

NEWSLETTER



Fall 2023, ISSUE 15



Community members create vibrant sand art for judging during the Art on the Beach event led by Cascade Head Biosphere Collaborative on August 5th, 2023 at Roads End Recreation Site, Lincoln City, Oregon. Photo courtesy of Duncan Berry.

FROM THE EXECUTIVE DIRECTOR'S DESK

During August, I had the good luck to travel the Oregon coast, participating in a variety of ocean and coastal events. I took part in a wonderful art-on-the-beach event in Lincoln City, celebrated the 20th anniversary of our Pacific northwest coastal ocean observing system in Astoria, and witnessed the inspiring work of our summer interns in Newport and Port Orford. During my travels, I heard continued interest in the ocean and all it provides for us, balanced by a nervousness about rapid changes being observed off our shores and across the planet. We are buoyed by the interest of students in learning about and helping to sustain our ocean and coasts. Just three years into the new Marine Studies undergraduate major, nearly 100 students have enrolled in the program and 5 have already graduated! On September 12th, we celebrated the Gladys Valley Marine Studies Building on the Hatfield campus in Newport, Oregon. The OSU Foundation put on a wonderful event during which we thanked our generous donors and community supporters who made the construction of this amazing building possible. We look forward to another great year of meeting new friends, excited about what's next in our pursuit of marine studies.



Jack Barth, *Executive Director*

- Jack Barth, Marine Studies Initiative Executive Director

MSI Summer Internships



MSI's ten interns jumping for joy after giving the final presentations of their summer projects!

Our summer 2023 internships cruised by! We provided 10 different experiences, including two new partner organizations and mentors: MidCoast Watersheds Council and the Port of Newport.

Interns dove into projects such as: 1) evaluating the Oregon Coast Aquarium Animal Ambassador Program, 2) enhancing accuracy in chlorophyll fluorometry with Sea-Bird Scientific, 3) coastal bird interpretation with the US Forest Service, 4) organizing Port Orford community outreach events, 5) multimedia communication in watershed restoration, 6) developing sustainable and cost-efficient fish and general waste disposal systems, 7) monitoring cobble movement in Oregon's beaches, 8) developing a remote monitoring system for 3D printers in the HMSC Innovation Lab, 9) evaluating how skates respond to offshore wind turbines, and 10) designing low-cost water quality instruments.

We want to thank our partners and mentors for providing such incredible learning experiences through their professional, personal, and financial support.

Learn more about our Summer 2023 interns at: beav.es/Taw



MSI Intern Logan Kary working with new partner MidCoast Watersheds Council on stream restoration.



MSI Intern Madeline Judokusumo working with new partner Port of Newport to develop sustainable and cost-efficient waste disposal.

MSI Student and Housing Awards

In Spring and Summer 2023, MSI provided financial support for five undergraduate students exploring their ocean-related academic interests. Ashley Osborne, Faith Townsend, MariAnna Hinojosa, Nick Kehoe and Paige Foust received MSI Student Awards of up to \$500 for professional conference travel, pelagic birding trip registration, or field equipment purchases. In addition, MSI provided Coastal Housing Awards totaling around \$890 for three students staying at Hatfield in Fall 2023. We're excited that more and more students are taking advantage of these opportunities made possible by generous donor support!

Celebrating All Coastal Internships

Spending a summer as an intern on Oregon's captivating coast can profoundly reshape one's outlook. Summer internships at the Hatfield Marine Science Center unveil a world of mystery and urgency, from serene dynamic estuaries to the enigmatic changes in the sea. This summer, 60+ undergraduate students experienced a transformative journey of active learning through direct experience in intern programs organized by the Marine Studies Initiative, Oregon Sea Grant Summer Scholars Program, HMSC Innovation Lab, and NSF Research Experience for Undergraduates, the Fisheries, Wildlife, and Conservation Sciences VIEW Fellowship (Vanguarding an Inclusive Ecological Workforce), and others. Hatfield is a major hub for internship activity, with other intern activity locations up and down the coast.



HMSC Summer Coastal interns learn about coastal dune and forest management of the Oregon Dunes National Recreation Area with USFS staff Doug Glavich and Chelsea.

