NORTHERN BERING SEA INTEGRATED ECOSYSTEM RESEARCH PROGRAM

SCIENTIST AND COMMUNITY LEADER BIOS

The North Pacific Research Board Northern Bering Sea Integrated Ecosystem Research Program acknowledges and thanks the communities of Nome and Savoonga for their insight, engagement, and participation in this program. We welcome the opportunity to continue to expand on these community connections and incorporate community member engagement and participation in the program.

SCIENCE STEERING COMMITTEE



Robert Suryan, PhD

Affiliation: NOAA Alaska Fisheries Science Center, Auke Bay Laboratories

Areas of Expertise: Bioenergetics, food web dynamics, foraging ecology, recruitment

Email: rob.suryan@noaa.gov

Dr. Suryan is the lead Principal Investigator for upper-trophic level studies and responsible for coordination among all components and collaborating institutions. His primary research focus for the IERP is food web studies and bioenergetics to understand recruitment and population dynamics of commercially and culturally important species and their prey. As a National Fisheries Marine Fisheries Service scientist and member of the Scientific and Statistical Committee for the North Pacific Fishery Management Council, Dr. Suryan works closely with management bodies to ensure the IERP contributes to ecosystem-based fisheries management. Dr. Suryan has over 30 years of experience studying marine ecosystems throughout the North Pacific and has participated in previous ecosystem research programs in the California Current, Gulf of Alaska, and Bering Sea. He currently leads an ecosystem research program at NOAA's Alaska Fisheries Science Center and is the Science Lead for the Gulf Watch Alaska Long-term Ecosystem Research and Monitoring Program.



Julie Keister, PhD

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Zooplankton ecology, biological oceanography, monitoring, species composition, climate change

Email: Julie.keister@noaa.gov

Julie is the lead of the NOAA Lower Trophic Level portion of the program. She is an oceanographer who looks at the many ways that climate-driven changes in the marine environment can affect zooplankton. She takes a varied approach to her research, using a combination of field studies, laboratory work, and remote-sensing data. She is especially interested in how large-scale changes in ocean circulation affect zooplankton distributions. She is also looking at how ocean acidification affects the early life stages of zooplankton and how hypoxia (that is, low oxygen environments) affects trophic linkages between fish and zooplankton in food webs of the Pacific Northwest.



Sarah Mincks, PhD

Affiliation: University of Alaska Fairbanks

Areas of Expertise: Benthic ecology, sediment biogeochemistry, macrofaunal invertebrates, sediment food webs, carbon cycling

Email: slmincks@alaska.edu

I serve as the Lead PI of the StratiFIED-NBS team, chief scientist for Sikuliaq cruises, and a member of the Scientific Steering Committee. I am responsible for sediment coring operations, and measurements of sediment oxygen and nutrient fluxes, community structure, and microbial biomass. Sediment analyses will be combined with water-column and sediment trap sampling to assess composition and fate of organic particles, and benthic-pelagic coupling across the study area.

NORTH PACIFIC RESEARCH BOARD STAFF



Matthew Baker, PhD

Affiliation: Science Director, North Pacific Research Board

Areas of Expertise: Fish ecology, stock assessment, fisheries management, cooperative research

Email: matthew.baker@nprb.org

Director of NPRB science programs and data management. Member of Science Steering Committee for NPRB northern Bering Sea Integrated Ecosystem Research Program. Volunteer crew member. Executive Managing Editor for Deep Sea Research II Special Issue publications:

https://www.sciencedirect.com/special-issue/10P2HB3SF05
https://www.sciencedirect.com/special-issue/102V8M5SZH3
https://www.sciencedirect.com/special-issue/10SXMT98JZ9
https://www.sciencedirect.com/journal/deep-sea-research-part-ii-topical-studies-in-oceanography/vol/177/suppl/C



Danielle Dickson, MSc

Affiliation: NBSIERP Program Manager, North Pacific Research Board

Areas of Expertise: Program management and facilitation of ecosystem science; marine mammal research; marine ecology; collaboration and partnerships

Email: danielle.dickson@nprb.org

As the Senior Program Manager for the NPRB Integrated Ecosystem Research Program, I facilitate multi-disciplinary research to achieve improved understanding of the processes that influence species of commercial, ecological, and subsistence importance. I sit on the Science Steering Committee for the Northern Bering Sea IERP. I build partnerships with other organizations to leverage the IERP as a nexus of regional collaboration and identify how research results can be applied to inform resource management and address community needs for information. I represent the NPRB in meetings at regional, national, and international forums, (e.g., Alaska Native co-management organizations; U.S. Interagency Arctic Research Policy Committee; international Pacific Arctic Group). I managed prior IERPs focused on the Gulf of Alaska and the Arctic. Prior to joining the NPRB staff in 2011, I specialized in marine mammal research. I have called Alaska home since 2001.

