2023 Summer Scholars Program – position descriptions

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1. Oregon Department of Fish and Wildlife (ODFW), Newport, OR

Shellfish and Estuarine Assessment of Coastal Oregon (SEACOR)
*all projects are subject to change without notice*

The Oregon Department of Fish & Wildlife (ODFW) Shellfish Program is responsible for conducting shellfish and habitat assessments for each estuary in Oregon, and monitoring shellfisheries for the state. These efforts inform resource management decisions and are also used to track changes in Oregon’s estuaries and shellfisheries.

IN PERSON ONLY: The scholar would work on the Shellfish Assessment Project (SEACOR) conducting a study of shellfish populations and estuarine habitats in Tillamook Bay, Oregon’s 2nd largest outer coast estuary. Shellfish in Tillamook Bay are an important cultural, economic, and food resource for people in this area. The Scholar will work collaboratively on a team to collect shellfish and estuary habitat data in various intertidal and subtidal regions of Tillamook Bay. The scholar will also participate in a collaborative Unmanned Aircraft System (UAS, or drone) project with a focus on using UAS to map intertidal eelgrass in Oregon estuaries. Collaborators include staff from the Tillamook Estuaries Partnership (TEP), a local NGO that is developing a drone program to monitor eelgrass in Tillamook County estuaries. The Scholar will work out of the ODFW Marine Resources Program offices in Newport with the rest of the SEACOR team. To learn more about SEACOR and the work we do, view the following video at: https://www.youtube.com/watch?v=ytwmnQGTTwA.

The primary role and responsibility of the Scholar will be collecting field data as an important member of the SEACOR team. Tasks include participating in team meetings, preparing field gear, traversing intertidal flats, collecting environmental and biological data with a partner, extracting and measuring shellfish, and entering data. The Scholar may also interact with recreational harvesters and engage the public at clamming clinics and outreach events during the summer. Depending on their interests and skills, the Scholar may also conduct an independent data project under guidance of a mentor. Opportunities include small scale mapping of bivalve populations, analyzing habitat-species associations, or assisting in the spatial analysis of UAS imagery from the eelgrass mapping project.

Field work: 80-85%, Office work: 15-20%, weekly travel to field sites

Minimum qualifications
• basic background in biology and ecology
• comfortable working independently and as part of a team
• willingness to work outdoors in all weather conditions (ability to traverse unstable substrates and work from small boats)
• attention to detail
• strong work ethic and willingness to learn intertidal field sampling methods

Other optional qualifications
• strong communication skills
• experience with small motorized boats (<25’) or other water craft (e.g. kayak, canoe)
• experience with statistics, data entry, and/or GIS
• able to drive a vehicle

Eligibility: Open to US citizens only
2. Hatfield Visitors Center, Newport, OR

Develop interpretive resource materials, create public programs
*all projects are subject to change without notice*

IN PERSON ONLY: Since 1965, the Hatfield Visitor Center has welcomed visitors to learn about marine species, research and the coastal environment. The Visitor Center is proud to be a Coastal Ecosystem Learning Center, one of 22 such centers nationwide that teach, share research, and inform the public about our coastal and marine habitats. Oregon Sea Grant manages this unique facility, which provides a valuable link between the public and the exciting world of marine research and education. The Visitor Center is a public facility and part of OSU's larger Mark O. Hatfield Marine Science Center, a campus of laboratories and classrooms where scientists and students from the university, along with numerous state and federal resource agencies, conduct world-class research on topics ranging from whale migration and undersea volcanoes to global climate change.

The Summer Scholar would be responsible for creating engaging interpretive opportunities to connect with a diverse audience on a daily basis in the Visitor Center. This would include creating public programs that could be given in an auditorium or in the field for the general public that could be replicated by others, possibly with hands on components/activities; developing interpretive resource materials for volunteers and staff to utilize to interpret exhibits; answering visitors’ questions; and connecting with volunteers.