Internships provide experience in conducting research, developing independent projects, and honing effective communication skills. Students learned to convey complex concepts in an accessible manner, a skill that is vital for effectively disseminating knowledge to diverse audiences. For example: from studying marine ecosystems to analyzing data, interns in the REU program gained a deep understanding of scientific methodologies, data interpretation and the marine science community.

Interns participated in the Oregon Coastal Internship Field Experience, a three-day immersive learning experience in nature's classroom along the southern Oregon coast with visits to field stations and field sites with agency and industry partners (fisheries, aquaculture, tourism). Their journey culminated at the **HMSC Summer Coastal Intern Symposium**, sharing their work and revelations with researchers, agencies, non-profits, and industry pioneers. Though the summer may end, the impact of these experiences will endure. The OSU Coastal Summer Interns embarked on an internship that forever ties them to the Oregon coast!

-Itchung Cheung, HMSC

MAST Undergrad Program Update



Lori Cramer, first Assistant Director of the MAST program.

The Marine Studies Initiative and the College of Liberal Arts (CLA) welcomes Lori Cramer, Professor of Sociology, as the first Assistant Director of the Marine Studies (MAST) undergraduate degree program. Lori brings nearly 30 years of expertise in transdisciplinary coastal and marine research and curricular development to MAST, which is administered and led by CLA Associate Dean Nicole von Germeten. Nicole and Lori continue MAST's collaborations across OSU and coastal spaces as they work together to advance this interdisciplinary degree. To share your interests in the human dimensions of the ocean and coasts, reach out to vongerjmj@oregonstate.edu or cramerl@oregonstate.edu.

Academic Program News

Summer Session: Experiential Learning at the Oregon Coast

Between June and August, Hatfield Marine Science Center hosted an enriching series of OSU courses, attracting over 50 students from a dozen majors to learn about the ocean and coasts through field-based, experiential courses. Faculty from three Colleges converged to offer:

- Biology and Conservation of Marine Mammals (Instructors: Kate Stafford & Renee Albertson; CAS)
- Phycology (Instructor: Allen Milligan, CAS)
- Food from the Sea (Instructor: Taylor Chapple, CAS)
- Ecology of Marine and Estuarine Birds (Instructor: Rachael Orben, CAS)
- Aquaculture Laboratory (Instructor: Chris Langdon, CAS)
- Pacific Northwest Coastal Ecosystems (Instructor: Sarah Henkel, COS)
- Marine and Estuarine Invertebrate Zoology (Instructor: Nathan Kirk, COS)
- Biological Oceanography (Instructor: Maria Kavanaugh, CEOAS)

Thank you to all the educational partners and units participating in the Marine Studies Initiative to expand and enhance experiential learning at the coast!

Welcome to Fall Term

Undergraduate and graduate programs across the university are welcoming new and returning students. We are incredibly excited about the expanding array of course offerings in Fall term, including intensive short courses and regular, 10-week courses. A new course, Behavioral Ecology of Marine Animals (FW 466/566), is just one of the many offerings. This Fisheries Wildlife, and Conservation Sciences course is taught by Mauricio Cantor. It is an introductory, field-based course examining how the social lives of animals contribute to solving fundamental life challenges—eat, not be eaten, reproduce—from an evolutionary and ecological perspective. Congrats, Mauricio, on launching this new fall term course at the coast!

Ocean11 Marine Club



Hiking through the Cascade Head Biosphere Reserve



Kayaking during the Spring 2023 Coast Camping Trip

Ocean11 marine club keeps bringin' it – experiencing the ocean in great and creative ways. This new school year we expect our students to continue their wide variety of activities. In Spring '23, they organized a big Camping Trip in the Oregon Dunes National Recreation Area, Cascade Head Biosphere Reserve hike, Whine & Paint Night, World Ocean Day activities on campus, ocean games and activities at school Science Nights and OSU Discovery Days, beach cleanups, dialogues with OSU ocean researchers and managers about underwater robotics, community resilience, ocean veterinary medicine, fisherman 1st aid, surfing techniques, and more, plus relationship-building times like game and video nights. With our largest Student Leadership Team ever (19 strong!), we're expecting more growth and grandiose things from Ocean11 in 2023-24!



Are you an undergraduate student with a passion for the ocean? If so, OSU's Ocean11 Marine Club may be the perfect fit for you!

