



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349

Angel Drobnic, Chair
North Pacific Fishery Management Council
1007 W. 3rd Avenue
Anchorage, AK 99501

August 27, 2024

Dear Ms. Drobnic,

I am pleased to recommend the appointment of Dr. Sophia Wassermann as a member of the Gulf of Alaska (GOA) Groundfish Plan Team (GPT).

Dr. Wassermann is a Research Fish Biologist in Groundfish Assessment Program (GAP) in the Resource Assessment and Conservation Engineering Division at the Alaska Fisheries Science Center (AFSC). She is qualified to serve on the Plan Team due to her background in quantitative ecology, stock assessment, and resource management. She has been with the GAP program since May 2023, primarily producing the Bering Sea pollock data products and collaborating on the Bering Sea data report. Additionally, she has worked to increase the reproducibility and accessibility of models and model products through cloud computing resources.

Previously, she was a postdoctoral scholar at the University of Washington with André Punt, where she collaborated with SSMA researchers on expanding a mixed-species management strategy evaluation for BSAI groundfish, and with NWFSC researchers on evaluating the effects of cannibalism on Pacific hake population dynamics using the CEATTLE model. In addition, she participated in the Applied Stock Assessment class at UW and co-authored the 2023 assessment of Rex Sole on the West Coast (a benchmark data-moderate assessment). Before UW, she was briefly a postdoc at the University of California, Davis, exploring the synchrony of fisheries portfolios in California.

She received her PhD from the University of Galway in 2021 and previously worked in Iceland and the Turks and Caicos Islands, conducting research that combined quantitative ecology and resource management. Throughout her career, she has been drawn to applied science at the ecosystem-management interface.

Dr. Wassermann's combination of stock assessment, management strategy evaluation, hands-on survey experience, and role in the development of survey data and model products used by the assessment authors makes her an ideal candidate to participate in the GPT.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Foy".

Dr. Robert Foy
AFSC Director



Sophia N. Wassermann, PhD

B1 Dr. Wassermann GOA PT Nomination
October 2024

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EDUCATION

PhD EARTH & OCEAN SCIENCE 2021 | Ryan Institute, University of Galway

Irish Research Council Government of Ireland Postgraduate Scholar

Supervisor: Prof. Mark P. Johnson

Dissertation: Modeling the shoaling behavior of pelagic fishes to improve stock assessment methods.

Teaching assistant for:

- Field Skills in Marine Science
- Marine Zoology
- Geographic Information Systems and Biostatistics

MSc BIODIVERSITY & CONSERVATION (with Distinction) 2016 | Trinity College Dublin

Supervisors: Prof. Stephen Waldren, Prof. James G. Wilson

Dissertation: Effects of climate change and bird predation on bivalve populations in Dublin Bay from 1985-2015.

BA ENVIRONMENTAL STUDIES 2013 | Vassar College

WORK

RESEARCH FISH BIOLOGIST | NOAA NMFS ALASKA FISHERIES SCIENCE CENTER

May 2023 - current | Seattle, Washington

Supervisor: Dr. Duane Stevenson

Member of the Bering Sea team in the Groundfish Assessment Program.

POSTDOCTORAL SCHOLAR | UNIVERSITY OF WASHINGTON

September 2021 - May 2023 | Seattle, Washington

Supervisor: Dr. André Punt

In collaboration with Drs. Isaac Kaplan, and Kristin Marshall the NOAA Northwest Fisheries Science Center and Drs. Melissa Haltuch, Carey McGilliard & Jim Ianelli at the Alaska Fisheries Science Center;

- Developed the CEATTLE model (Climate-Enhanced, Age-based model with Temperature-specific Trophic Linkages and Energetics) to explore the effects of cannibalism on Pacific hake population dynamics;
- Expanded a mixed-species management strategy evaluation framework for the Bering Sea & Aleutian Islands groundfish fishery.

POSTDOCTORAL SCHOLAR | UNIVERSITY OF CALIFORNIA, DAVIS

February 2021 - August 2021 | Davis, California

Supervisor: Dr. Kiva Oken

Fisheries season timing and the benefits of diverse fishing portfolios in response to sudden revenue declines.