Interacting with the public: 75%, Office work: 25%, possible weekend hours

Minimum qualifications
• good communication skills
• enjoys public speaking
• works well with fellow staff members, volunteers, and general public
• interest in educating others on marine topics

Other optional qualifications
• interest in developing virtual interpretive presentations
• ability to assist with website and social media content
• interest in exhibit development and maintenance
• interest in assisting with volunteer trainings

Eligibility: International students are eligible to apply
3. Oregon Kelp Alliance (ORKA), Port Orford, OR

ORKA kelp forest research and restoration projects
*all projects are subject to change without notice*

IN PERSON ONLY: The Oregon Kelp Alliance works to enhance our understanding of and to promote healthy kelp forests in Oregon, and includes marine scientists, natural resource managers, tribal members, conservation non-governmental organization employees, commercial divers and fishermen, sport divers, ecotourism businesses, mariculturists, and restaurateurs who have an interest in maintaining or restoring healthy kelp forests in Oregon. Kelp is a foundation species that provides habitat and food to myriad marine species, sometimes even miles away. Local economies rely on kelp forests to provide food for red sea urchins and abalone and habitat for rockfishes and other commercially valuable species. Local community identities are built around these fisheries, and local tribes value these species as cultural resources.

The ORKA Scholar will serve as a field technician supporting ORKA kelp forest research and restoration projects, learn about and support Oregon kelp forest policy initiatives, science communication through the ORKA website, social media channels, seminars and workshops, conduct outreach to various stakeholder groups (recreational, survey, scientific, and commercial divers, and other coastal stakeholder groups), and provide support for ORKA activities. They will be provided with an opportunity to conduct an independent research project focused on a specific portion of ORKA's work, including data analysis and reporting of results in a suitable conference format.

Field work: 35%, Lab work: 25%, Office work: 20%, Travel 20% (time spent on each activity will vary)

Minimum qualifications
• knowledge of OR interest in Oregon’s kelp forests
• willingness to participate in field work at various ocean shore and beach locations (traversing sand beaches and rocky shorelines, spending many hours out of doors, working from small boats)
• good organizational skills, strong communication skills

Other optional qualifications
• proficient in using social media channels (twitter, instagram, facebook, You Tube, etc.)
• willing to be trained to operate an air fill station to fill SCUBA tanks
• trained SCUBA diver
• ability to drive to off-site locations

Eligibility: Able to be employed in the U.S.
Human dimensions study on visitors’ species awareness
*all projects are subject to change without notice*

IN PERSON, VIRTUAL, OR HYBRID: The Haystack Rock Awareness Program (HRAP), Cannon Beach, OR

IN PERSON, VIRTUAL, OR HYBRID: The Haystack Rock Awareness Program (HRAP), Cannon Beach, OR is a marine-based environmental educational program, focused on stewardship and outreach at Haystack Rock in Cannon Beach. The mission statement, “to protect, through education, the intertidal and bird ecology of the Marine Garden and Oregon Island National Wildlife Refuge at Haystack Rock,” demonstrates the fundamental role education plays in our program. HRAP operates a Beach Interpreter program eight months a year, from March through October, that provides for multiple educators to staff Haystack Rock’s Marine Garden at every low tide. Interpreters answer questions, point out interesting sights, offer inspiration, and share with visitors the aspects of tidepool etiquette as well as state and federal laws.

This year’s sea grant scholar will administer a short human dimensions study on visitors to Haystack Rock and their awareness of various local species, what species that they are particularly interested in, and a before and after questionnaire following discussion with a wildlife interpreter. This data will help us better understand the public’s general awareness of local species and current ecological concerns regarding those animals, as well as the impact conversing with an interpreter has on these topics. The scholar will conduct the study and provide a completed report and recommendation based on results. Secondarily, depending on time, the scholar can work on one of two projects: first a brief study on the impact of interpretive signage on visitor behavior, or second a literature review on artificial light at night on the intertidal zone along with a recommendation for social media and PR campaign based on the review.

