UCONN | COLLEGE OF LIBERAL ARTS AND SCIENCES

Department of Marine Sciences

Spring 2025 Newsletter

Prof. J. Evan Ward
Department Head

Spring has arrived in New England! As the water temperature rises the faculty, staff and students are busy planning for summer field work and research. The past semester saw many changes to federal agencies, and keeping up with new policies on government funding for research and education has become challenging. Many of our faculty study various aspects of climate change; support for which has become uncertain. Nonetheless, faculty, staff and students continue to work on topics that will improve our understanding of how human impacts affect the world's oceans. One example of this work can be found in this issue's story on the 10-year anniversary of the Connecticut Institute for Resilience & Climate Adaptation (CIRCA).

Other content within this newsletter includes an interview with our Financial Assistant (Janet Laflamme), and stories about turning science data into music, studying the breakdown of biodegradable plastic in seawater, installing a new instrument (Imaging Flow CytoBot) in the Rankin laboratory, and conducting mercury research in the Arctic. Other interesting stories and updates can also be found about the research and outreach events being conducted by our faculty, staff and students. I wish everyone a healthy, happy, and productive summer.

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UCONN | AVERY POINT **Marine Sciences**

Reflecting on Progress: CIRCA's Decade of Increasing Connecticut's Climate Resilience

Helping to navigate the obstacles to building a more sustainable future

UConn Today | March 28, 2025 | ***Elaina Hancock***

As the climate crisis worsens, besides pushing resilience projects ahead, O'Donnell stresses that it is essential that we reduce our emissions as soon as possible. (Adobe stock)

In the aftermath of Hurricane Sandy, the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) was created to help build climate resiliency in the state of Connecticut. This past October saw CIRCA's 10th anniversary, which was marked by an event that drew researchers, policymakers, and stakeholders from across the state. CIRCA works closely with communities and decision-makers to develop resilience in many ways, from crafting policy, assessing climate vulnerability, supporting clean energy projects, mapping community and environmental justice communities across the state, and many more. Though much has been accomplished, more work is ahead as the climate crisis grows more pressing.

CIRCA Executive Director and Professor in the Department of Marine Sciences James O'Donnell reflects on last year, a year where overall, while Connecticut was spared hurricanes, areas of the state like Western Connecticut and Norwich experienced major flooding disasters.

"We were relatively lucky in 2024 since we didn't have a hurricane, but floods like those in Monroe, Oxford, and Norwich could occur almost anywhere in Connecticut, we're pretty exposed," says O'Donnell.

Addressing the issue of exposure is not an easy undertaking, but CIRCA has made significant progress in building relationships with stakeholders and decision-makers both at the state and local levels. Carrying policies and resilience-building planning efforts from idea to finished product takes a lot of time, coordination, and outreach, and all of this takes expertise, and that is what CIRCA's team of experts offers – help in building climate resilience.

O'Donnell draws on the example of how he is currently serving on a legislative committee that was established to make recommendations on how to best support and expand tourism in southeastern Connecticut, an area that is also vulnerable to the impacts of sea level rise and more frequent flood events.

"They're concerned about flooding in Mystic, and they realize all of the tourism center, businesses, and the attractions of Mystic Seaport and downtown are largely in the flood zone," O'Donnell says.

In the winter of 2023, the area in question was underwater several times, says O'Donnell, and those cases were not the result of storms. With rising sea levels and changes in variations in the circulation of the North Atlantic, this trend of flooding will continue to increase, and in the case of Mystic, O'Donnell says we can expect up to 20 inches of sea level rise by 2050.

"Sea level increase in the Northwest Atlantic is increasing faster than everywhere else in the world, and it's a consequence of the patterns of ocean circulation and changes in ocean circulation that a result from warming of the ocean and atmosphere."

But for stakeholders and policymakers, having experts to consult and who can provide support and information for making decisions that will ultimately save lives is valuable. O'Donnell says that in his role working with politicians and decision-makers, his role as a physicist is to help answer questions and provide insights.

"The question of what will happen is not hard to project. The question is, what do you do, and who pays for it? That's the hard part."

Seeing a project through requires many factors to coalesce, from idea to finished project. O'Donnell says a significant step starts with ensuring all stakeholders are on board with a plan. He draws on an example of a project in Bridgeport that CIRCA started working on in 2017. The plan is to build a berm to protect a neighborhood from sea level rise, and all property owners need to agree before the project can proceed. If anyone objects, the plans need to be modified. After everyone approves the project, the permitting process can begin, followed by getting bids from contractors, and if bids come in higher than expected, either more funding needs to be secured, or the project needs to be redesigned to lower costs, which starts the whole process over.

"It has been eight years, and there's no construction yet. We've got an inventory of around 150 projects that have been identified through a process we call the Resilient Connecticut Planning Process, and those projects are all over the state. We've advanced about 15 in a substantial way, and we've helped in some other ones. The project pipeline starts, and it ends, and there are steps along the way, and the goal is to advance things up the pipeline, but it takes years."

O'Donnell says in the case of Mystic, in planning ways to sustain tourism, some people are more interested in short-term questions such as where a parking structure should be built, but even a seemingly simple project like this one benefits from climate resilience expertise,

"My role there is to help them appreciate what areas might be vulnerable in the future. Many of the attractions at Mystic Seaport and some of their infrastructure is in the flood zone. They need to think about how to protect it and ensure that they can sustain visitor interest and make it convenient for people to visit."

The value of CIRCA's expertise was appreciated at the 10th-anniversary celebration of CIRCA, says O'Donnell,

"One of the things that was really rewarding from our meeting in October is realizing how climate is considered now, compared to 10 years ago. We had a bi-partisan panel of three Republicans and three Democrats from across the state and they were all very, very supportive and interested in being informed. The other thing that's happened is several state agencies have created climate planning offices, so they've hired people to provide climate-informed perspectives on the work that the agency is doing, including former employees of CIRCA. They poach people from our program, which is a good thing!"

CIRCA is not just focused on flooding, says O'Donnell, more recently, they have started to work on the serious problem of heat stress across the state, especially in urban areas like Hartford and Stamford. Researchers are working to measure and understand current and historical data to track the trends to better predict conditions in the future.

"We currently get two or three days a year when it is above 90°F at night, and we can expect an increase in the future. When that happens, people feel uncomfortable, and people who are vulnerable suffer, so we're going to be we have to anticipate that as well. It's also a significant impact for people who work outside. There are other climate-related impacts that we should plan for."

As the climate crisis worsens, besides pushing resilience projects ahead, O'Donnell stresses that it is essential that we reduce our emissions as soon as possible.

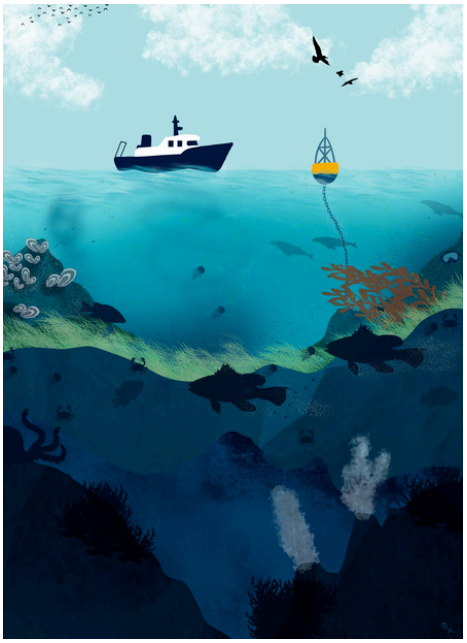
"If we don't reduce our emissions, things will get worse late in this century. We're committed to warming and we're committed to sea level rise, but what we do now will affect what it's going to be like in 2100 and it's a huge difference to what it will be like in 2200. If we don't rapidly shut down emissions now, we're talking about building much higher flood walls. It is important to make people aware that we can adapt to small changes, but it will be a different world if we don't reduce our greenhouse gas emissions."

Celebrating Student Research at the 15th Biennial Feng Colloquium

Most of the participants of the 15th biennial Feng Colloquium at DMS on 15 May 2025

By **Samantha Rush.**

On May 15, 2025, the Department of Marine Sciences hosted the 15th Biennial Feng Graduate Research Colloquium. Named in honor of the first department head, Dr. Sung Y. Feng, the colloquium serves as a professional development event for our departments graduate students, who hone their skills in abstract writing, posters presentations and research talks. This year's program featured 18 talks and 22 posters showcasing the breadth of multidisciplinary work across the department.



Artwork by Matthew Leason

Started by Dr. Hans Dam in 1996, the 2025 Feng Steering Committee included Dr. Julie Granger, Emily Watling, Yifan Zhu, and Anne Gilewski. This year's event also featured artwork by Matthew Leason and was made possible with the support of DMS staff, particularly Deb Schuler and Todd Fake. The event continues to be a valuable platform for students to hone their scientific communication skills, receive feedback, and share their work across the department.

