



*Cape Falcon Marine Reserve
c/o Oregon Department of Fish and Wildlife*

From the Associate Director's Desk

Happy New Year and welcome to the second newsletter from the Marine Studies Initiative's office. My name is Kristen Milligan, and I started working with the MSI as Jack Barth, MSI's Executive Director, and Bob Cowen, Director of Hatfield Marine Science Center, were leading the intensive strategic planning process. I am excited and honored to be part of this important program, and I deeply appreciate the strong collaborative spirits and efforts of everyone involved. Our office is developing into a dynamic hub of activities, all focused on issues of the ocean and coasts. As you'll read in this newsletter, MSI-affiliated faculty from across OSU are creating and delivering new courses, mentoring and training interns, and advancing research programs. The Ocean11 student organization has been spurred by the curiosity, creativity, and enthusiasm of the many involved students and mentoring by MSI Academic Advisor Cynthia Leonard. And, faculty and staff from HMSC and Corvallis are preparing for a full experiential summer program at the coast. Opportunities abound for making new connections across OSU and beyond to collectively advance our ultimate goal for a healthy ocean and planet. I look forward to our continued work together. Ever onward!



*Kristen Milligan,
Marine Studies Initiative
Associate Director*



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SPOTLIGHT'S ON!



Take a look at what these amazing folks are doing in Corvallis and out at the coast.

Cori Kane

OSU-ODFW Marine Reserves
Research Associate

Cori is the new Marine Reserves research associate, coming on board with us in September 2018. Cori will be acting as a liaison between OSU researchers and Oregon Department of Fish and Wildlife's marine reserves team to facilitate science in Oregon's nearshore ecosystems and to expand student engagement in the marine reserves. Cori is a bona fide "fish nerd" and loves to spend her time studying the ecology of nearshore fishes. After taking a brief break from temperate systems, she's returning to her kelp forest roots and will be helping to lead nearshore monitoring efforts in the Marine Reserves this year. Her favorite thing about her position so far has been getting to meet and work with so many excited students and faculty at OSU, Hatfield, Port Orford, ODFW, and the Oregon Coast Aquarium.



Cori Kane



Ana K. Spalding

Ana K. Spalding

Assistant Professor of Marine
Public Policy

Ana K. Spalding is an Assistant Professor of Marine and Coastal Policy at OSU. After she finished her BA in Economics at the University of Richmond, she returned to her home country of Panama to work on economic development issues in Latin America. From this experience, Ana realized that studying marine policy would be a good way to work in economic development and also spend time in the beautiful marine environments that she loves. From there, she continued her education to receive a Master's degree in Marine Affairs and Policy, and a Ph.D. in Environmental Studies. Her favorite thing about her job is working with colleagues to better understand the links between coastal community needs and policy structures, and thinking about creative ways to conserve the oceans and coastal communities.

When she isn't working, Ana likes spending time with her kids, going to the coast, and traveling. Last summer, she and her family spent 6 weeks in southeast Asia traveling in Borneo, Thailand, and Bali!

Academic Program News

Introducing New Courses

Over the past year, the Marine Studies Office has been helping to support faculty developing new courses. In Fall 2017, we teamed up with the Center for Learning and Teaching (CTL) and offered a Professional Learning Community led by Dr. Kay Sagmiller, former Director of the CTL. Eight (8) faculty worked together to develop new, marine-related interdisciplinary courses. Two of these courses are being finalized for the anticipated liberal arts Marine Studies undergraduate degree. Ana Spalding (CLA/School of Public Policy), led the development of a 300-level, 4-credit course “Society, Culture, and the Marine Environment”. And, Susanne Brander (CAS/Environmental and Molecular Toxicology), Will White (CAS/Fisheries and Wildlife/Coastal Oregon Marine Experiment Station), and Peter Betjemann (CLA/School of Writing, Literature, and Film) will be teaching a 200-level, 4-credit course “Humans and the Ocean” starting this spring.