For information about how to get involved, contact Ocean11 at ocean11osu@oregonstate.edu

For more information about Ocean11, visit: beav.es/ocean11



Experiential Course Spotlights



BI 450 students take to the Oregon tidepools to survey.

Term-long, residential course at Hatfield Marine Science Center: Each spring, Integrative Biology in the College of Science offers a flagship, by-application BI 450 Marine Biology and Ecology course for upper division undergraduate Marine Biology and Ecology students. Students apply in Fall term before taking the class in Spring, while living at Hatfield. This 15-credit, “eat-sleep-breathe” experience makes use of Hatfield’s classroom, laboratory and housing facilities, opportunities to conduct research, and the central coast’s estuarine and ocean habitats for field studies. The course is team-taught by top faculty in the areas of marine invertebrates, algae, fishes, intertidal and coastal ecology and conservation. At the end of term, students present their research projects during a symposium open to everyone.



Student Alaya Whelan-Moore holds a broadnose sevengill shark during FW 199.



ES 360 students and instructor Natchee at the coast in Spring 2023. Courtesy of Natchee Barnd.

Award-winning experiential, cooperative education course with long weekends at the coast:

Offered this past spring, Indigenous Ocean and Coast (ES 360) was a 4-credit course designed by Natchee Barnd, Associate Professor of Ethnic Studies in College of Liberal Arts, School for Language Culture and Society. This intensive course explored the Indigenous ocean and coast relationship by working directly with the Confederated Tribes of Siletz on coast related projects, all using hands-on learning and application methods. In its first offering, twenty two students from a range of degrees joined this amazing experience: Liberal Arts' Marine Studies, Political Science, Psychology, and Spanish; Forestry's Natural Resources; Engineering's Computer Science; Earth, Ocean, Atmospheric Sciences' Environmental Sciences; and Agricultural Sciences' Botany and Environmental Economy and Policy. Natchee Barnd was recently awarded the OSU-Community Partnership Award from the Office of Engagement for ES 360 in Spring 2023, highlighting Natchee's extraordinary commitment to community engagement. Congrats, Natchee!

1-credit orientation courses are a great way to introduce students to the coast: In the past academic year, nearly two hundred students enrolled in introductory courses bringing students to the coast.

-Introduction to Marine Life in the Sea: offered by two different departments - FW 113 about birds and mammals and BI 111 about marine habitats.

-Introduction to Sharks, FW 199 including shark tagging with the Hatfield-based Big Fish Lab led by faculty Taylor Chapple

-Surfing, PAC 247 with pool session and weekend surf instruction at Newport area beaches

Hatfield Marine Science Center

In June, the Oregon Board of Trustees approved \$16.5 million to build a 34,000-square-foot housing project to accommodate primarily upper-division and graduate students but also visiting professionals and staff studying or working at Hatfield. Approximately 70+ studio-style apartments and a small number of two-bedroom apartments will make up the new facility. The new housing will be a quick walk from the Hatfield campus and located outside the tsunami zone. Additionally, the housing complex will help ease some of the strain on local housing demand. Construction is planned to begin this winter.

A rendering of the future Hatfield housing facility, courtesy of Hatfield Marine Science Center



Research Highlights

Oregonians love seafood! With another great year of enjoying Dungeness crab, fresh albacore tuna, and razor clams fresh from the sea, we're reminded how we might sometimes take this bounty for granted. Our food from the sea is expanding to include seaweed like OSU© bacon-flavored dulse and urchins co-cultured with dulse at OSU© Port Orford Field Station. See our Port Orford news about how this co-culturing research offers a unique approach to the urchin overpopulation challenge. We've also come to realize that the ocean and coasts are likely to be the best source for protein for a growing worldwide population. By some estimates, the ocean could supply over six times more food than it does today, often using low-carbon methodologies and food waste reduction. OSU has a wide range of research, education, and outreach and engagement activities focused on sustainable wild fisheries and marine aquaculture. MSI continues to encourage progress on these topics, including through an OSU-wide aquaculture web page: aquaculture.oregonstate.edu.