NBS IERP SCIENTISTS AND COMMUNITY LEADS



Jim Armstrong, MSc

Affiliation: Freezer Longline Coalition

Areas of Expertise: Pacific cod, longline fishing operations, sector lead on cooperative research

Email: jim@freezerlongline.org

I hope to contribute by providing the perspectives of the cod freezer longliner sector. We have been directly involved in cooperative research for many years, providing platforms for cod satellite tagging, genetics, and even blood serum samples. FLC is very interested in ensuring that the distribution of data collections is proportional to the distribution of cod harvest. Our boats fish for cod all year throughout the Bering Sea, including the NBS during warm periods.



Kelia (Keely) Axler, PhD

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Fish early life history, ichthyoplankton, zooplankton, fisheries oceanography

Email: kelia.axler@noaa.gov

Keely is a Research Fisheries Biologist at the NOAA Alaska Fisheries Science Center. For the IERP, her research will examine how ocean warming and changing sea ice dynamics in the Northern Bering Sea influence the base of the food web, with downstream effects on the feeding, growth, and survival of the early life stages (eggs, larvae, and juveniles) of marine fishes. By linking environmental change to zooplankton prey dynamics and early life processes, her work aims to improve predictions of fisheries recruitment variability in this rapidly changing ecosystem. In the IERP, she will lead field collections and data analysis of ichthyoplankton and contribute to zooplankton sampling on Lower Trophic Level surveys.



Diana Baetscher, PhD

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Genetics, environmental DNA, metabarcoding, population structure, molecular diet analysis

Email: diana.baetscher@noaa.gov

Diana will lead the collection and analysis of environmental DNA (eDNA) and DNA metabarcoding samples from water collections (eDNA) and from Northern Fur Seal diet samples. Diana is a research geneticist specializing in genomics and eDNA and leading eDNA research at the Alaska Fisheries Science Center. Diana has coordinated eDNA sample collections and analysis for dozens of research cruises in the North Pacific.



Lewis Barnett, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Species distribution modeling, population dynamics, groundfish, spatial ecology, survey design
Email: lewis.barnett@noaa.gov

Dr. Barnett is a research fish biologist in the Alaska Fisheries Science Center's Resource Assessment and Conservation Engineering Division, Groundfish Assessment Program. He is a collaborator on the upper trophic level component of the NBS IERP. He will contribute to integration and analysis of Bering Sea groundfish and crab bottom trawl survey datasets to address how environmental change is influencing predator-prey overlap.



Amy Bishop, PhD

Affiliation: University of Alaska Anchorage
Areas of Expertise: Animal movement, food web ecology, marine mammal biology
Email: ambishop2@alaska.edu

Dr. Bishop's research emphasizes and explores ecosystem connections such as predator-prey dynamics, contaminant flow through food webs, including subsistence foods, and impacts of changing environments on animal movements and behaviors. As part of the NBS IERP, she will conduct collaborative research with Indigenous communities that rely on upper-trophic level predators like ice seals for nutrition and cultural practices to address interests in understanding how contaminants are moving through oceanic food webs and the potential risks for consumption. Specifically, Dr. Bishop will serve as the primary academic advisor MSc student, Orlin Gologergen, and supervise analysis of samples collected through the proposed work for heavy metals. Total mercury concentrations will be quantified for marine mammal samples to address questions of toxicant exposure risk, environmental concentrations and seasonality, and integrate findings with the overarching IERP program goals.



Zoë Bolling

Affiliation: University of Alaska Fairbanks
Areas of Expertise: Graduate student studying benthic ecosystems
Email: zmbolling@alaska.edu

I am a student of Dr. Sarah Mincks. I will be contributing to the respirometry experiments and understanding how stratification affects the benthic communities.



Lillian Braun

Affiliation: University of Alaska Fairbanks, CFOS
Areas of Expertise: Chemical Oceanography, Particle Flux, Arctic Ocean, Sediment Traps
Email: lbraun2@alaska.edu

Lillian Braun (she/her) is a masters student in the College of Fisheries and Ocean Sciences at the University of Alaska Fairbanks pursuing a degree in chemical oceanography. Her primary focus is on quantifying the physical drivers of particle quality and flux in the Chukchi Sea across annual timescales. Braun processes sediment traps taken from mooring arrays to elementally analyze the fallen marine particles to quantify the flux, composition, and quality of these nutrients. For the NBS IERP, Braun will be working under the advisement of Dr. Shannon Doherty on dissolved nutrient concentrations and deploying moored sediment traps with comparisons in the difference in stratification of the water column by location to observe the influence of water column stability on nutrient cycling.