Since summer 2018, Liberal Arts faculty have also been developing additional courses focused on issues of the ocean and coasts from social science and humanities perspectives. Examples of course titles for these developing courses include “Race, Gender, and Labor on the Oregon Coast”, “Indigenous Ocean and Coast”, “Marine Histories of the Pacific,” and “Gender, Race, and Marine Sciences”. As OSU finalizes new courses, we will make announcements in future newsletters and our MSI Listserv. To join our listserv, contact the MSI office. *Our next newsletter will give an update about the liberal arts Marine Studies undergraduate degree program.*

In addition to the faculty listed above, we thank the following CLA faculty leading these course developments: *School of Language, Culture, and Society:* Natchee Barnd, Bradley Boovey, Kryn Freehling-Burton, Lisa Price, Marta Maria Maldonado, and *School of History, Philosophy, and Religion:* Aimee Hisey, Steve Shay.



*A marine biology class on a fieldtrip near Newport.
c/o Hannah O’Leary.*

Feature: Undergraduate Courses Continue to Gain Momentum

Since the MSI’s strategic planning process, new courses were developed by Integrative Biology (College of Science), Fisheries and Wildlife (College of Agricultural Sciences) and College of Earth, Atmospheric, and Ocean Sciences. Designed for students from any discipline, these courses help increase ocean literacy across OSU. *Look for announcements through our listserv about these and other new courses!*

Introduction to Marine Biology- BI 150.

3 credits. Spring 2019 (Corvallis). Taught by Felipe Barretto. Survey of marine organisms, the environments they inhabit, and their evolutionary adaptations for thriving in those environments.

Oceans in Peril- BI 347. 3 Credits. Fall 2018

(Ecampus) and Winter 2019 (Corvallis). Taught by Jeremy Rose. The interactions of society and the marine environment, emphasizing the ecological, biogeochemical, economic, sociological, and political significance of the oceans. This is a lecture course that meets the Core, Synthesis- Science/Technology/Society Bacc Core.

Food from the Sea- FW 324. 3 Credits. Spring

2019 (Corvallis) and Summer 2019 (Ecampus). Taught by Scott Heppell. Food from the Sea explores cultural, societal, economic, practical, and environmental features of seafood. This is a lecture course that meets the Contemporary Global Issues Bacc Core.

Oceanography- OC 201. 4 Credits. 2019

(Corvallis Fall/Winter and Ecampus Fall/Spring). On-campus instructors are Marta Torres and Rob Wheatcroft. This course is a comprehensive introduction to oceanography as an interdisciplinary science. This lecture/lab meets the Core Perspectives- Physical Science Bacc Core.

STUDY AT THE SEA

Register for summer courses at Hatfield Marine Science Center

Live and study at the Oregon coast!

Get hands-on, in-the-field experience as you complete your degree. In-state tuition for everyone.

Student housing scholarships are available (applications due May 1st).



Available at HMSC
all Summer Sessions:
Research Credit (401)
Internship Credit (410)
June 24 to September 6
2019

COURSES

JUNE 24-JULY 19 (SESSION 2)

New Course! Pacific Northwest Coastal Ecosystems
BI 353; 4 cr. with lab/field component.

New Course Offering! Coastal Oceanography
OC 332, 3 cr.

Biology and Conservation of Marine Mammals
FW 302, 4 cr. with lab course in field techniques,
FW 301, 1 cr.

Aquatic Biological Invasions
BI 421, FW 421/521, 4 cr.

Photographic Field Studies
ART 399, ART 499, 4 cr.

JULY 22-AUGUST 16 (SESSION 4)

Ecology of Marine and Estuarine Birds
FW 331, 4 cr.

Marine and Estuarine Invertebrate Zoology
Z461/561, 4 cr.

Field Methods for Marine Research
FW 493, 3 cr.

Biological Oceanography
OC 440, 4 cr.



**Oregon State
University**

AUGUST 19-SEPT 6 (SESSION 5)

Aquaculture Laboratory
FW 498/FW 598, 3 cr.

