

Kelly Bonnvil-Sexton

Department of Geography
University of Oregon
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Education

- Expected 2025 **MSc in Geography, University of Oregon**
Advisor: Sarah Cooley. Thesis: *Evaluating the Capabilities of ICEYE and Capella Space X-band Satellites for High Resolution Wetland Observations Across Diverse Climate Zones*
- 2023 **BSc in Marine Biology and Spatial Data Science and Technology, University of Oregon**
Magna cum Laude and Departmental Honors. Dean's List Spring 2021-Spring 2023
- 2020 **Associate of Science, Associate of General Studies, and Associate of Arts Oregon Transfer, Lane Community College**
Awarded with Honors. President's List Spring 2020, Summer 2020, and Fall 2020

Awards and Honors

- 2022 **OIMB Alumni Association Scholarship** (three-time recipient)
- 2022 **Laura Bickerstaff Scholarship** (two-time recipient)
- 2022 **Robert Terwilliger Scholarship**

Research Experience

- 2023 **Cryo-Hydro Lab of Earth Observation, University of Oregon**
X-band SAR data utility for wetland observation. River discharge effects on landfast sea ice.
- 2022 **Deep-Sea Research Expedition on R/V Atlantis.**
Deployment and recovery of CTD and Multiple Opening and Closing Net Environmental Sampling System (MOCNESS). Identification and sorting of larvae morphologically. Analysis of high-resolution video recorded from HOV Alvin dives.
- 2022 **Maslakova Lab, Oregon Institute of Marine Biology**
Performed DNA extractions, gel electrophoresis, and PCR. Analyzed DNA sequencing data using Geneious Prime.

- 2022 **Von Dassow Lab, Oregon Institute of Marine Biology**
Utilized high-speed video microscopy to capture larval motion.
Collected, sorted, and identified planktonic larvae.
- 2022 **Galloway Lab, Oregon Institute of Marine Biology**
Led the creation of a species distribution model for Red Abalone along the Oregon coast. Compiled biological and location data, utilizing ArcGIS Pro and MaxEnt for model creation.
- 2022 **Young Lab, Oregon Institute of Marine Biology**
Dissected pyrosomes to count individual zooids. Sorted and identified deep-sea plankton samples. Maintained live and dead larval samples. Analyzed ROV video for methane seep size quantification.

Fieldwork

- August 2023 **Petersville, Alaska** - Performed UAV, WSE, and PT surveys of multiple lakes and rivers in Petersville, Talkeetna, and Palmer to validate Capella Space and ICEYE X-band analyses. Funded by NASA CSDA Grant.
- July 2023 **Willamette River, Oregon** - Performed UAV survey of the Willamette River to validate Capella Space and ICEYE X-band analyses. Funded by NASA CSDA Grant.
- April 2023 **Willamette River, Oregon** - Participant in NASA SWOT calibration and validation test campaign measuring water survey elevation, slope and discharge on the Willamette River. Funded by NASA.

Selected Presentations

- 2023 **Bonnville-Sexton, K., Cooley, S.W. and Fayne, J.,** Wetland Delineation using X-Band SAR Data, University of Oregon Graduate Research Forum, Eugene, OR.
- 2024 **Bonnville-Sexton, K., Cooley, S.W. and Fayne, J.,** Evaluating the Capabilities of ICEYE and Capella Space X-band Satellites for High Resolution Wetland Observations, American Geophysical Union 2025 Annual Meeting, Washington D.C.

Publications

- In Press **Bonnville-Sexton, K.** (In Press). *Heteropolypus ritteri* In: Oregon Shelf Invertebrates. C.Q. Plowman and C.M. Young (eds.). Oregon Institute of Marine Biology, Charleston, OR.