DMS mingling at the Poster session

Penny (l.), Evan (m.) & Hans (r.)

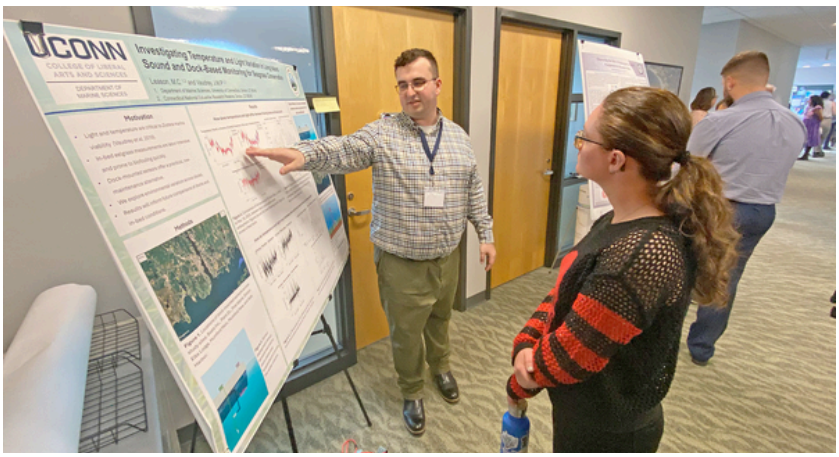
Yifan Gu (r)

Dave Lund (l), Paban Bhuyan (m), Xavier Warren (r)

Vicki You

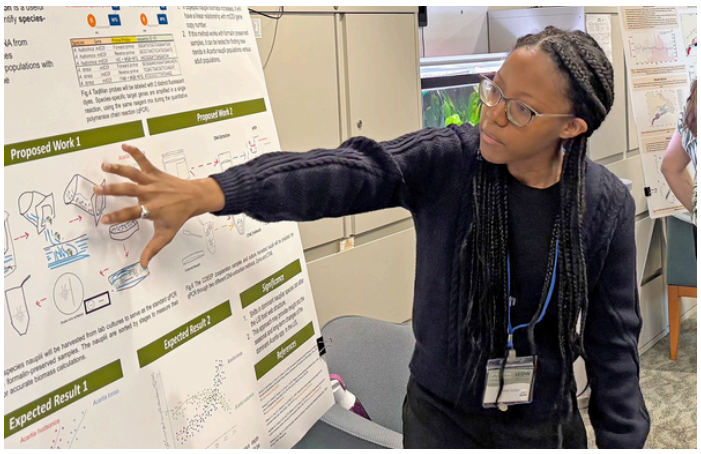
Eva Scrivner

Madison Sobol



Matthew Leason (l) & Sarah McCart (r)

Anne Gilewski (l)



Sunnidae Gallien

Meet Janet Laflamme: The Jack-of-all Trades Driving Our Department's Success

Janet Laflamme is a Financial Assistant at the Department of Marine Sciences, playing a vital role in keeping the department running smoothly. In this interview with current graduate student Samantha Rush, she shed light into her essential position and how she has watched the field change over the years.

Janet Laflamme, Financial Assistant at DMS

Samantha: I found that you obtained your bachelor's degree in biology/biological sciences at UConn in the 1980s and later went back to school to obtain your associate's degree in accounting after almost 20 years at Pfizer. Can you share a little about your time at Pfizer and your journey to accounting?

Janet: I spent 18 years at Pfizer as a research chemist. My work was on metabolic diseases, so many of the projects I worked on were focused on diabetes and obesity. I worked with a PhD chemist synthesizing, isolating, and identifying the novel chemical compound targets which were then submitted for biological testing. Within Pfizer, there were a lot of opportunities for advancement but as time went by it became much more challenging to juggle work/life balance and my three children needed me at home. So, in 2005, I left Pfizer and stayed home to care for my kids. Once my youngest was in school, I felt that an accounting degree would be the best for flexibility and location. Although I was 47 years old starting a new career, the change just made sense! When I was finishing my accounting degree, I was encouraged to apply for this job at UConn. The Department of Marine Sciences was a great opportunity, and it even brought me back to my Alma mater.

Samantha: So, when did you officially start working at UConn? Can you describe your initial role within the Department of Marine Sciences and how that has changed over time?

Janet: I officially began in August 2012 as a Financial Assistant. Initially, my role was to fill the shoes of Pat Evans, who was headed to retirement. I had 3 years to learn everything before she retired! Now, my official title is Financial Assistant 2 Expert Level at UConn.

Samantha: I have interacted with you quite a bit, especially with shipping equipment around the world, so I know you do a multitude of different things! You undoubtedly serve an integral role in this department. Could you share some of the many tasks that keep you busy? How would you describe your day to day in the department?

Janet: I am a jack of all trades! I support all of the back end work related to purchasing, purchase orders, and credit cards. I ensure that all accounts are handled properly to make UConn audit proof. Beyond just the research support, I also work with shipping, undergraduate payroll, and reimbursements. I also support efforts related to the boat and dive locker, and I do a lot of problem solving. This is just like science in the sense that I am multitasking across different skills and disciplines to reach the end goal. Besides these specific tasks, my day-to-day does involve a lot of interruptions. While there are just 100 people in this department, I also interact with the main campus, so I end up with a lot to balance between all different people.

Samantha: You are truly doing so many different things to support all the workings of the department! What would you say are the most rewarding and challenging parts of your job?

Janet: The most rewarding part is definitely watching the students grow and seeing where they all end up, especially the graduate students. I enjoy having the ability to see the success from the sidelines of the direct research over the years. It is also rewarding to see the opportunities that women have now, that my generation just did not. I would say that the most challenging part of my job is the moments when many people need many things at the same time. I may have phone calls, red flag emails, and someone in my office at the same time, and that can be very chaotic! At one point, I was independent as the staff was transitioning within the department. That was certainly tough, but Elizabeth Rawlinson (another Financial Assistant in the Department of Marine Sciences) more evenly spreads the weight of the many tasks.

Samantha: What have you seen change most in the department over time?

Janet: There has been an increase and extension of global research. The department has grown over time with added faculty positions and disciplines. However, the involvement in shipping and traveling globally has exploded.

Samantha: Now considering you worked for both Pfizer and UConn Avery Point (right down the road from each other), I have to ask: are you local to this part of CT?

Janet: Yes, I am originally from Norwich, CT. My dad was in the U.S. Navy, so we moved up and down the seaboard, but I always loved this area. I did not necessarily think I would have a job also related to the ocean, but I couldn't imagine not being along the coastline.

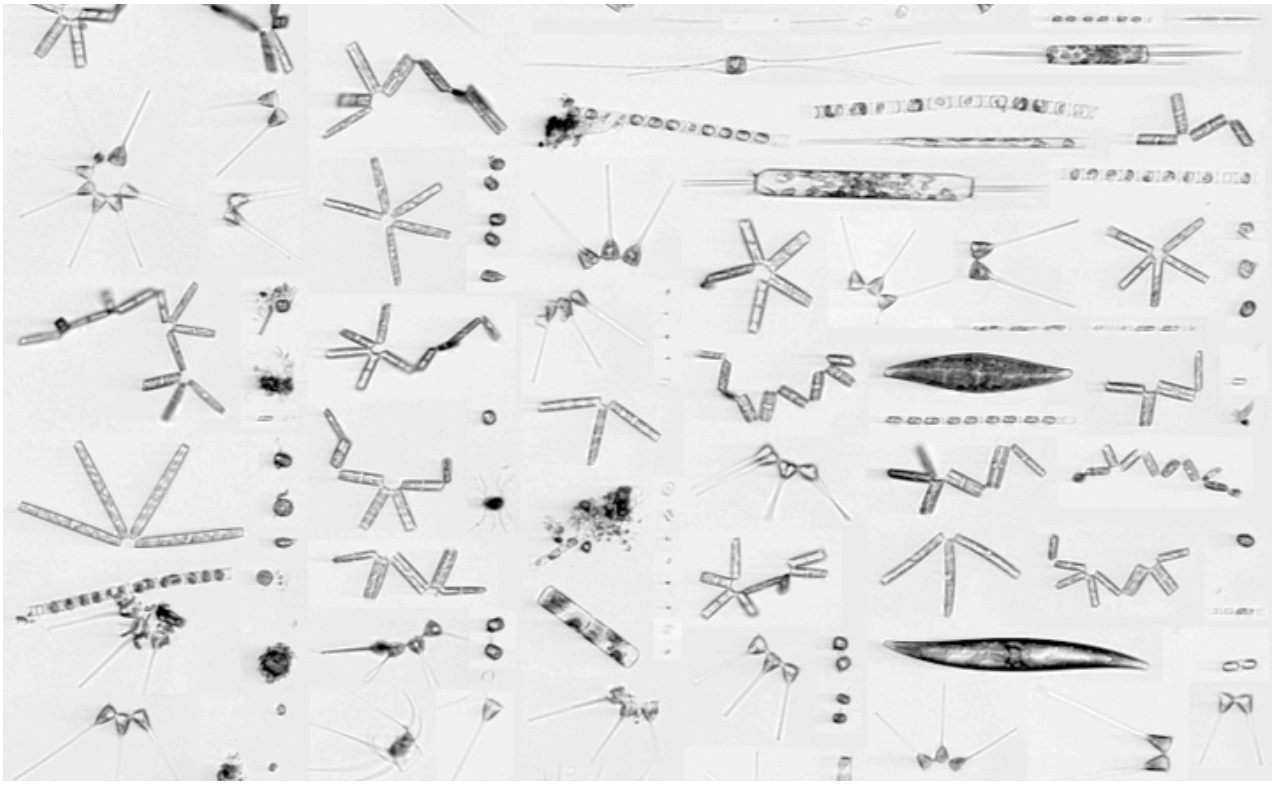
Samantha: And for fun, when you are not at work, what could we find you doing?