For more information

Hatfield Marine Science Center Summer Programs:
<https://tinyurl.com/StudyBeach>

Contact HMSCacademic@oregonstate.edu

MSI Internship Opportunities

Check out the different MSI-supported opportunities for paid internships along the Oregon Coast this summer



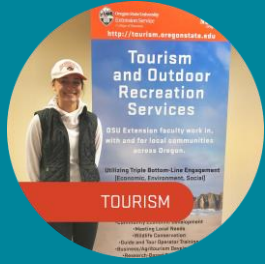
Arts – An OSU **Graduate** student from the arts will be based at the Hatfield Marine Science Center. Studio space is available. This will be an opportunity to develop work, contribute to the HMSC community, and visit other parts of Oregon. A mentor will be matched with the candidate's background and art medium.



Whale Research – An **Undergraduate** student will be part of a team conducting research to understand the foraging ecology of gray whales in beautiful Port Orford! We are looking for a motivated, interested and outgoing **OSU undergraduate** student to be part of the GEMM Lab team. Through this internship, students will learn scientific methodology, sampling and data collection protocols, ecological principles, leadership skills, quantitative data analysis methods, and science communication skills.



Engineering – An **Undergraduate** student in Engineering will have the opportunity to work with a professor from MIME and the OSU Prototype Development Lab (PDL) on projects based at the Hatfield Marine Science Center. The focus of the lab is accessing OSU technical expertise to apply engineering principles to create prototype devices.



Tourism – An **Undergraduate** Student will have the opportunity to participate in the new Guide Recognition and Training Program (GORP) with the Oregon Sea Grant/OSU Extension Tourism Program in Coos Bay, OR. Duties include conducting an applied research project relating to tourism, creating blog postings, talking with professional guides, experiencing professional guided activities, or short educational video production.



Education, Policy, Communication – An **Undergraduate** student will have the opportunity to work with an ODFW Shellfish Biologist with the Marine Resources Program to conduct research, monitor and manage commercial and recreational shellfisheries, and communicate with stakeholders. This year, an intern will engage in developing outreach products, assessing public knowledge, and interfacing with Oregonians and visitors on important conservation management messages.

Curious About Other
Internship
Opportunities?

For more information about these, or to find other internships, visit the MSI [Internship Opportunities](#) page

Email internship questions to our academic adviser Cynthia Leonard at cynthia.leonard@oregonstate.edu

OCEAN11 MARINE CLUB

Students gather from many colleges to talk all things marine.

"Let's say you're planning to rob the Bellagio, the Mirage and the MGM Grand. Are you going to go in with a team of all safecrackers? Twelve pickpockets? A crew of explosives experts? Not a chance. To get past the state-of-the-art security, you need a cast of characters of disparate disposition and ability. You need a team of opposites, each of whose skills and approach complements those of the others. You need to take calculated risks. You must reach beyond what should be possible, but case out the joint carefully, with contingency plans in place, before you start. And you need to be prepared to act opportunistically, making the most of available resources when you run up against constraints or when events fail to proceed according to plan. If you want to rob three casinos at once, you need heterogeneous collaboration, calculated risk-taking and resourceful opportunism."

Alejandro Crawford

Commenting on the importance of trans-disciplinary collaboration

USA News & World Report
11/26/2013



Marine Biology student and Ocean11 member observing the organisms living on a Newport dock during an Integrative Biology weekend field course.

Ocean11. It's OSU's first cross-campus, transdisciplinary marine club. As in the Ocean's Eleven film, we know that all 11 colleges at OSU are needed to pull off a seemingly impossible task. Only with the different skills, expertise, and perspectives of students and staff from every college collaborating can we meet the enormous challenge of caring for our ocean and coasts.

OSU students want such a marine club. About 70 attended our kick-off meeting in October. There are 150 members with students joining almost weekly. Almost all 11 colleges are represented, including many majors outside of the expected marine-related fields. Over 20 students volunteered to help develop our new marine club, committing to the Ocean11 Leadership Team.



Students and Ocean11 members learn how to cast a plankton net at a Newport dock, during an Integrative Biology weekend field course.