Field work: 65%, Office work: 35%

Minimum qualifications
• background and/or interest in environmental education
• organized
• able to work independently
• proficient in MS Office
• experience with literature reviews
• strong interpersonal skills

Other optional qualifications
• able to stand on feet for up to 8 hours a day in inclement weather
• able to drive their own vehicle

Eligibility: Open to US citizens only
5. International Coastal Atlas Network (ICAN) - remote

Grow a directory of projects worldwide, participate in global outreach
*all projects are subject to change without notice*

VIRTUAL ONLY: The International Coastal Atlas Network (ICAN) is a community of practice founded in 2006 to scope and implement data interoperability approaches to coastal web atlases (CWAs). In 2013 ICAN became a project of UNESCO IOC’s International Oceanographic Data and Information Exchange (IODE) Programme. The long-term strategic goal of ICAN is to encourage and help facilitate the development of digital atlases of the global coast based on the principle of distributed, high-quality data and information. These atlases can be local, regional, national and international in scale. The network focuses on sharing knowledge and experience among atlas developers in order to find common solutions whilst ensuring maximum relevance and added value for users. ICAN members seek to play a leadership role in forging international collaborations of value to the participating nations, thereby optimizing regional governance in coastal zone management and marine spatial planning. A major goal is to help build a functioning digital atlas of the worldwide coast based on the principle of shared distributed information.

A Sea Grant scholar would become familiar with the international network of coastal atlases and related forms of marine spatial data portals. The scholar would learn about a wide range of topics related to international collaboration and data sharing for efforts such as the UN Decade for Ocean Science. Specific topics that the scholar will be exposed to include: i) the range of coastal and marine data and information sharing projects across the globe, including various technological approaches such web maps, atlases, portals etc. ii) Initiatives for data sharing related to the UN Decade for Ocean Science, particularly the Ocean InfoHub Initiative, and various methods of participation, as well as barriers to participation, iii) Communication approaches for information sharing across projects, and research towards a Community of Practice Knowledgebase or living inventory of solutions available for various Atlas tasks. Most specifically, the scholar would work with the Co-chairs of the ICAN steering group to grow a directory of projects worldwide, accessible via the ICAN website, and could assist with various outreach tasks such as recruiting project speakers for ICAN’s fall workshop, and the development of a web survey and online forms to be used for data collection from project owners. Scholars with an interest in social media may also assist with contributions to various social media content channels, to enhance outreach and communications.

Remote work: 100% (30% directed research, 40% web page, web directory, web survey and web map building, 10% coordination with ICAN mentors and steering group members, and 20% in career enhancement learning opportunities provided by the ICAN mentors)

Minimum qualifications
• ability to meet via Zoom and work with people remotely
• interests in international collaborations, coastal management, marine spatial planning, OR information and data sharing
• ability to do independent web research and utilize Google Drive
• ability to meet one early morning per week via Zoom with international collaborators

Other optional qualifications
• familiarity with web editing, maps, and graphics programs

Eligibility: International students are eligible to apply
6. South Slough National Estuarine Research Reserve, Charleston, OR

**Develop communication resources for training and outreach**
*all projects are subject to change without notice*

**IN PERSON, VIRTUAL, OR HYBRID:** Oregon’s South Slough National Estuarine Research Reserve is made up of 5,900 acres and provides habitats for salmon, great blue herons, bald eagles, migrating ducks, elk, oysters, and crabs. The Reserve offers a diverse landscape of open waters, emergent islands, streams, salt marshes, and conifer-forested uplands. Through research, education, and stewardship programs, Reserve staff promote scientific and public knowledge of estuaries and how to manage them.

The Scholar would assist with developing communication resources by: 1) capturing digital media of Reserve wildlife, landscapes, trees, plants, fieldwork, public programs, and events using Reserve equipment. (Olympus Waterproof, Canon Power shot, Go-Pro 360, Go-Pro Hero, or iPad); and 2) working with the Coastal Training Program coordinator to develop end user products and training resources for coastal decision makers on a variety of topics. For the first goal the Scholar will edit the products described above as well as footage taken from Sexton field camera recordings of eelgrass beds and tidal changes. All digital media will be edited with Adobe, Cyberlink Power Director, or Windows photo/video editing software and stored in the Reserve image library. As the Reserve makes efforts in increased accessibility to all audiences, the Scholar will assist Reserve staff in adding and editing closed captioning to videos for the South Slough YouTube channel and providing alt text for online images. Additionally, the student would help by collecting preliminary data about Reserve trails and public access spaces using ESRI Survey 123, to inform a future accessibility assessment. The Scholar will help with outreach by developing and scheduling estuary themed content for Reserve social media channels (Facebook, Instagram, Twitter), engaging with stakeholders at meetings or community events, and collaborating with the science staff to identify research projects the scholar might assist with, then highlight in their outreach efforts. They will participate in education program delivery training provided by Reserve education staff and assist with summer education programs.