Janet: I would usually say that you could find me reading, but I am currently being bossed around by my 3-year-old grandson! He keeps me quite busy, but he is certainly gifting me with a very full life in this season.

Samantha: That is so wonderful! Thank you so much for setting aside some time in your busy day for me! Your role is so greatly appreciated in the department, and we couldn't do very much without you!

And as soon as I stepped out, someone walked in right behind me with a question! She certainly does so much to hold us all together.

At DMS phytoplankton are now on IFCB-TV



Composition of the larger phytoplankton as captured by the IFCB on February 6th 2025.

By **Hannes Baumann.**

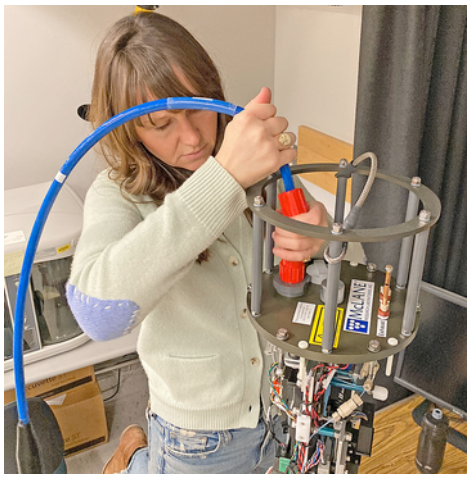
The team of DMS researchers Dr. **Zofia Baumann**, Dr. **Kate Randolph** and **Hazel Levine** are happy to share that a major new instrument has begun its long anticipated work. The **Imaging Flow Cytobot** - or IFCB for short - is for now installed in the Rankin Seawater lab, after being purchased with a UConn-CLAS shared equipment grant nearly two years ago (Dierssen, Baumann et al.).

The instrument has the capacity to monitor and display in real time the breath-taking diversity of microscopic life in the ocean. Our IFCB focuses on the smaller size classes 5 - 150 um, which mostly represent single cell algae and small mixotrophs.

Leveraging additional NSF support, we were able to overcome challenges with operating the IFCB on a routine basis. The IFCB now accesses the intake line of the Rankin Lab (a very small fraction of it) and then photographs any particles and characteristic shapes. The compilation below shows a given size range to illustrate some of the diversity. The IFCB now records these images and displays them on a public-facing online Dashboard, which can be mesmerizing to watch.

The implementation of the IFCB in Rankin Lab was led by Kate Randolph and greatly supported by Hazel Levine, Bob Dziomba, Charlie Woods, Todd Fake, and Chris Mills!

The next step is to develop an AI-based classification system for automatic species identification. This will still take time, but we are collaborating with other IFCB users, including its inventors, and are optimistic about the progress ahead.



Dr. Randolph assembling the brand new IFCB in February of 2023.

Some of the DMS researchers (Dr. Zofia Baumann, Bridget Holohan, and Dr. Kate Randolph) attending the IFCB training at McLane Labs in February of 2023.

DMS students help mapping sediments and fauna in Long Island Sound

22 May 2025. Carlee Dunn and **Riley Pena**, DMS graduate students in the **Matassa Lab**, worked alongside researchers from the University of Connecticut, University of New Haven, and US Geological Survey aboard the R/V Connecticut to map benthic habitats in western Long Island Sound. The cruise used USGS's Seabed Observation and Sampling System (SEABOSS) to capture video and sample seafloor sediments and benthic organisms, such as brittle stars.

The team's research is part of the Long Island Sound Habitat Mapping Initiative, which aims to characterize the regions seafloor habitats. You can see more of the action on the teams facebook page!

Riley Pena (l.) and Carlee Dunn (r.) with the SEABOSS on board the R/V Connecticut

“Just keep swimming: challenges in PhD research”

The ole adage holds true for DMS graduate student Emma Siegfried’s first experiments on a new species of sand lance

By **Samantha Rush** and **Hannes Baumann**

In 1984, the late Alphonse Smigielski and colleagues published a research paper that showed how **American sand lance** (*Ammodytes americanus*) could be successfully spawned and reared in the laboratory. Now, DMS PhD student Emma Siegfried is working to continue experimental research on this species, finding that revisiting the 40 year old study is not without challenges.

Sand lances are so called forage fish, meaning that their role in the ecosystem is to eat tiny planktonic organisms while being important food themselves for higher trophic animals such as other fish, seabirds, and marine mammals. Despite their importance, there is insufficient information about how this species will cope to climate change, particularly during the most sensitive larval and embryo stages. To fill this knowledge gap, Emma’s work focuses on exploring how increasing water temperatures and carbon dioxide (CO2) levels affect sand lance embryos and larvae.

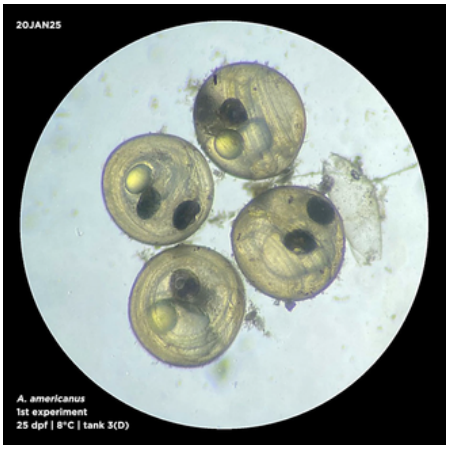
Previous research conducted in Prof. **Hannes Baumann’s Evolutionary Fish Ecology** lab discovered that embryos of the closely related Northern sand lance (*Ammodytes dubius*) are extremely sensitive to elevated CO2 levels, as they are projected to occur in future oceans. However, whether American sand lance are equally CO2 sensitive is not known.

Left: On October 2nd 2024, Emma Siegfried looks at the beach seine stretched across the sand at low tide in Wells Harbor. Right: American sand lance collected in Wells, ME, are being transported in a cooler to the Rankin lab at UConn Avery Point

Emma’s thesis research began in 2024 by first trying to find a reliable and easy to access location, where the species could be found and collected. In the harbor of the Wells National Estuarine Research Reserve in Wells, Maine, she found what she needed, because her fish occurred in high numbers there and could be sampled at low tide easily via beach seine. Now Emma’s goal was to catch the fish as close as possible prior to their spawning season, which in the case of sand lance starts with the beginning of winter.

In late August and early October 2024, Emma and her lab mates successfully collected sand lance and transported them live to the Rankin Seawater at Avery Point. There, however, sand lance proved challenging to care for, as they prefer spending days to weeks burrowed in sand (hence their name), making it difficult to monitor their health and development. Subsequent sampling efforts in November and early December brought a new set back, because the previously accessible population in Wells Harbor had evidently moved into slightly deeper waters and thereby out of reach for the beach seine. Unfazed, Emma proceeded to rear the fish she already had in the lab, hoping that they would ripen and produce embryos for a CO2-sensitivity experiment.

At first, this looked like another failure. Sand lance use the declining temperature as a cue to ripen, but the waters of eastern Long Island Sound that flow through the Rankin lab remained unseasonably warm well into December. Eventually, however, on 23 December 2024, water temperatures crossed the critical 7°C threshold, and 3 days later, Emma and her lab mates indeed succeeded in strip-spawning a few ripened up females! The fertilized embryos were then placed in the Automatic Larval Fish Rearing System (ALFiRiS) that allows computer-controlled exposure of organisms to different temperature and CO2 conditions.



