish Rapper since 2019. He can be reached at [matthew.mensinger@maine.edu](mailto:matthew.mensinger@maine.edu).



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**Carolyn Merriam** is a Master's student at the University of Maine Orono and a member of the UMaine Student Subunit. Her research uses acoustic telemetry to characterize adult Atlantic salmon's pre and post-spawn movement in the Penobscot and Machias Rivers in Maine. She can be reached at [carolyn.merriam@maine.edu](mailto:carolyn.merriam@maine.edu).

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