

Catrin Wendt

Seattle, Washington 98102 | Catrin.A.Wendt@gmail.com

Summary *I am a trained disease ecologist with a diverse background ranging from designing underwater camera systems to developing environmental genetic testing protocols. I am passionate about directly applied research with broad applications and the use of sophisticated statistical analysis tools. I am experienced in genetics research methods including sample extraction, real-time qPCR, and sequencing.*

Education

2020 M.S. Aquatic and Fishery Sciences
University of Washington

2016 B.S. Marine Science
California State University Monterey Bay

Publications

2020 Fiorenza EA, Wendt CA, Dobkowski K, King T, Pappaionou M, Rabinowitz P, Samhuri J, Wood CL. It's a wormy world: meta-analysis reveals long-term change in the global abundance of parasitic anisakid nematodes in fishes and invertebrates. *Global Change Biology*. 26(5): 2854-2866. <https://doi.org/10.1111/gcb.15048>

In Prep Wendt CA, Friedman CS, Purcell MK, Hershberger PK, Wood CL. Assessment of marine water and sediment samples for *Ichthyophonus* DNA.

In Prep Wendt CA, Hershberger PK, Horn RF+, Friedman CS, Wood CL. *Ichthyophonus* in juvenile herring: Investigating a transmission hotspot.

Research Experience

2017 – 2020 **Research Assistant**
School of Aquatic and Fishery Sciences, University of Washington. Seattle, WA.
Project: Developing a molecular screening method for pathogenic DNA in water and sediment

- Optimized environmental DNA methods to quantify pathogenic parasite presence in a remote field site
- Quantified low-template DNA samples with qPCR
- Prepared low-template eDNA samples for sequence-validation and processed sequencing results with Sequencher softwares for comparisons in GenBank
- Field collection of water and sediment samples for eDNA processing

Project: Investigating *Ichthyophonus* spp. in a known hotspot

- Investigated drivers of *Ichthyophonus* disease in juvenile herring in WA and AK
- Trained and managed 9 undergraduate volunteers in field and lab methods
- Identified a disease transmission hotspot using live-culture parasite analysis
- Used advanced linear models to analyze spatio-temporal pathogenic parasite prevalence data

- 2014 – 2016 **Ronald E. McNair Post-Baccalaureate Scholar**
Ecosystem Electronics Lab, California State University Monterey Bay. Seaside, CA.
Project: Building and testing underwater camera systems for sustainable fisheries research in a remote atoll
- Designed and field tested a baited remote underwater camera system
 - Deployed ROVs to sample mesophotic coral reef fish communities
 - Repaired, maintained, and deployed stationary long-deployment camera systems

- 2015 **Undergraduate Researcher**
Ocean Science REU at Monterey Bay. Seaside, CA.
Project: European green crab (*Carcinus maenas*) distribution in the Elkhorn Slough
- Created a novel *C. maenas* growth curve for the Elkhorn Slough region
 - Collected and processed water samples for long term monitoring surveys
 - Conducted sea otter behavior surveys

- 2012 - 2014 **Research Intern**
Bodega Marine Laboratory, University of California Davis. Bodega, CA.
Project: Project: European green crab (*Carcinus maenas*) distribution in the Elkhorn Slough
- Trained and led new volunteers in doctoral candidate's data collection
 - Maintained data collection in a long-term manipulated intertidal field experiment

Invited Presentations

- 2018 Wendt CA. Do fish processing plants act as reservoirs for disease? WA Cooperative Fish & Wildlife Annual Meeting, Seattle, WA, USA. (*Oral Presentation*)
- 2016 Wendt CA. Biodiversity in decline: how human behavior promotes invasive species. TEDdy Talks @ CSUMB, Seaside, CA, USA. May 17, 2016. (*TED-style talk*)

Contributed Presentations (* indicates award received)