Left: On 26 December 2024, Hannes Baumann, Emma Siegfried, and Lucas Jones lift a bowl of sand out of the big circle tank to look for buried sand lance. Right: 25 days old embryos of American sand lance developing slowly at 8 degrees Celsius

Unfortunately, more experimental setbacks followed. Less than 1% of the embryos actually developed to hatch, the CO2-induced acidification did not produce the desired target pH levels, and a system malfunction remained undetected long enough to raise water temperatures to unnatural levels. Emma remains positive, however, and looks at her trials and tribulations as well as the preliminary data as a valuable exercise in gathering experience with this new, non-model species.

“Even though it didn’t go the way we expected, [we] still learned a lot.” she says.

She added that science is by definition challenging, but she is eager to apply what she has learned and move forward. More generally, her thesis research aims to answer the question whether CO2-sensitivity is a shared trait among sand lance species. To that end, she is applying for a grant to collaborate with researchers in Bergen, Norway who have experience with another, closely related sand lance species (**Lesser sand eel**, *Ammodytes marinus*). She hopes to secure funding to travel and conduct research there from December 2025 through March 2026.

Science Advances publishes DMS study on mercury fluxes in the Arctic

By **Cara Manning**

Congratulations to UConn authors Yipeng He, Hannah Inman, and Robert Mason, as well as their collaborators, on their paper "***Elevated methylmercury in Arctic rain and aerosol linked to air-sea exchange of dimethylmercury***," which was published in Science Advances on March 19 2025!

Yipeng He, Robert Mason, Marissa Despins, and Hannah Inman on the Arctic research expedition

The results of our study of mercury (Hg) dynamics in the Arctic in May/June 2021 further documented the potential of the ocean to be a source of dimethylmercury (DMHg) to the atmosphere under specific conditions, in this instance in conjunction with coastal upwelling. The study further showed that the fate of this DMHg is that it is converted in the atmosphere to methylmercury (MeHg), the most toxic and bioaccumulative form of Hg, which is then transported long distances in the atmosphere before being returned to the ocean in precipitation and through aerosol deposition leading to the potential contamination of fish and marine mammals in vulnerable ecosystems far from the DMHg source. The study determined the magnitude of the various fluxes involved in this transport to further quantify the importance of this pathway.

This research formed part of the thesis research of Yipeng He, the lead author, and was funded by NSF Polar Programs to Robert Mason and his co-PIs. Hannah Inman was also involved in the research study and is a co-author on the paper.

UConn researchers partner with bioplastics company to examine biodegradable plastics

A study led by marine sciences Ph.D. student Hannah Collins found that Novamont's Mater-Bi, a starch-based polymer, degraded significantly faster than traditional plastics—showing promise for reducing marine pollution

UConn Today | January 28, 2025 | **Sarah *Al-Arshani***

Marine sciences Ph.D. candidate Hannah Collins (r.) and Larissa Tabb (l.) evaluate the lab tanks to check on degradation progress

Plastic pollution has become a global crisis, with the **United Nations Environment Programme** estimating between 19 and 23 million tons of plastic waste leak into aquatic ecosystems each year. A partnership between UConn marine sciences researchers and a leading bioplastics manufacturer is showing promise in addressing this issue.

A recent study published in the **Journal of Polymers and the Environment** found that Mater-Bi, a starch-based polymer produced by Italian company Novamont, degraded by as much as nearly 50% over nine months in a marine environment—significantly more than traditional plastics.

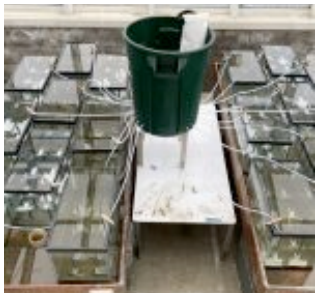
Novamont, which has a U.S. office in Shelton, collaborated with the UConn team to evaluate the product's biodegradation.

The study was led by **Hannah Collins**, a marine sciences Ph.D. candidate. Collins and her co-author, Larissa Tabb '22 (CLAS), highlighted research done as part of the Marine Environmental Physiology Laboratory under the guidance of her advisor, professor and head of marine sciences Evan Ward.

"I've always been interested in how marine animals interact with their environment," Collins says. "When our lab started looking at microplastics, it was clear how pervasive and damaging this problem is."

Collins says the findings could have meaningful implications for reducing plastic pollution in aquatic environments. For example, products like Mater-Bi could replace traditional plastics used in aquatic structures, such as kelp farm lines, to reduce the possibility of plastic pollution.

"We've seen the pictures of sea turtles with plastic around their heads," she says. "We have a lot of evidence of the negative effects of plastic pollution."



Tank setup for the experiment at the Rankin Laboratory on the Avery Point campus

Collins, who grew up visiting Cape Cod and the beaches of Long Island Sound, has long been fascinated by marine life. After earning a degree in biology from Gettysburg College and working in Alaska's salmon fisheries, she decided to combine her passion for marine organisms and the environment, first in her master's program and now for her Ph.D.

She says the collaboration with Novamont has helped her feel like she is making a difference in addressing marine pollution. It also provided her with hands-on experience examining real-world product applications.

Biodegradable plastics like Mater-Bi degrade much faster than traditional plastics, reducing risks to aquatic environments. However, Collins notes that many of these products are often tested under controlled conditions, not in real-world marine environments.

Students spent nine months monitoring degradation of Mater-Bi

Collins' research on Mater-Bi was conducted in a semi-controlled environment at the John S. Rankin Laboratory on the Avery Point campus. The lab filters seawater from the surrounding area to keep large organisms, like crabs, out. This allowed Collins and her team to test how much the product degraded in natural conditions while ruling out the impact of interference from those large organisms.

Samples of the bags used in the experiment

Her team tested samples of a Mater-Bi compostable bag, a traditional plastic bag, and a known biodegradable plastic in the lab. Every two weeks, they checked and measured how much each sample degraded by either mass or area. After nine months, they found that the Mater-Bi samples lost between 25% and 47% of their mass or area. Additionally, they found that the rate of degradation increased during warmer months.

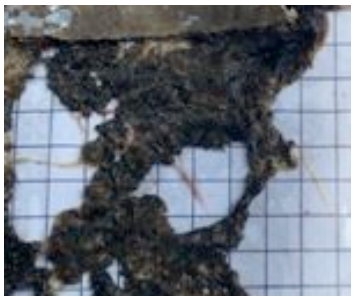
"Microbial activity tends to increase in warmer conditions, which likely contributed to the faster degradation rates we observed," Collins says.

Collins says she is hopeful that these findings could lead to future uses of Mater-Bi in aquaculture, especially for products where temporary or disposable materials are often used, such as oyster grow-out bags or kelp farming lines.

"If something breaks loose, it won't persist in the water for decades," she says.

Collins and Tabb have maintained connections with Novamont. Collins will attend the World Aquaculture Conference in New Orleans this March, where she hopes to connect industry leaders with biodegradable products like those produced by Novamont.

"Addressing plastic pollution requires a range of solutions," she says. "Biodegradable plastics are just one piece of the puzzle."



A Mater-Bi sample at the end of the experiment

DMS researchers test novel underwater "presenter" helmet

By **Peter Auster**

Prof. emer. Peter Auster during the test dive of the new presenter helmet

Research Professor Emeritus Peter Auster led a development project to demonstrate the utility of a "presenter helmet" and integrated oxygen rebreather to engage audiences with video recorded directly from environments of interest. The novel helmet allows an expressive human face and voice rich in excitement, in contrast to standard helmets and full-face masks.

The field test was conducted from the RV Weicker in a shallow seagrass meadow off Avery Point. The project was funded by CT SeaGrant with vessel support from the CT National Estuarine Research Reserve.

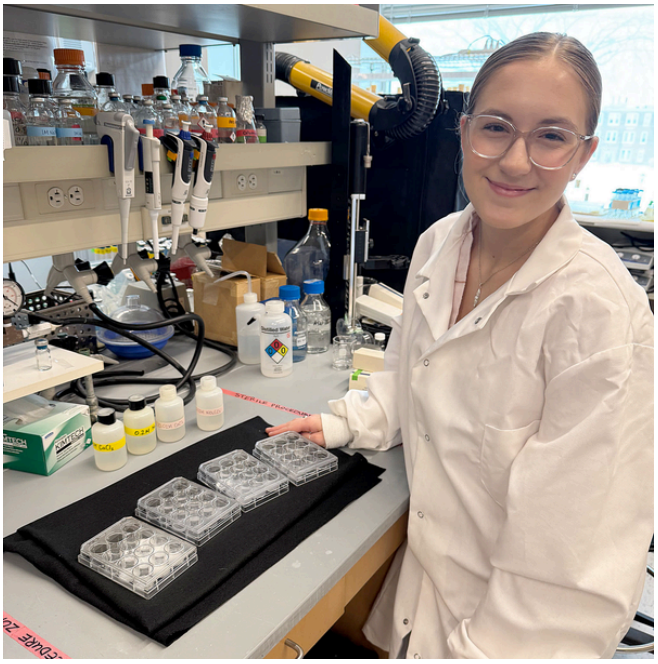
Mike Lombardi from Lombardi Undersea LLC designed and built the helmet, rebreather, and submersible video "studio" complete with voice from the helmet. Associate Professor Jason Krumholz from the CT Reserve also dove the helmet and collected multiple video segments for posting over the web. The potential for "live dives" with a host on the seafloor is a possibility in the future.