The leaders want the club to invest their energy and enthusiasm in 5 areas: Community Outreach, Field Trips, Learning Opportunities, Research & Professional Development, and Social Activities. They have many ideas--from field trips to Newport and Astoria, hiking Cascade Head, to selling metal straws to help ease the ocean plastics problem, volunteering with Salmon Watch, making connections for short- and long-term research experiences, and learning how to surf.



Ocean11 leaders working on club goals and organizational structure

Two Graphic Design students have adopted Ocean11 as their capstone project. Through focus groups and interviews, these seniors have researched the backgrounds and perceptions that students and staff have of the ocean and student organizations to help them develop branding for Ocean11. Questions like “What can we (you) do to bring the diverse disciplines across campus together?” have helped our student leaders consider the purpose and mission of Ocean11.



Ocean11 members enjoying a snack at a club meeting



Get Involved!

Join our journey via the Ocean11 website (marinestudies.oregonstate.edu/ocean11) and follow us on Facebook, Twitter and Instagram.



Ocean11 OSU



@Ocean11osu



@Ocean11osu



Ocean11 leadership potluck

Research and Development

In the last issue, we highlighted work on “Food from the Sea.” That effort continues, including the planning of new programs and curricula to further help students get ready for a range of jobs related to food from the sea. Stay tuned for details.

KEEP UP-TO-DATE
Research stories from
Terra Magazine



Blue Innovation Network

There is new energy across OSU from Corvallis to Newport around the theme of “blue innovation” or “blue technology.” This theme includes innovation around marine sensors, underwater vehicles, marine renewable energy, food from the sea, among others, and will make great use of the new Innovation Lab being built into the new Marine Studies Building in Newport. Updates forthcoming.



**ARE YOU
INVOLVED IN
RESEARCH?**

Are you involved in research related to the coasts and ocean? Whether it's in tourism, technology, or tide pools, we want to hear from you! The Marine Studies Initiative is gathering information in an effort to represent the broad range of coastal and marine-related research that is being conducted by OSU faculty and staff.

If you would like your research to be on our website, please let us know by emailing Marine.Studies@oregonstate.edu

Port Orford Field Station

Tom Calvanese, Field Station Manager, has been helping to cultivate OSU programs in Southern Oregon- including, organizing new internship opportunities, facilitating faculty interests in new short field courses, and engaging with the community.

We are pleased to announce three awards from the Port Orford Field Station Development Fund. Thanks to the generosity of local champion Deb McNeil and the Plumb, Level & Square Fund, we are supporting:

- Dr. Leigh Torres and a team of students studying gray whale foraging behavior.
- Sara Hamilton, Ph.D. student, in her research investigating herbivory on bull kelp by purple urchins in Oregon and California.
- Polly Q. Lisicak, Undergraduate student in Digital Media Arts and Video Production Intern at Oregon State Productions, in her scientific diving video project.

Students and researchers interested in working in the south coast coastal region are encouraged to apply for a grant of up to \$1,000. Download application from the station website <https://research.oregonstate.edu/port-orford>



Dulse growing in an aquaculture tank near OSU's Port Orford Field Station

Summer Internships and New Courses at Hatfield Marine Science Center

There's a great line-up of opportunities for students to study at the sea in summer 2019. Applications are being received for internship programs, including an NSF-supported Research Experiences for Undergraduates coordinated by Itchung Cheung (HMSC/COS) Kaplan Yalcin (CEOAS), MSI internships, and Oregon Sea Grant Summer Undergraduate Scholars program. *Check out the flier in this newsletter for courses, including two new offerings:*

- BI 353 Pacific Northwest Coastal Ecosystems
- OC 332 Coastal Oceanography

Marine Studies Building Update

Located in Newport, Oregon



*Construction of the new Marine Studies Building.
c/o Mark Farley*

The Marine Studies Building is taking shape and the changes to Newport's bay front skyline are starting to be evident. The core will be complete by the end of the month and then work on the shear walls begins, which will bring the shape of the building into focus.