Field work: 55%, Lab work: 10%, Office work: 35%

**Minimum qualifications**
- experience or coursework with communication, social media, photography, or videography
- interest in increasing accessibility, diversity, equity, and inclusion initiatives
- basic understanding of social media platforms and digital photography
- ability to drive their own vehicle to and from work

**Other optional qualifications**
- basic understanding of ecology, biology or natural resources
- comfort driving moderate distances (1-2 hours)

**Eligibility:** Open to US citizens only
2023 Summer Scholars Program – position descriptions

7. Oregon Department of Fish and Wildlife (ODFW), Human Dimensions, Newport, OR

Assess visitors’ awareness and knowledge of ocean acidification in Marine Reserves

*all projects are subject to change without notice*

**IN PERSON ONLY:** The [Oregon Department of Fish & Wildlife](https://www.oregon.gov/ODFW) [Marine Reserves Program](https://www.oregon.gov/ODFW/ENR/SR) conducts human dimensions research to monitor the socioeconomic impacts of marine reserve implementation. **Two Summer Scholars** will work with ODFW Human Dimensions Project staff to gain professional experience and practical skills in interdisciplinary natural resource social science, with a focus on marine reserve management. The scholars may also occasionally work on other marine reserve projects such as outreach and science communications or ecological data collection in the field.

The Scholar(s) will work in primary data collection conducting a brief intercept survey of visitors to Oregon’s five marine reserves and at other shoreside locations across most of the Oregon Coast. Some overnight travel will take the Scholar to more distant locations along the coast. The purpose of the visitor intercept survey is to assess visitors’ awareness and knowledge of ocean acidification and the marine reserve system. In addition, we will also investigate effective communication strategies pertaining to ocean acidification. Later during the summer, data entry, data analysis, and/or report writing are potential responsibilities. The Scholar will gain an in-depth understanding of research pertaining to communications, significant ocean issues, and marine resource management. They will also gain experience interacting with stakeholders and navigating natural resource management issues from the perspective of an agency. In addition, the Scholar will gain an understanding of government employment and be able to forge connections with agency personnel and collaborators.

Field work: 80%, Office work: 20%, significant travel including some overnight stays

**Minimum qualifications**
- comfortable with public speaking and interacting with strangers
- willing to participate in outdoor field work at various ocean shore and beach locations coast-wide, including foot and car travel
- ability to drive state-owned vehicle to work sites

**Other optional qualifications**
- familiarity with ocean acidification, the Oregon marine reserves, and associated coastal topics

**Eligibility:** International students are eligible to apply
United States Environmental Protection Agency (EPA), Newport, OR

Test sensor feasibility for National Coastal Condition Assessment survey
*all projects are subject to change without notice*

IN PERSON ONLY: The U.S. EPA’s Pacific Coastal Ecology Branch, located at the Hatfield Marine Science Center in Newport OR, is preparing for an important National Coastal Condition Assessment (NCCA) survey in 2025. During the summer of 2023, we will be continuing research in the development of a coastal acidification indicator for the National Coastal Condition Assessment (NCCA, https://www.epa.gov/national-aquatic-resource-surveys/ncca). The NCCA survey is a national survey of the nation’s estuaries that is conducted every 5 years. In 2020/2021, we incorporated total alkalinity measurements into the survey. During the summer of 2025, we are planning on collecting water samples for total alkalinity analyses, and measuring pH. These two measurements will allow us to characterize the carbonate chemistry and assess estuarine waters using published organismal thresholds.