DMS sophomore to study if tiny algae grow calcium carbonate crystals

A supply grant from UConn's Office of Undergraduate Research (OUR) will test whether cyanobacteria could assist with removing carbon dioxide

By **Hannes Baumann**

Evelyn Lewis glances at the well plates full of colorful slime in Prof. Visscher's lab and smiles. The life thriving in there is invisible to the naked eye, but she knows how to keep the microscopic critters happy. For almost a year now, she has helped taking care of them, and this has helped others in the lab with their research projects.



On February 12, Evelyn Lewis examines test plates of CaCO3 precipitates in the lab

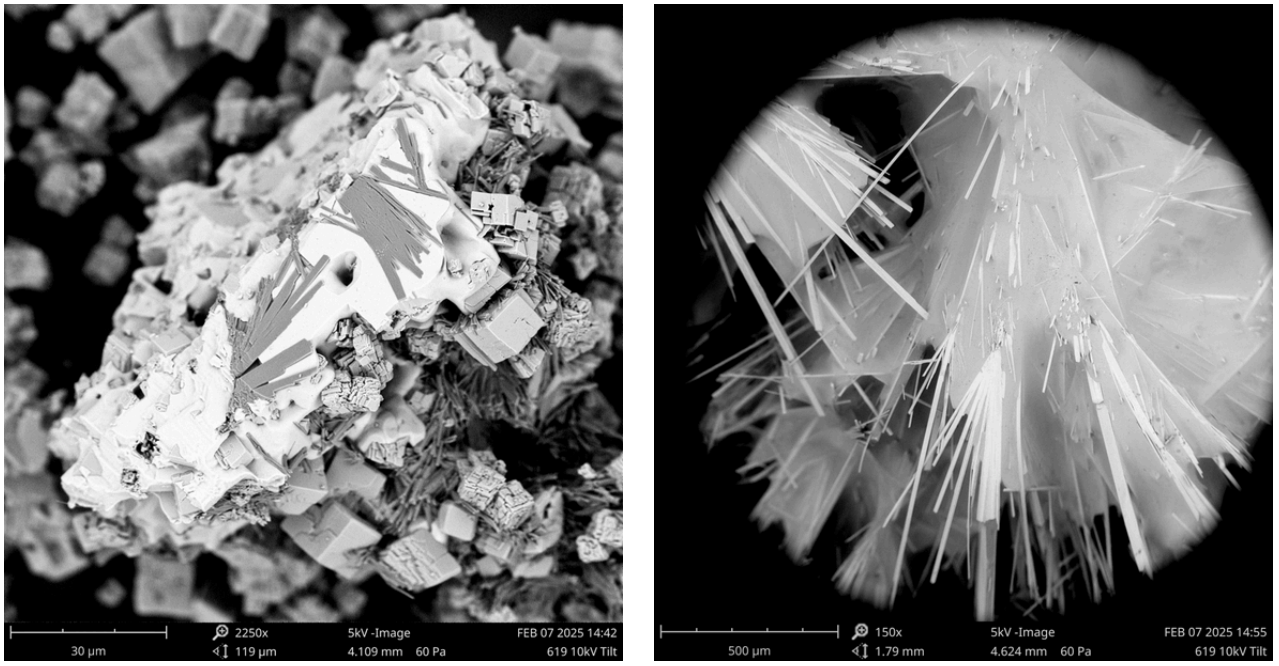
But now, Evelyn is starting a project of her own. Her soft voice betrays the nascent excitement, as she examines a well plate full of what looks like crusty, white dust.

"These are calcium carbonate crystals, and they look so beautiful under the microscope", she says.

Thanks to a new supply grant from UConn's Office for Undergraduate research, she will now have the opportunity to look at many more of these crystals. Evelyn's research will focus on some of the smallest photosynthetic organisms in world, cyanobacteria. When they bloom they often coat themselves in slime that they can chemically manipulate. The conditions in this extracellular slime might then become favorable to bind carbon dioxide (CO2) in form of calcium carbonate (CaCO3), ultimately removing it from the atmosphere. In other words, cyanobacteria may be tiny but mighty as a natural tool for combating the increase of heat-trapping CO2 in the atmosphere.

These natural options of using microbial slime for CO2 removal remain surprisingly underexplored", explains Visscher. "The slime binds calcium and when it sinks to the bottom, it supports CaCO3 formation in sediments for thousands of years. This recently discovered mechanism provides novel insights into the global carbon cycle."

So over the next months, Evelyn will culture cyanobacteria again – but this time for her project. In small well plates, she will measure their $CaCO_3$ production for about two weeks in relation to differing amounts of calcium. Yet the arguably coolest part will come after that, when the collected crystals will be examined using scanning electron microscopy (SEM) and energy dispersive X-ray spectroscopy (EDS).



SEM photograph of (left) rhomboid CaCO3 crystals formed in the presence of a large amount of calcium (lots of slime) and (right) Needle-shaped carbonate crystals form when a smaller amount of calcium, or less slime, is present (note the difference in scale).

Ultimately, the gathered data will allow testing the overarching hypothesis that the presence of cyanobacteria increases CaCO3 precipitation.

Graduate Students bring ocean science to life at Sip ‘n Science event

By **Samantha Rush**

DMS graduate students hosted the annual Sip ‘n Science event at Beer’d Brewing Co. in Stonington, featuring interactive science demonstrations for the local community. Despite a torrential downpour outside, the event was well attended and highlighted meaningful engagement between students, faculty, and the public. Students designed demonstrations of oceanographic principles or their own research, showcasing the breadth of work at the Marine Sciences department while also gaining valuable experience in communicating complex scientific concepts to a general audience.


Left: Erin Leathrum (l.) and Sarah McCart (r.) found a way to visualize microfossils. Middle: Carley Dunn (l.) and Halle Berger (r.) having fun showing off macrobenthic organisms. Right: Hannah Roby (r.) and her giant cardboard black sea bass.

This year's demonstrations covered a wide range of topics, including microfossils, mercury, marshes, ocean waves, isotopes, ocean acidification, the Coriolis force, sea ice brine, Black Sea Bass gut contents, planktonic species, and coastal snails and crabs. Students were nothing short of creative - designing wave tank races, ranking games for mercury-impacted species, isotope explanations using the Hungry Hungry Hippos game, visual displays of acidification effects on seashells, rotating table experiments with dye to show ocean forces, larger than life-sized sea bass cutouts, and salty ice cubes to simulate polar sea ice processes.

Well done, everyone! The department is truly proud of its graduate students!



Genius! Hungry Hippos to visualize isotopes or just to have fun.

You never know when passion starts. Outreach plants seeds.

Julie Granger (l.) and Catherine Mattassa (r.) - Sip 'n Science!



Left to right: Emma Siegfried (l) dissolving shells to illustrate ocean acidification | Catherine Crowley (l), Alex Frenzel (m), and Peter Ruffino (r) | Bernard Akawaase explains the wave tank | A highlight was Paban Bhuyan's and Bernard Akaawase's (not shown) rubber ducky wave tank.

Harmony of Nature II: Music as a Tool for Science Communication

By **Samantha Rush**.

PhD candidate **Molly James**, pianist **Sophy Chung**, and composer **Maxwell Lu** have joined forces to release **Harmony of Nature II: Waves**, an album showcasing the growing potential of music as a tool for science communication.

Molly James, Sophy Chung, and Maxwell Lu

During the COVID-19 pandemic, Molly and Sophy began helping each other learn and practice their respective languages: English and Korean. This blossomed into a beautiful friendship and also into an unexpected collaboration between music and science.

Molly, a scientist and bass trombone player in the **Southeastern Connecticut Community Orchestra**, and Sophy, a pianist trained at **The Juilliard School** and a teacher at **Yewon Arts School** in Seoul, previously merged their passions to create Harmony of Nature phase I in 2022. The project transformed environmental data (temperature changes, wind speed, wave height, and tides) from the South Korean Meteorological Agency into sounds and classical compositions.