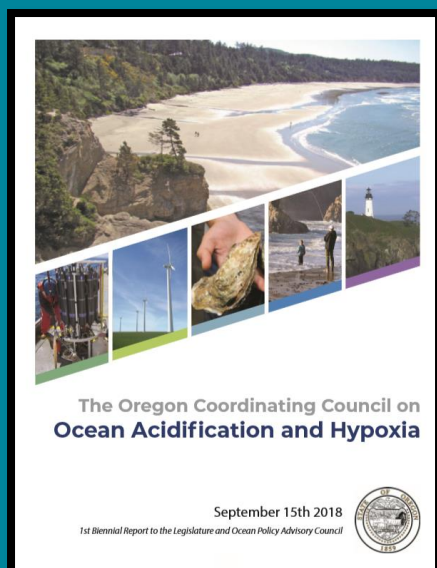
You can watch the construction livestream here: <http://webcam.oregonstate.edu/msisouth>

Ocean Acidification & Hypoxia

OAH Council Established

Ocean acidification and hypoxia, often going by its acronym “OAH,” is a perfect example of a transdisciplinary research theme that MSI supports.

In 2017, the Oregon Legislature, with leadership from Senator Roblan and informed by OSU faculty who are leaders in this scientific field, created [the Oregon Ocean Acidification and Hypoxia Coordinating Council \(OAHCC\)](#). The Council helps to ensure a coordinated and effective response to the threats of ocean acidification and hypoxia to Oregon’s cultural and commercial ocean resources. In September 2018, the OAHCC, co-chaired by Oregon Department of Fish and Wildlife’s Marine Resources Program Manager Caren Braby and MSI Executive Director Jack Barth, delivered its [first report](#) to the Oregon legislature outlining recommendations and guidance on how the State should respond to the threat of OAH to our coastal fisheries and economies. Recommendations from that report will be fashioned into an action plan to be completed during summer 2019.



OAH Workshop

Graduate student Michael Moses, with funding from Wendy and Eric Schmidt, designed and led a “hybrid” workshop – two webinars plus two hands-on days at the Hatfield Marine Science Center -- in August 2018 to teach the practical aspects of making quality measurements of the ocean carbonate system including pH and pCO₂. The workshop was attended by over 20 participants from state agencies, Native American tribes, local watershed councils, and non-governmental organizations including the Pacific Shellfish Institute and the Tillamook Estuaries Partnership. We plan to use this workshop to design and offer an OSU course on this topic in future years.



New OAH Video

We are also excited to announce the release of an Ocean Acidification “solutions” video led by OSU’s Francis Chan and Surfrider’s Oregon Policy Manager Charlie Plybon. This [video](#) is a companion to a [previous video](#) explaining the threat of ocean acidification, features a number of OSU researchers and graduate students, as well as a high school student working in collaboration with our Port Orford Field Station Manager, Tom Calvanese.

Your Questions Answered

There is always so much happening here at MSI, so naturally, we get a lot of questions! People want to know what we are up to, and what we are all about. You've asked, so we answered. Here are answers to some of the most frequent questions we get here at the MSI office.

What is the MSI?

The Marine Studies Initiative at Oregon State University fosters innovative approaches to solving societal challenges for our ocean and coasts through collaboration and a transdisciplinary approach. The MSI is built upon three major goals:

- To provide a new transformational educational experience, highlighted by a new undergraduate major and minor in marine studies and other new curricula across campus.
- To advance leadership in transdisciplinary marine research and scholarship through a variety of research focus areas.
- To increase societal impact in Oregon and beyond via expanding partnerships and increasing access to education in marine studies.

For more frequently asked questions, head on over to the [FAQ page](#) on our website!



Provost Ed Feser sharing remarks at MSI 2018 Open House

Is there going to be a degree in Marine Studies?

Yes! A new liberal arts Marine Studies BA/BS degree program is being developed. Housed in the College of Liberal Arts, the Marine Studies degree focuses on the dynamic relationship between people and the marine environment. The degree draws on OSU's excellent natural and social science traditions, as well as exceptional arts and humanities programs.

What does Oregon State University offer that is unique?