Mariela Brooks, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Trophic ecology, stable isotopes, marine biogeochemistry, fisheries ecology
Email: mariela.brooks@noaa.gov

Collaborator and co-lead for isotope analysis and food web tracer studies for the upper trophic level projects.



Will Fennie, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Chemical oceanography, mercury cycling, methylmercury accumulation
Email: will.fennie@noaa.gov

Will is a research oceanographer at NOAA's Alaska Fisheries Science Center in the EcoFOCI program. Will's research focuses on collecting and aging larval and juvenile fish to understand the environmental drivers of early growth, survival, and recruitment. Will is especially interested in how environmental conditions shape spatial variability in fish early life history traits. Will received a master's in marine science from Moss Landing Marine Labs and a PhD from Oregon State University.



Adrian Gall, PhD

Affiliation: ABR, Inc.

Areas of Expertise: Seabird ecology, community collaborations, biological oceanography

Email: agall@abrinc.com

Dr. Adrian Gall is supporting the upper trophic level studies of the NSB IERP by analyzing observational data collected by the U.S. Fish and Wildlife Service (USFWS) to describe the abundance, distribution, and species composition of the seabird community. She studied the reproductive and feeding biology of seabirds on the colonies of St. Lawrence Island to earn her M.S. degree at Oregon State University and seabird communities at-sea in the Chukchi Sea for her Ph.D. from University of Alaska Fairbanks. Dr. Gall is excited to collaborate with residents of the region to explore seasonal and interannual variation in the spatial distribution and abundance of seabirds at sea. Seabird data will be integrated with information on physical and biological oceanography to refine spatially explicit distribution models and explore hypotheses about top-down vs. bottom-up control of prey populations. Dr. Gall is the Director of Research and President of ABR, Inc.



Jeanette C. Gann, PhD

Affiliation: NOAA Alaska Fisheries Science Center, Auke Bay Laboratories

Areas of Expertise: Biological oceanography, phytoplankton ecology, phytoplankton identification, Imaging Flow Cytobot (IFCB)

Email: jeanette.gann@noaa.gov

Jeanette Gann (she/her) is a research oceanographer with the Ecosystem and Fisheries Oceanographic Coordinated Investigations (Eco FOCI) group at the Alaska Fisheries Science Center. With more than 15 years of experience working in Alaska's large marine ecosystems (LMEs), her focus is on phytoplankton ecology and bottom-up processes in the Bering Sea via fisheries-oceanographic surveys. She is currently working on the development of a 'nutritional key' for phytoplankton and to improve understanding of bottom-up variations in nutritional quality via changes in phytoplankton community composition. As a collaborator for the NBS IERP, she will oversee the collection and data analysis for phytoplankton taxa, including installation of the Imaging FlowCytobot (IFCB) aboard IERP surveys, and lab-based IFCB preserved sample analyses for those surveys where an inline IFCB is not available. In addition, she will help coordinate and manage all water collections aboard the northern Bering Sea ecosystem trawl surveys conducted by the NOAA UTL IERP group.



Zachary Gold, PhD

Affiliation: NOAA PMEL Ocean Molecular Ecology Program
Areas of Expertise: eDNA; 'Omics; biological oceanography; marine ecology; bioinformatics
Email: zachary.gold@noaa.gov

Dr. Zachary Gold is the Ocean Molecular Ecology Group Lead at the NOAA Pacific Marine Environmental Laboratory. Gold will lead the environmental DNA (eDNA) component of the NOAA Lowerr Trophic level project, which includes sample collection and processing from both shipboard and moored autonomous samplers. Dr. Gold works closely with the EcoFOCI program to scale biological analyses with physical and chemical processes and allow for characterization of Alaska and Arctic ecosystems' response to changing ocean conditions. This project builds on his team's research developing a 5 year eDNA time series in the Bering and Chukchi seas from microbes to phytoplankton to zooplankton to fishes to marine mammals. He is also the Vice Chair of the NOAA 'Omics Working Group under the NOAA Science Council working to support, develop, and integrate advanced biomolecular tools into NOAA mission objectives.