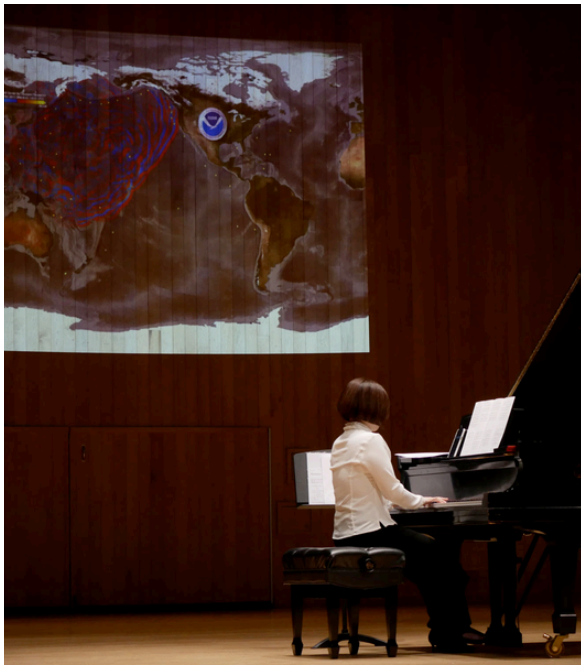
The project received a lot of positive feedback, especially following live performances. Motivated by this success, the team enlisted Max, a composer also trained at The Juilliard School and computer scientist, to help develop a second album. Like the first, Harmony of Nature II uses environmental data to generate musical compositions, but with a specific focus on wave data.

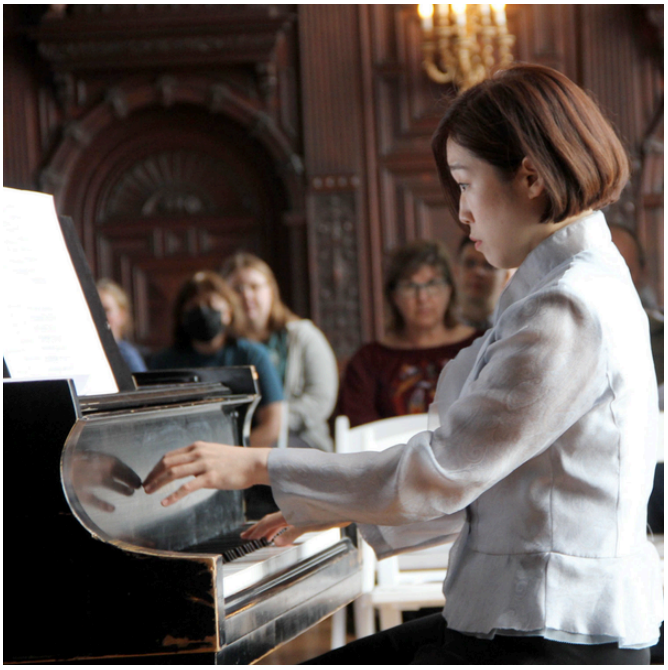
One piece, called honshu_east_all - tsunami, is composed from data from the **National Oceanic and Atmospheric Administration** (NOAA) **Deep-ocean Assessment and Reporting of Tsunamis** (DART) buoy system during the 2011 Tohoku earthquake and tsunami in Japan. The piece features bell tones at intervals that correspond to the tsunami signal detected by the buoys as it traveled across the Pacific Ocean. Another composition, **sea level rise**, uses NOAA Tides & Currents buoy data from long-standing stations in NY and CT to explore sea level rise in Long Island Sound.

The goal of these compositions is to translate complex, non-intuitive environmental data into a deeper emotional connection to nature. While it can be difficult to quantitatively measure the exact impact on scientific literacy or audience actions, Molly notes that in-person feedback has been “very positive” with listeners expressing emotional connections and increased knowledge.

The team is already working on Harmony of Nature III, with a target release date sometime between 2025 and 2026. Currently, they are exploring datasets from the 2024 Atlantic Ocean hurricane season that brought devastation to the US

including storms such as Beryl, Helene, and Milton. At the same time, they are also exploring data related to rapid Arctic environmental changes and glacial melt. Their future goals include expanding the instrumentation, recruiting more musicians for recordings and performances, and including researchers from other scientific fields.





Left: Sophy playing a piano composition connected to NOAA tsunami data as pictured on the background screen (credit: Ahnecia Gary). Right: Sophy playing the piano in the Branford House (credit: Judy Benson/CT Sea Grant)

"This exercise in collaboration and science communication presented me with opportunities to learn from my two teammates who have totally different skillsets from my own and who challenge my inclinations and training as a scientist. I am out of my comfort zone in all our meetings", says Molly.

For her, the experiences with Harmony of Nature have offered multiple iterations of science communication training from communicating to Sophy and Max as well as to their intended audience. Molly adds that effective science communication, whether through music or other avenues, relies on understanding your audience, distilling your message, and avoiding jargon.

So far, Sophy has performed Harmony of Nature II at several venues in the US, including the Marc A. Scorca Hall at the **National Opera Center in New York City** (3/23/24), the **Branford House at UConn Avery Point** (3/27/24), and at the **von der Mehden Hall at UConn Storrs** (3/29/24).

The project has also been on display in a multimedia exhibition format at the UConn Avery Point campus at the Alexey von Schlippe Gallery, where Sophy returned to debut a new piece at the opening reception in the Branford House on April 2, 2025.

You can find the full Harmony of Nature II album on Apple Music and Spotify

Could an endangered, ancient fish make a comeback in the Connecticut River?

Fish that swam next to the dinosaurs are once again appearing in CT waters

UConn Today | April 30, 2025 | ***Elaina Hancock***

After sightings of young sturgeon were reported, CT DEEP researcher Kelli Mosca '22 MS and Professor Hannes Baumann began researching whether these ancient fish are making a comeback in the Connecticut River (credit: Jacob Snyder)

For 160 million years, long-lived and highly migratory Atlantic sturgeons have made their way from the ocean to freshwater spawning grounds inland. The Connecticut River was one of the waterways sturgeon sought out – that is, until they were fished nearly to extinction in the early 20th century.

In 2014, however, researchers from the CT Department of Energy and Environmental Protection (**CT DEEP**) caught a few juvenile sturgeons in the **Connecticut River,** implying that sturgeons were spawning there again. More little sturgeon appeared in 2020 and again in 2022, leading some to wonder if this iconic fish that swam next to the dinosaurs was indeed making a comeback in our regional waters.

A new study from UConn professors **Hannes Baumann** from the Department of Marine Sciences and **Eric Schultz** from the Department of Ecology and Evolutionary Biology, in collaboration with researchers from CT DEEP including **Kelli Mosca** '22 MS, J**acque Roberts, Thomas Savoy** and **Evan Ingram** from Stony Brook University, shows that we have much to learn about sturgeons and that it may not be too late to give them a chance for recovery. Their findings are published in the National Oceanic and Atmospheric Administration's open access journal, **Fishery Bulletin**.

Baumann says the project started at a conference in 2019, when he connected with researchers at CT DEEP who pitched a potential collaboration with Mosca, who was a CT DEEP seasonal resource assistant at the time and was hoping to pursue a graduate degree and focus her research on sturgeon. Despite these sightings, Baumann says he was skeptical that the fish were having a comeback, but he was interested in the project.

"These fish spawn in freshwater and then they develop until they are about 50 centimeters in size, then they travel to the ocean so if you find a little sturgeon in the Connecticut River, it must have been born there," says Baumann. "We know there are sturgeon entering the Connecticut River; then the question is, how far do they go?"

CT Deep researchers including Jacque Roberts, pictured here, used acoustic telemetry to track the movements of sturgeons. Fish were equipped with a small acoustic tags, and CT DEEP receivers mounted throughout the Connecticut River recorded signals whenever fish swam near. (credit: Jacob Snyder)

For the project, Baumann secured funding from Connecticut Sea Grant, Mosca joined Baumann's lab, and they started analyzing data to study sturgeon movement in the Connecticut River.

In 1998, sturgeons became a protected species but only after their situation had become dire. They are now heavily regulated, and even getting permits for research is not an easy task, says Baumann.

The researchers took samples of their pectoral fins that indicate the fish's approximate age. Mosca looked at samples taken from the fish to determine the age,

"Ageing fish is often compared to ageing trees, in the sense that just as trees gain a ring in their trunk for each year they're alive, a fish adds what we call an annulus (ring) to various hard parts in their body each year they are alive. In sturgeon's case, they are not fully calcified, meaning there are not many hard bones to choose from to age. However, a small piece of their pectoral fin is hard enough to create those rings and can thankfully regrow so there is no deleterious effect on the fish. I am thankful to have access to such a large archive of these samples, which are rare given the endangered status of this species," says Mosca.

People have also tagged these fish with acoustic transmitters, a specialized tag that send out a signal which is then picked up by listening equipment called receivers. CT DEEP deploys receivers anchored along the Connecticut River and within Long Island Sound that record the tag data as tagged sturgeon swim by.