Oregon State University is a strong research university holding a top-tier research designation from the Carnegie Foundation. OSU is also one of only two land, sea, space, and sun grant institutions in the United States. The incredible location of OSU allows for easy access to the coast, estuaries, bays, agricultural fields, forests, rivers, streams, lakes, cities, and mountains all while maintaining a small-town feel.

2018 MSI Office Open House

A major thank you to everyone who joined us for our third annual Marine Studies Office open house on November 16th!

We had approximately 80 guests in our office for refreshments, sustainably-sourced sushi, and engaging conversations. Jeff Parsons from the College of Liberal Arts played the harp to welcome attendees. We also had the pleasure of four students displaying both art and research as a representation of the work they have done and all that the Marine Studies Initiative strives to accomplish.

If you were unable to join us this year, we missed you! We hope that you will be able to join us next fall for next year's open house.

Contact Us @

Marine.studies@oregonstate.edu

Add Seaweed to Your Diet!



Coconut Oil Siracha Popcorn with Seaweed

This winter, while you are cuddled up under a blanket watching movies and avoiding the rain, why not snack on something nutritious? If eating seaweed seems a little scary, try it out with a simple snack. This super-easy, spicy popcorn recipe is perfect for munching on all night long.

Ingredients

- 2 tablespoons coconut oil
- ½ cup popcorn kernels
- 2 tablespoons nutritional yeast
- 2 tablespoons sriracha
- 1 tablespoon nori komi furikake, or seaweed of choice

**seaweed can be found at your local natural foods store*

Instructions

1. In a large pot over high heat, add the coconut oil
2. Once the oil has melted, add the popcorn kernels and shake the pot to evenly distribute. Cover the pot and allow the kernels to pop, shaking every 30 seconds.
3. Once the kernels have popped, remove the pot from the heat and uncover
4. Sprinkle the nutritional yeast, sriracha and nori komi furikake over the popcorn and toss until thoroughly combined.
5. Enjoy!

CREATURE FEATURE:

OCHRE SEA STAR

The ochre sea star (*Pisaster ochraceus*) is the most common sea star in the Oregon intertidal zone. This animal, which can be orange or purple, feeds mainly on mussels and is important for maintaining diversity in these areas.

Sea star populations have suffered from a hit by Sea Star Wasting Disease, which killed off about 90% of all ochre sea stars along the west coast since 2013. Thankfully, here in Oregon we are finally starting to see a recovery and return of this keystone species.

MEDICAL MARVELS

Sea stars don't have blood! Instead, they use seawater to circulate nutrients through their body.



If a sea star loses a limb, they can regenerate a new one! It's a slow process though, taking up to a year to grow back.



COMING UP!

2019 EVENTS

State of the University

Feb. 7th, 11 am – 1:30 pm
Oregon Convention Center,
Portland

Join Oregon State University President Edward J. Ray for a review of the university's accomplishments over the last year and a look to the future.

Coastal Heritage & Cultural Resilience Book Launch

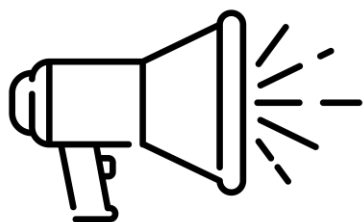
Feb. 25th, 3 pm – 4:30 pm
Oregon State University, Memorial Union, Journey Room

This book explores the knowledge, work and life of Pacific coastal populations from the Pacific Northwest to Panama. The contributors are particularly interested in how local knowledge -either recently generated or transmitted along generations- interfaces with science, conservation, policy and artistic expression. Editors: **Price**, Lisa L., **Narchi**, Nemer E (Eds.)

Marine Science Day

April 13th 10am – 4pm
Hatfield Marine Science Center,
Newport

Come spend a day at the coast surrounded by everything marine! For an entire day, HMSC is open to the public, with researchers and students talking about marine science and all the amazing work that goes on inside HMSC.



If you have an upcoming marine-related event, please add “Marine Studies Initiative” in addition to your organization when creating the event in the OSU Calendar.

Please contact Marine.Studies@oregonstate.edu if you would like us to promote your events through our newsletter or webpage.

Follow us on social media!



marinestudies.oregonstate.edu



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