Lastly, I'd like to draw attention to a major funding update for the Oregon Kelp Alliance. Tom Calvanese, Port Orford Field Station Manager and ORKA Project Director, is slated to receive over \$2.5 million in funding for the Oregon Kelp Forest Protection and Restoration Initiative. ORKA will use this funding to continue engaging coastal communities in the work of protecting and restoring Oregon's kelp forests. These essential habitats have undergone significant changes in recent years due to warming oceans, loss of predators, and population booms of purple sea urchins, which eat kelp. The Protection and Restoration Initiative will put coastal communities to work promoting healthy kelp forests at six sites along the Oregon coast, while building local capacity for continued kelp forest stewardship. -Jack Barth, MSI Executive Director



Shrimp and dulse seaweed salad, Oregon Department of Agriculture, Flickr

Port Orford Field Station

This summer, students from Oregon and around the country came to Port Orford to study the Redfish Rocks Marine Reserve, gray whales, and kelp forests. From the installation of a marine debris mural and interpretive touchscreen at the Battle Rock Visitor Center by Grant Marschall (MSI intern), Sof Fox (Sea Grant intern), and Connor Gonzales (Sea Grant intern), to studying urchin return rates as part of an experimental kelp forest restoration project by Caroline Rice (Sea Grant Summer Scholar for the Oregon Kelp Alliance), and exploring urchins as a method of grazer control in co-culture and kelp forest restoration efforts by Tate Scarpaci, Sea Grant Summer Scholar, Oregon Kelp Alliance), Port Orford was a hub of activity!

REU intern Aden Ho collaborated on an Oregon Sea Grant research project to co-culture purple sea urchins and dulse. This project is testing the commercial potential for culturing barren urchins as part of kelp forest restoration efforts. Team Zoop Troop from the GEMM Lab celebrated 9 years of gray whale foraging research. This team was led by MMI graduate Alison Dawn, joined by REU intern Autumn Lee, GEMM Lab intern Natalee Webster, and High School Interns Jonah Lewis from Pacific HS, and Aly Covey from Marshfield HS.

Left to right: Sof Fox, Grant Marschall, and Connor Gonzales stand with their marine debris mural.



Left to right: Grant Marschall, Connor Gonzales, Tom Calvanese, and Sof Fox tabling at the Redfish Rocks on the Dock community event.



Outreach

This entire summer has been full of many outreach events, including nonstop tabling for START, when incoming students take to OSU Corvallis campus and officially register for classes! In August, MSI took part in the Art on the Beach contest held by 4Cast, where locals and pros took to the beach at Roads End State Recreation Site to create wonderful sand art pieces, with the chance to win a paid getaway at the local Chinook Winds Resort. While admiring the artwork, we were able to educate 700+ people on the great Pacific upwelling that happens off the Oregon coast every summer by hosting a "Taste of the Ocean" table. Visitors tasted samples of varying salinities to determine which marine ecosystem they represent. We are excited to carry this momentum forward into the upcoming school year, continuously engaging and educating people about the wonders of the ocean.



MSI Student worker Ryan Osha helps a young visitor "Taste the Ocean" at the 4Cast Art on the Beach event, Roads End State Recreation Site.

MSI Faculty Update

Introducing Simone Burton as the new Marine Studies Initiative Administrative Assistant! Simone is originally from rural Utah, where being landlocked pushed her to dream beyond the land of the red rocks and out to the sea. This dream led her to attend Oregon State University's marine biology and ecology program. Simone holds an Honors Bachelor of Science in Biology with a Marine Option from Oregon State University. During her time in the Honors College, she focused her thesis on science communication tactics surrounding marine plastic pollution. She was a founding member of the Ocean11 Marine club and credits connections she gained in Ocean11 in helping her acquire every job role she's held since graduating in 2021! Simone has experience as a Nature Educator at the Corvallis Environmental Center, where she led and managed educational programs, and as Environmental Storytelling Intern working with Chris Johns, former Editor-in-Chief of National Geographic. Additionally, she served as an Education Project Assistant at the Oregon Sea Grant's Hatfield Marine Science Visitor Center, providing outstanding support and public engagement. Simone's achievements have been recognized with prestigious awards, including being a NOAA Ernest F. Hollings Scholar and an honorable mention recipient for the Udall National Scholarship – Environmental Stewardship. Outside of marine conservation, Simone's passions include all things water, traveling, hiking, cooking, baking, and playing with her rambunctious one-year-old cat, Mango.