The researchers used data on tracked sturgeons over the course of the three-year study, and over that period, sturgeons were detected as far upriver as Wilcox Island (Middletown, at river kilometer 52).

"In theory, it's all very easy, you just have to download the data and look where the sturgeon are," says Baumann. "In practice, there are lots of statistics and analytical steps to properly assess these data. There were something like 1.5 million detections, over the three years in total, so 1.5 million rows of data, where every ping was a sturgeon somewhere. This corresponded to 85 individuals tracked over three years."

Tracking animals in this way is called acoustic telemetry, and Baumann says the technology has profoundly changed our understanding of animal movements in the wild. There were some surprises in this one, he notes.

"Instead of just episodic accounts of single individuals, this study stands out for the large number of tracked fish," says Baumann. "It showed that sturgeons generally arrive in the estuary in spring and leave in fall and that most stay in the brackish estuary. But intriguingly, a lot of the fish are indeed making these long upstream excursions into the freshwater. Why would they do this?"

After being fished nearly to extinction, Prof. Hannes Baumann cannot say with certainty if sturgeon are making a comeback in the Connecticut River, but this new study gives us some hope that the species may recover. (credit: Jacob Snyder)

Baumann says that the initial, most intuitive explanation of the fish displaying spawning migrations appeared unlikely after closer inspection. This is because most of the fish were not of adult size and age and, therefore, too young to spawn.

"We always thought Atlantic sturgeon are only in the estuary when they are young, and it is only when they want to spawn that they go into the freshwater. But that appears to be false. Our study shows that almost every size of sturgeon travelled into the freshwater portion of the Connecticut River. We had two individuals in our data set who were 18 years old. Most of the fish that we caught were younger than 12 years, and the average was about eight years, so they're youngsters," says Baumann.

The data therefore revealed that Atlantic sturgeons are using the entire Connecticut River, not just the estuary. Baumann says their working theory is that the fish are exploring other areas to find food, since the estuary can become crowded in the summer.

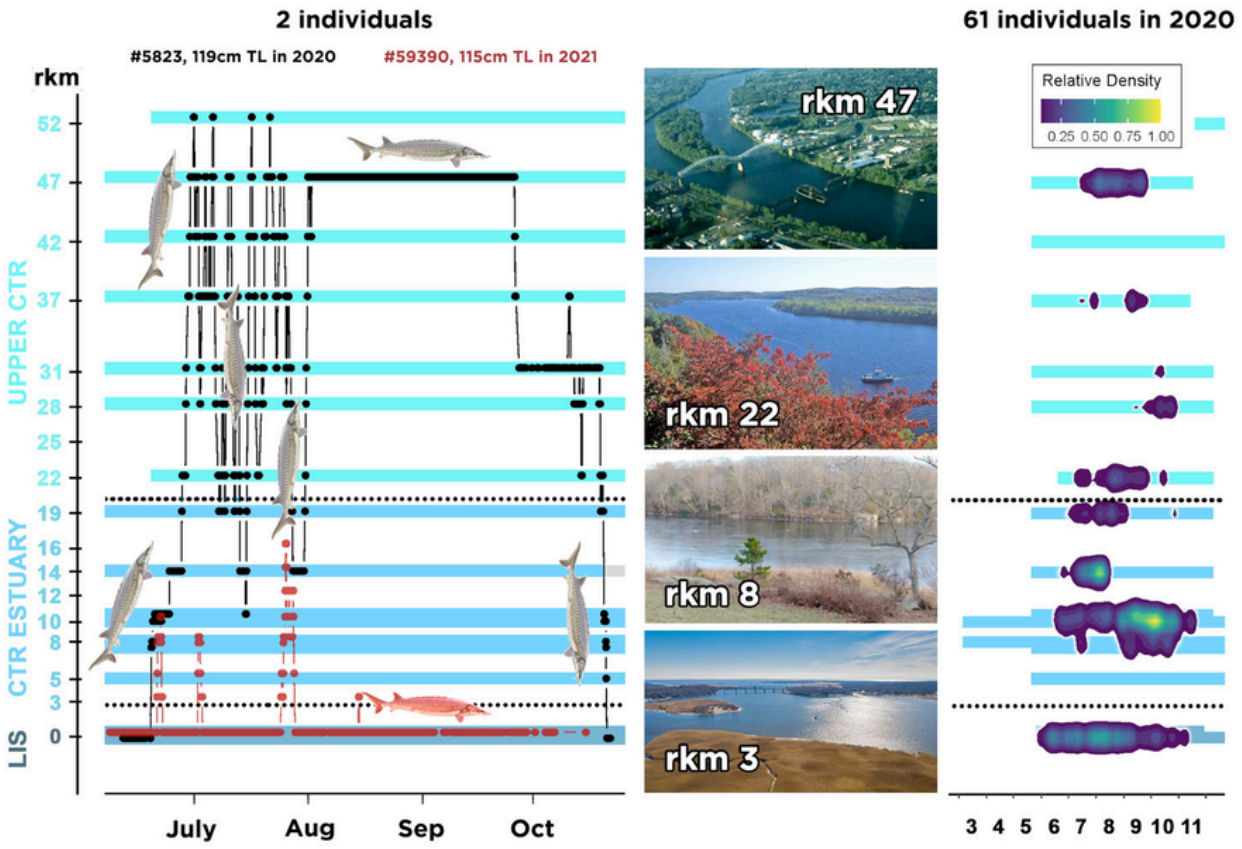
"In the paper, we advanced a theory that some of these Atlantic sturgeons move further up the river due to competition because it's getting too crowded. The gist is we now know that we need to protect sturgeons at least during these important summer months, when they are in the entire Connecticut River."

These findings are promising and important for ensuring measures are in place to help give the sturgeons the best chance possible at making a recovery. Though Baumann cannot say with certainty that the population is growing, a hopeful indication is that sightings of juveniles likely born in the River are happening more frequently.

“The sightings are still very sporadic and sort of ephemeral, but perhaps it’s a start.”

Protecting a highly mobile species like sturgeons can be tricky because they recognize no borders. Therefore, it takes national, federal, and international cooperation, but other measures are also important to ensure people are aware of their presence to help reduce accidental boat strikes or bycatch in commercial fisheries.

“From a logical perspective, they have been fished to quasi extinction in the beginning of the 20th century. Indeed, it would be a small miracle if these fish came back,” says Baumann. “At the end of the day, they made it 160 million years, and we need to just give them a chance to make it another 100. It doesn’t take much. It does take time, but if we allow it, I’m convinced that nature will find a way.”



Visualizing telemetry data: An abacus plot (left) allows following the seasonal movements of individual fish along the Connecticut River receiver array, from the mouth of LIS, to the brackish estuary and into the fresh, upper river. A Kernel density plot (right) can visualize the habitat occupancy of many telemetered individuals.

GRADUATIONS 2024-2025

The Department of Marine Sciences is proud of our most recently graduated Master's and Ph.D. students

Molly James (M.Sc. 2024)
Major advisor: James O'Donnell

Mackenzie Blanusa (M.Sc. 2024)
Major advisor: Cesar Rocha
Thesis: *Tropical Submesoscale Dynamics as Inferred From an Array of Saildrones*

Hannah Inman (M.Sc. 2024)
Major advisor: Robert Mason

Felipe Porto (M.Sc. 2024)
Major advisor: Pieter Visscher

Tyler Griffin (Ph.D. 2024)
Major advisor: J. Evan Ward
Dissertation: *Taxonomic and Functional Profiles of Gut Microbiota from Mytilid Mussels: Dynamics Under Normal Physiological Conditions and in Response to Disturbance*

Ewaldo Leitão de Oliveira Junior (Ph.D. 2024)
Major advisor: Hans Dam
Dissertation: *The Role of Temperature and Thermal Adaptation on Plankton Ecology: Population Dynamics, Predator-prey and Antagonistic Interactions*

Jessie Steadman (M.Sc. 2024)
Major advisor: David Lund

Ethan Taylor (M.Sc. 2024)
Major advisor: David Lund
Thesis: *Evaluating the Depth Habitat of* G. bulloides *in the Atlantic Sector of the Southern Ocean*

Sophia Smith (M.Sc. 2024)
Major advisor: Robert Mason
Thesis: *Speciation, Partitioning, and Transport of Hg from the Penobscot River to the Gulf of Maine*

Brittney Collins (M.Sc. 2024)
Major advisor: Michael Whitney

Mengyang Zhou (Ph.D. 2024)
Major advisor: Julie Granger
Dissertation: *Physical Influences on Ocean Biogeochemistry – Nitrogen Biogeochemistry in Mesoscale Eddies in the North Pacific Subtropical Gyre and Seasonal Hypoxia in the Southern Benguela Upwelling System*

Lauren Barrett (Ph.D. 2024)
Major advisor: Penny Vlahos
Dissertation: *Carbon and Oxygen Dynamics in Productive Coastal Ecosystems: From the Remote Arctic to Metropolitan Temperate Zones*

Alexandra Frenzel (M.Sc. 2025)
Major advisors: Craig Tobias and Samantha Siedlecki
Thesis: *Sediment Alkalinity Exchange on the Northwest Atlantic Shelf: Diffusive Fluxes and Drivers*

AWARDS, GRANTS, PUBLICATIONS

Awards

Prof. **Senjie Lin** received the **Darbaker Prize** from the Botanical Society of America. Professor Lin's research spans an impressive range of approaches and questions, and it provides insights for understanding the biology of two distinct groups of marine phytoplankton (diatoms and dinoflagellates), and thus for thinking about global nutrient cycling and phytoplankton community dynamics.