MARINE SCIENCE TUTOR | NATIONAL UNIVERSITY OF IRELAND, GALWAY

September 2018 - March 2020 | Galway, Ireland

Worked with students before major deadlines for their Marine Science coursework, including their final theses. Provided support for writing, presenting, data handling, and study skills.

STUDENT GRANTEE | FULBRIGHT U.S. STUDENT PROGRAM: HÁSKÓLI ÍSLANDS & MARICE

September 2014 - June 2015 | Reykjavík, Iceland

Supervisors: Dr. Guðrún Marteinsdóttir, Dr. Niall McGinty

Impact of environmental factors on the vertical distribution of capelin (*Mallotus villosus*) during their spawning migration.

WATERFRONT INTERN | THE SCHOOL FOR FIELD STUDIES: CENTER FOR MARINE RESOURCE STUDIES

August 2013 - July 2014 | South Caicos, Turks & Caicos Islands

Supervisors: Dr. Heidi Hertler, Dr. Edward Hind-Ozan, Dr. Alex Tilley

- Research on using distance sampling for detection probability of invasive lionfish, tourist opinions of attractions featuring captive cetaceans, and coral reef ecology.
- Led research and recreational dives, organism ID sessions, and field work for students studying abroad.

PUBLICATIONS

PEER-REVIEWED PAPERS

1. **Wassermann, S.N.**, G.D. Adams, M.A. Haltuch, I.C. Kaplan, K.N. Marshall, & A.E. Punt (2024) Even low levels of cannibalism bias population estimates for Pacific hake. *ICES Journal of Marine Science*.
2. Free, C.M., C. Vargas Poulsen, L.F. Bellquist, **S.N. Wassermann** & K.L. Oken (2022) The CALFISH database: a century of California's non-confidential fisheries landings and participation data. *Ecological Informatics*.
3. Niner, H. & **S.N. Wassermann** (2021) Better for Whom? Leveling the Injustices of International Conferences by Moving Online. *Frontiers in Marine Science*.
4. Niner, H., S. Johri, J. Meyer & **S.N. Wassermann** (2020) The pandemic push: Can COVID-19 reinvent conferences to models rooted in sustainability, equitability and inclusion? *Socio-Ecological Practice Research*.
5. **Wassermann, S.N.** & M.P. Johnson (2020) The potential to improve the sustainability of pelagic fisheries in the Northeast Atlantic by incorporating individual fish behavior into acoustic sampling. *Frontiers in Marine Science*.
6. **Wassermann, S.N.**, E.J. Hind-Ozan & J. Seaman (2018) Reassessing public opinion of captive cetacean attractions with a photo elicitation survey. *PeerJ*.
7. Tilley, A., E. Carter, **S. Wassermann** & J. Lopez Angarita (2015) Enhancing management effectiveness of invasive lionfish using distance sampling and detection probability. *Aquatic Conservation*.

TECHNICAL REPORTS

1. Markowitz, E.H., E.J. Dawson, **S. Wassermann**, C.B. Anderson, N.E. Charriere & D.E. Stevenson (2024) Results of the 2023 eastern and northern Bering Sea continental shelf bottom trawl survey of groundfish and invertebrate fauna. NOAA Tech. Memo.
2. Ianelli, J., T. Honkalehto, **S. Wassermann**, N. Lauffenburger, C. McGilliard, & E. Siddon. (2023) Stock assessment for eastern Bering Sea walleye pollock. North Pacific Fishery Management Council, Anchorage, AK.
3. Min, M., E. Sellinger, T. Wang, S.G. Beyer, A. Rovellini, M. Veron, **S.N. Wassermann**, V.G. Gertseva, K.L. Oken, O.S. Hamel, & M.A. Haltuch. (2023) Status of Rex Sole (*Glyptocephalus zachirus*) along the US West Coast in 2023. Pacific Fishery Management Council, Portland, OR.