The NCCA requires robust standardized sampling methods. There are some challenges in conducting nationwide sampling, including limitations on the use of mercuric chloride for sample preservation, delayed preservation due to needing to ship samples, and variability in sensors that are used by sampling crews. The Sea Grant Scholar would conduct studies assessing impact of water sample collection methods, sample handling, and sample preservation on total alkalinity measurements. We are proposing to use the pHyter (Sunburst Sensors LLC, Missoula MT), which is a handheld instrument that measures pH using colorimetry. The Scholar will test the feasibility of using pHyter sensors through laboratory and field deployments and comparisons to other instruments such as iSAMI. The Sea Grant Scholar would participate in all components of scientific research, including conducting the field sampling, analyzing samples in the laboratory, and analyzing the data. The scholar would have results to present at the Symposium. The scholar would gain experience in field sampling, laboratory analyses of water samples for total alkalinity, usage of water quality instrumentation (including pHyter and iSAMI sensors from Sunburst Sensors LLC), and data analysis.

Field work: 10-20% Office work: 30-40% Lab work: 40-50%

Minimum qualifications
• ability to work on a small boat and docks and carry gear
• ability to participate in long field and laboratory days
• interest in ecology of marine environments

Other optional qualifications
• experience in chemistry, oceanography, and field or lab research
• experience with laboratory methods (especially chemistry)

Eligibility: Open to US citizens only; student must be currently enrolled at a US college or university
9. Redfish Rocks Marine Reserve and Marine Protected Area, Port Orford, OR

Marine Reserve Interpretation and Science Communication

*all projects are subject to change without notice*

IN PERSON ONLY: The Marine Reserve Interpretation Intern is a combination of science communicator and marine reserve interpreter. The intern will communicate the story of the Redfish Rocks Marine Reserve, and the importance of collaboration with the fishing community to visitors to Port Orford. In 2023, the Redfish Rocks Team (RRT) will acknowledge a decade of marine stewardship at the Redfish Rocks Marine Reserve and Marine Protected Area through its "Ten Years of Marine Stewardship" outreach and education program, and the intern will work with the Redfish Rocks Team to support these efforts. The RRT will include two other summer interns, and the Team will work together to complete the outreach and education goals. The intern will be responsible for an independent research project, to be developed with the mentor, will collect data, compile these data into a report, and present results at the annual State of the Coast Conference. The intern will also recruit volunteers for community science programs with partner agencies such as Coast Watch, COASST, and the Marine Mammal Stranding Network, and will be part of the team sampling juvenile fishes as part of an OSU/ODFW long term monitoring collaboration at Redfish Rocks. There will be additional opportunities to participate in field research and monitoring activities.

The Scholar will complete a marine reserve interpretation training, and spend a total of 6 weeks at Battle Rock Wayside and other appropriate locations communicating information to the public about the Redfish Rocks Marine Reserve and Marine Protected Area as part of a team. In addition they will: Organize and coordinate the annual Redfish Rocks on the Dock community event; Develop independent research project associated with juvenile fish recruitment monitoring at Redfish Rocks using SMURFs; Attend monthly Port of Port Orford Commission Meetings to learn about local commercial fishing and operations; Interview 2 local fishermen about their experience with the Redfish Rocks Marine Reserve and Marine Protected Area; Attend meetings of the Redfish Rocks Team, Community Advisory Committee, and other relevant groups, as needed; Coordinate with Redfish Rocks Team and ODFW's Marine Reserve Program to ensure consistent messages; and Use Port Orford Field Station and Redfish Rocks Team social media platforms for outreach and education efforts.

Interacting with public: 50%, field work: 40%, science communication: 10%

Minimum qualifications

• Motivated, outgoing, and communicative; positive attitude towards public engagement
• Enthusiastic to learn about marine reserves, particularly the Redfish Rocks Marine Reserve and Marine Protected Area, and commercial fishing
• Excited to learn about marine ecology in coastal Oregon

Other optional qualifications

• Work and/or volunteer experience in marine science
• Comfortable engaging with members of the public
• Knowledge of marine reserves and/or nearshore coastal ecology
• Experience with collecting, analyzing, and presenting data
• Comfortable with social media platforms
• Experience working in the near shore aboard small boats, and experienced snorkeler

Eligibility: Able to be employed in the U.S.