PhD Candidate **Hannah Collins** received the **World Aquaculture Society Student Spotlight award** from the World Aquaculture Society. This recognizes the best student abstracts submitted to the Aquaculture 2025 meeting.

PhD Candidate **Halle Berger** received the **Best Student Poster Award** at the 2025 winter science meeting of the Southern New England Chapter of the American Fisheries Society. The poster was about Halle's research on modeling the effects of ocean acidification and warming on Atlantic sea scallop growth to inform adaptive fisheries management.

Grants

Profs. **Cara Manning**, **Leonel Romero**, and **Samantha Siedlecki** have received a $499,570 grant from the **Long Island Sound Study** Research Grant Program to investigate the drivers of oxygen depletion (hypoxia), and the duration and severity of low-oxygen conditions in western Long Island Sound using a combination of observational and modeling approaches. (https://longislandsoundstudy.net/2024-research-project-descriptions/)

Prof. **Senjie Lin** (PI) and Dr. **Anson Ma** in the School of Engineering received a $1,500,000 grant **ECO-SPARK**: **Enzymatic Conversion of Organic Carbon into Sustainable Power through Aquatic Reactors and Kinetics** (DARPA). Algae are both natural and industrial sources of renewable energy. Collaborating in a Columbia University-led multi-million-dollar project, Professor Senjie Lin will lead his UConn team and contribute his expertise on microalgae to advance the development of algae-based electricity-generating technologies.

Selected Publications

PhD Candidate **Hannah Collins** and DMS undergraduate **Larissa Tabb** (CLAS '22), along with **Bridget Holohan** and Prof. **Evan Ward**, collaborated with a local bioplastics company to investigate the disintegration of biodegradable plastic bags in marine conditions. The study compared the disintegration of Novamont SpA's Mater-Bi brand to a comparable biopolymer and a traditional plastic type, showing that with increasing time and temperature the biopolymers significantly degraded, but the traditional polymer did not.

- Collins, Hannah I.; Tabb, Larissa; Holohan, Bridget A.; Ward, J. Evan. **Disintegration of biodegradable plastic bags in marine mesocosm conditions: The effects of time and temperature**. Journal of Polymers and the Environment, 33, 1035-1046.

Former graduate student Yipeng He, student Hannan Inman, and Dr. Robert Mason participated in a research expedition in the Bering and Chukchi Seas off Alaska in 2021. Collected and analyzed samples in the atmosphere and in the ocean waters were used to examine the factors effecting the inputs of various mercury (Hg) compounds to the ocean from the atmosphere and the loss of gaseous forms of Hg to the atmosphere, with a focus on the exchange of methylated Hg forms.

- He, Yipeng; Inman, Hannah; Kadko, David C; Stephens, Mark P; Hammond, Douglas E; Landing, William M; Mason, Robert P. 2025. **Elevated methylmercury in Arctic rain and aerosol linked to air-sea exchange of dimethylmercury.** Science Advances, 11.

Prof. **Robert Mason** was involved in the analysis and interpretation of the measurements made by research colleagues. The publication examined how the recent changes in climate is affecting the inputs of mercury (Hg) to the ocean waters off of Antarctica and the relative importance of inputs from the continent versus inputs from the atmosphere, and how these inputs differ for Hg compared to carbon. The study used information from ancient sediments to infer what will likely happen in the future in a changing climate.

- Zhou, C., Liu, M., Mason, R.P., Assavapanuvat, P., Zhang, N.H., Bianchi, T.S., Zhang, Q., Li, X. Sun, R., Chen, J., Wang, Raymond, P.A. 2025. **Warming-induced retreat of West Antarctic glaciers weakened carbon sequestration ability but increased mercury enrichment**. Nature Communications, 16.

Xiangming Shi, a former post-doc with Prof. **Robert Mason** participated in a research cruise around Iceland in 2021 examining the exchange of mercury (Hg) between the ocean waters and the sediments in the region around Iceland where there is dynamical mixing of waters between the Arctic and North Atlantic Oceans. Radioisotopes measurements of thorium were used to help estimate the fluxes of Hg compounds into and out of the sediments due to diffusion and sediment resuspension.

- Shi, X., Annett, A., Jones, R., Middag, R., Mason, R.P. 2025. Benthic redeposition and burial of mercury species estimated using sediment thorium isotopes in the far North Atlantic (60-70 ºN). Geochim. Cosmochim. Acta 399: 191-204

Selected Publications (cont.)

PhD student Eva Scrivner and colleagues linked the chemical composition of effluent wastewater discharge in the Tijuana River Estuary with laboratory, field, and hyperspectral satellite spectroscopy. This work serves to inform real-time water quality monitoring in a heavily polluted coastal urban center.

- Scrivner, E., Mladenov, N., Biggs, T., Grant, A., Piazza, E., Garcia, S., Lee, C.M., Ade, C., Tufillaro, N., Grötsch, P., Zurita, O., Holt, B., Sousa, D., 2025. **Hyperspectral characterization of wastewater in the Tijuana River Estuary using laboratory, field, and EMIT satellite spectroscopy**. Science of The Total Environment 981, 179598

Former Masters student **Annette Carlson** from the Coastal Biogeochemistry Dynamics lab, Prof. **Samantha Siedlecki** (PI) and Prof. **Julie Granger** published NSF funded work on oxygen dynamics in St. Helena Bay (SHB), a productive area in the southern Benguela Upwelling System off western South Africa that is severely impacted by low oxygen causing fish mortality events. Specifically, it highlights the seasonal cycle of oxygen, including periods of hypoxia and anoxia, and the role of winds and source water changes in driving these variations.

- Carlson, A. J., Siedlecki, S. A., Granger, J., Veitch, J., Pitcher, G. C., Fearon, G., et al. 2025. **Seasonal source water changes and winds contribute to the development of hypoxia in St Helena Bay within the southern Benguela upwelling system**. Journal of Geophysical Research: Oceans, 130, e2024JC021702

PhD student **Gunnar Hansen** alongside professors Prof. **Sandra Shumway**, Prof. **Rob Mason**, and Prof. **Zofia Baumann** examined the distribution of inorganic mercury (iHg) and methylmercury (MeHg) in the soft tissues of hard clams (quahogs) and found that muscular tissues contained a higher proportion of MeHg, while the viscera and mantle also harbored inorganic Hg.

- Hansen, G., Shumway, S. E., Mason, R. P., & Baumann, Z. 2025. **Mercury distribution with size between the tissues of the northern quahog (= hard clam)(*Mercenaria mercenaria*)**. Environmental Pollution, 126287.

CT DEEP researcher **Kelli Mosca** and Prof. **Hannes Baumann** combined age analysis and telemetry to show that Atlantic sturgeon of all sizes frequently migrate into upper, freshwater portion of the Connecticut River.

- Mosca, K.C., Savoy, T., R. Benway, J., Ingram, E.C., Schultz, E.T., and Baumann, H. 2025. **Age structure and seasonal movement patterns of Atlantic sturgeon aggregating in eastern Long Island Sound and the Connecticut River**. Fishery Bulletin. 123:127-142.

PhD student **Lucas Jones** used genetics to reveal what sand lance species inhabits the Hudson Bay in the Canadian Arctic.

- Jones, L.F., Schembri, S., Bouchard, C., and Baumann, H. 2025. **Molecular identification of larval sand lance (Ammodytes spp.) caught in the Hudson Bay System 2010-2018.** Environmental Biology of Fishes 108:305–316.

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Please consider joining the **Partners of Marine Sciences** by signing up at **https://marinesciences.uconn.edu/partners-of-marine-sciences**. Doing so will keep you up-to-date on all of the exciting activities ongoing in Marine Sciences. It will allow us to reach out to you about special initiatives.

Impressum

Compiled by DMS communication committee

Covered period: December 2024 - May 2025
Communication fellow: Samantha Rush
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