- 2018 Ecological patterns of *Ichthyophonus* spp. infection in age zero pacific herring. Western Society of Naturalists 99th Annual Meeting, Tacoma, WA, USA. (*Oral Presentation*)
- 2017 A curious case of herring disease in Cordova, Alaska. WA Cooperative Fish & Wildlife Annual Meeting, Seattle, WA, USA. (*Poster presentation*)
- 2016 Designing underwater video systems to study a remote mesophotic coral reef ecosystem. Spring 2016 Showcase: Celebrating Inquiry, Seaside, CA, USA. (*Lightning talk*)
- 2016 Remote research on a budget: designing video systems for research in the Ulithi atoll. Western Society of Naturalists 97th Annual Meeting, Monterey, CA, USA. (*Oral Presentation*)
- 2015* Does poor water quality due to eutrophication promote an invasive species? Fall Research Showcase. Seaside, CA, USA. (*Oral Presentation*)
- 2015 Does poor water quality due to eutrophication promote an invasive species? Fall Research Showcase. Seaside, CA, USA. (*Oral Presentation*)

Teaching Experience

- 2018 **Teaching Assistant**
School of Aquatic and Fishery Sciences, University of Washington. Seattle, WA.
Course: Biology of Shellfishes (FISH 310)
- Led a lab session of 22 students, including providing opening lecture and guidance through lab activities
 - Provided students feedback on research proposals to help them construct a feasible and impactful project
 - Graded lab reflections
- 2017 **Project Coordinator in Curriculum Development**
Cooperative Learning Center, CSU Monterey Bay. Seaside, CA.
Project: Improving student success in agriculture-related sciences with academic support and career mentoring
- Developed and archived training and teaching materials used as proof-of-concept to increase program funding from CSU Chancellor's Office
 - Observed Supplemental Instruction leaders and provide feedback in session plans
- 2016 **Instructional Student Assistant**
School of Natural Sciences, CSU Monterey Bay. Seaside, CA.
Course: Ecology, Evolution, Biodiversity & Plant Physiology (BIO 211)
- Applied inverted-classroom teaching approach to lectures for over 100 students
 - Responsible for grading and providing feedback for in-class activities and exam essay-style questions, including the final exam
- 2015 - 2016 **Supplemental Instruction Leader**
Cooperative Learning Center, CSU Monterey Bay. Seaside, CA.
Course: Ecology, Evolution, Biodiversity & Plant Physiology (BIO 211)
- Developed teaching materials to reinforce course concepts using education theory
 - Independently planned and led group sessions for up to 20 students

Mentorship

- 2018 – 2020 **Ryan Horn:** Capstone Student, University of Washington
- 2019 - 2020 **Delaney Lawson:** Undergraduate Volunteer, University of Washington
- 2019 - 2020 **Sophie Brooks:** Undergraduate Volunteer, University of Washington
- 2019 - 2020 **Elliott Chinn:** Undergraduate Volunteer, University of Washington
- 2019 - 2020 **Megan Ewig:** Undergraduate Volunteer, University of Washington
- 2019 - 2020 **Kahana Pietsch:** Undergraduate Volunteer, University of Washington
- 2019 **Veronica Torres:** McNair Scholar, UC Santa Barbara
- 2018 - 2019 **Emily Oven:** Capstone Student, University of Washington
- 2018 **Karissa Shutt:** Undergraduate Volunteer, University of Washington

Outreach and Science Communication

- 2017 **Students Explore Aquatic Sciences (SEAS) Member**
University of Washington. Seattle, WA.
Member of an outreach program that provides classrooms in the Seattle area with hands-on science activities designed around current department research.
- 2015 **Watsonville High School Guest Speaker**
Watsonville High School. Watsonville, CA.
Invited to give a talk about the scientific process and a career in STEM, inspired by the Ulithi research expedition.
- 2015 **Environmental Interpretation Guest Speaker**
California State University Monterey Bay. Seaside, CA.
Invited to give a National Association of Interpreters presentation as an example of a successful oral presentation.
- 2015 **Undergraduate Research Opportunities Center Ambassador**
California State University Monterey Bay. Seaside, CA.
Served as a representative for the UROC Scholars program at university open houses and accepted student orientations.
- 2015 **Recruitment in Science Education (RISE)**
Marina High School. Marina, CA.
Invited to serve on a panel to share advice and inspire first generation high school students from low-income and underrepresented communities to pursue higher education, specifically in STEM fields.

Certifications

ESRI GIS Certification
Trimble GPS Certification
CRLA Master Tutor Certification
Small Boat License (CA)

Software and Coding Languages

R (data analysis and data visualization)
GitHub
Sequencher DNA Alignment Softwares
Unix/Linux Systems and command line
ArcMap & Pathfinder Office
MySQL databases
Python scripting
JMP Statistical Software