Simone Burton, MSI Administrative Assistant

Upcoming Events

We have many exciting events coming up in Fall Term and leading into winter! From MAST Student socializing activities to workshops & celebrations, there's a lot to look forward to with the Marine Studies Initiative. Don't miss out! Check out our upcoming events and stay tuned for more details! marinestudies.oregonstate.edu/events

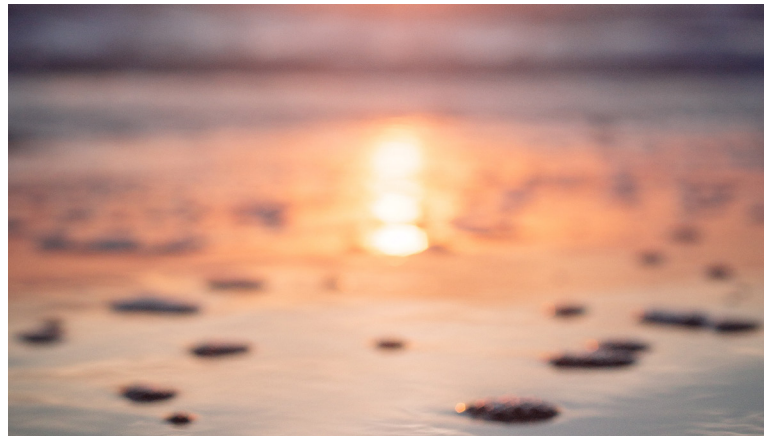


Photo courtesy of Kate Larson, MSI Media and Tech Student Worker

Social Media

Check out our new LinkedIn page!

Link your profile to network with our vast web of MSI-affiliated faculty, staff, and students while staying in the know with all things MSI!

beav.es/Tbm



SAVE THE DATE!

The Big Blue Film Festival

January 26-27, 2024



Tickets available December 2023

linktr.ee/bigbluefilmfest

The Big Blue Film Festival (BBFF) showcases films at the confluence of marine sciences, humanities, and the arts. Hosted at the Hatfield Marine Science Center and the Newport Performing Arts Center in Newport, Oregon, this event provides a lively weekend of marine-centered entertainment while raising awareness of marine issues and how we might solve them.

This event is for everyone; from students to faculty to community members!

The BBFF is a collaboration with Hatfield Marine Science Center, Oregon State University, the Marine Studies Initiative, OSU Productions and community partners.

Email Erin Webber, Festival Director, at bigbluefilmfest@gmail.com for more information or if you'd like to volunteer!

Thank you for your support!

We wish to acknowledge our many contributors for their kind and generous support of students and programs at Oregon State University. Your gifts help support the following:

Marine Studies Innovation Fund (#270020)

The Marine Studies Initiative Innovation Fund supports learning opportunities at the coast such as;

- Experiential hands-on learning opportunities
- Scholarships for marine-related degrees
- Unique research and internship opportunities
- Housing support to live at the coast while studying



Connecting Students to the Coast

One important need is for helping students spend time at the coast, in particular to support housing during their studies at the Hatfield Marine Science Center in Newport. Please contact us if you would like to help. You can also make a donation through the Marine Studies Innovation Fund with a note about where you would like your donation to be used.

Port Orford Field Station Science and Education Fund (#140330)

The Port Orford Field Station Science and Educational Fund supports access to unique marine and terrestrial ecosystems that support trans-disciplinary research and education, community priorities, and economic opportunities on the Southern Oregon coast. Donations to this fund enhance our ability to continue to provide this vital support to students, researchers and the community to expand our work in this hard-working rural community, as its residents embrace the new blue economy.



Your gifts make a difference for our students, our university, and our ocean and coasts.

Donate to these funds at [\[beav.es/T67\]](https://beav.es/T67).

To make a gift, go to: marinestudies.oregonstate.edu/impact/give-gift
Or send a check payable to 'OSU Foundation' with notation for MSI and list fund name, to Oregon State University Foundation, 4238 SW Research Way, Corvallis, OR 97330.

If you need assistance or details on other gift opportunities, call 800-354-7281 or 541-737-4218. Or, email:



Oregon State University
Marine Studies Initiative