SELECTED PRESENTATIONS

- **Wassermann, S.**, C. McGilliard, J. Ianelli, A. Hayes & A. Punt. Exploring multi-species quota allocation outside historical means using a closed loop simulation. 9th World Fisheries Congress, 2024. Seattle, WA. Oral Presentation.
- **Wassermann, S.N.**, G. Adams, M. Haltuch, I. Kaplan, K. Marshall & A. Punt. Cannibalism and other trophic dynamics of Pacific hake in a changing ocean. 5th International Symposium on the Effects of Climate Change on the World's Ocean, 2023. Bergen, Norway. Oral Presentation.
- **Wassermann, S.N.** Effect of cannibalism on Pacific hake population dynamics. Pacific Hake/Whiting Treaty: Scientific Review Group Meeting 2023. Seattle, Washington. Invited talk.
- **Wassermann, S.N.** Modeling the shoaling behavior of pelagic fishes to improve acoustic stock assessment methods. School of Aquatic and Fisheries Sciences Departmental Seminar Series, Autumn 2021. Seattle, WA. Invited talk.
- **Wassermann, S.N.**, N. McGinty, A. Ólafsdóttir & G. Marteinsdóttir. The impact of environmental factors on capelin behaviour during the spawning migration. International Marine Conservation Congress, 2016, St. John's, Newfoundland & Labrador. Oral Presentation.

JOB-RELATED TRAINING

2023	Applied Stock Assessment	University of Washington
2022	Numerical Computing for Fisheries Assessment & Management	University of Washington, Friday Harbor
2021	Decision Analysis in Natural Resource Management	University of Washington, Friday Harbor
2021	Champion open science program	Openscapes
2020	Introduction to Integrating QGIS and R for Spatial Analysis	GIS in Ecology
2017	Introduction to linear mixed effects models and GLMM	Highland Statistics
2017	Introduction to Agent Based Modelling	Complexity Explorer, Santa Fe Institute

SEAGOING EXPERIENCE

2024	FV Northwest Explorer	Bering Sea Bottom Trawl Survey
2023	FV Northwest Explorer	Bering Sea Bottom Trawl Survey
2020	RV Celtic Explorer	Irish Ground Fish Survey
2019	RV Celtic Explorer	Western European Shelf Pelagic Acoustic Survey
2018	RV Celtic Explorer	Celtic Sea Herring Acoustic Survey
2018	RV Celtic Voyager	Nephrops larval distribution & oceanography

LEADERSHIP AND SERVICE

2024	Deputy Recorder of the AFSC Team for Inclusion, Diversity, and Equity (TIDE)
2023-present	Member of AFSC TIDE
2020	Co-chair of the 6th International Marine Conservation Congress (held virtually)
2017-2020	Student Representative to the Society for Conservation Biology (SCB) Marine Section Board
2018	Deputy Co-Chair & Student Activities Chair of the 5th International Marine Conservation Congress
2016	Assistant Editor (Engineering, Mathematics, and Science) of the Trinity Postgraduate Review

Reviewer for: *Conservation Biology, Ecological Modeling, Fisheries Research, Frontiers in Marine Science, ICES Journal of Marine Science, Marine Ecology Progress Series, Oikos, Progress in Oceanography.*

AWARDS & FUNDING

2020	SMART & Marine Institute Ireland	Research Vessel Bursary
2019	Irish Centre for High-End Computing (ICHEC)	National Service Project, Class C
2019	Marine Institute Ireland	Networking and Travel Grant
2019	2nd Ecology and Evolution Ireland Conference	Best Poster
2018	Marine Institute Ireland	Research Vessels Ship-Time Grant-Aid (€140,000)
2017	Irish Research Council	Postgraduate Scholarship (€67,790)
2017	NUI Galway	PhD International Merit Scholarship (€27,000)
2017	EuroMarine	Young Scientist Fellowship Programme for Training
2017	Ryan Institute	Travel Support Scheme
2017	Marine Biological Association	Student Member Bursary
2014	Fulbright Iceland	U.S. Student Grant (\$14,500)
2013	Sigma Xi Scientific Research Honor Society	Undergraduate Award

CERTIFICATIONS & SKILLS

- **Software & Coding:** R, Python, Git/GitHub, VAST, TMB, Stock Synthesis, QGIS/ArcGIS, RMarkdown, \LaTeX
- **PADI** Open Water Instructor, Enriched Air/EANx, Deep Diver, Search & Recovery, Emergency O₂ Provider; **BSAC** O₂ Administration, Boat Handling, Compressor Operation
- Cold Water Survival
- Personal Survival Techniques (PST) STCW-95
- Emergency First Response Instructor