Esther Goldstein, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Fish life history, fisheries oceanography, fish ecology
Email: esther.goldstein@noaa.gov

Esther is a Research Fish Biologist at the Alaska Fisheries Science Center, Age and Growth Program. She is a co-investigator on the upper trophic level component of the NBS IERP. Her role in the IERP focuses on the effects of environmental change on growth, size, distributions, and survival of ecologically and economically important fish species. This work will primarily use otolith-derived age and growth information to determine (1) the influences of temperature, hatch timing, and early life experience (carryover effects) on body size and survival, and (2) the effects of environmental variability on population structure and age class composition of gadids in the Northern Bering Sea.



Orlin Gologergen

Affiliation: University of Alaska Fairbanks/University of Alaska Anchorage
Areas of Expertise: Mercury analysis, Indigenous knowledge and subsistent practices
Email: omgologergen@alaska.edu

Orlin Gologergen will be a master's student in Biological Sciences at the University of Alaska Anchorage this fall. Originally from Savoonga and raised in Nome, he is Indigenous, a traditional foods hunter. He has participated in the UAF BLaST program and the BRAIDED project, gaining training in One Health laboratory techniques, data management, and scientific communication. For the NBS IERP, Orlin will work under the mentorship of Dr. Amy Bishop. He aims to apply his scientific training and lived experience to address the concerns and needs of his community members in Nome and Savoonga, specifically by applying the BRAIDED model for monitoring traditional foods.



Sandra Gologergen

Affiliation: Native Village of Savoonga/Federally Recognized Tribe
Areas of Expertise: Tribal Council Sergeant-at-Arms, Subsistence Harvester, Local Traditional Knowledge
Email: sandra.gologergen62.com@gmail.com

I am part of the Tribal Government. Born & raised in Savoonga. I am also a local subsistence harvester with some local traditional knowledge of St. Lawerance Island



Russ Hocproft, PhD

Affiliation: University of Alaska Fairbanks CFOS
Areas of Expertise: Biological oceanography; zooplankton; imaging
Email: rrhopcroft@alaska.edu

My primary responsibility will be operation of the Deep-Focus Plankton Imager (DPI) to determine the spatial distribution of zooplankton. These will be related to depth plus other environmental and biological gradients expected to occur across the study region.



Robb Kaler

Affiliation: U.S. Fish and Wildlife Service
Areas of Expertise: Population demography and ecology of marine birds and seabirds; Arctic and Circumpolar seabird monitoring; survey protocols; climate change impacts
Email: robert_kaler@fws.gov

Robb Kaler will coordinate with Dr. Suryan and Dr. Gall to support the collection of marine bird data as part of the upper trophic level studies and will lead logistical planning for an at sea observer aboard research cruises. Robb has served as a seabird biologist with the U.S. Fish and Wildlife Service (USFWS) Migratory Bird Program since 2010, and he leads the July Prince William Sound marine bird survey funded by the Exxon Valdez Oil Spill Trustee Council.



David Kimmel, PhD

Affiliation: NOAA/NMFS/Alaska Fisheries Science Center

Areas of Expertise: Biological oceanography, zooplankton ecology, quantitative ecology

Email: david.kimmel@noaa.gov

I am a Research Oceanographer at the Alaska Fisheries Science Center, Ecosystems and Fisheries Oceanography Coordinated Investigations Program. I am collaborator with the lower trophic level component. I will oversee the zooplankton portions of this component, including net sampling, collection of zooplankton for energetics as well as grazing experiments, data analysis, presentation, and publication of research results.



Jesse F. Lamb, MSc

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Larval fish diets, juvenile fish diets, zooplankton taxonomy, zooplankton ecology, oceanography

Email: jesse.f.lamb@noaa.gov

In this project, I will lead the microscopy-based diet analysis of larval walleye pollock, Pacific cod, and Arctic cod collected across the Northern Bering Sea. I will dissect, identify, and quantify ingested zooplankton prey taxa to establish prey selectivity and dietary composition across varying sea ice extents and thermal regimes. Furthermore, I will help synthesize my findings with complementary genetic diet profiles and physiological indicators, including larval growth rates, body condition, and overall nutritional health. Beyond visual taxonomic identification, I will analyze these dietary datasets to determine how rapidly warming ocean temperatures and shifting zooplankton assemblages alter the availability and nutritional quality of critical prey. By directly linking empirical feeding patterns to environmental variability and fish performance, my analysis will provide essential insight into early-stage survival mechanisms, helping predict how climate-driven ecosystem changes will impact future recruitment for commercially and ecologically vital Bering Sea groundfish populations.



Mike Litzow, PhD

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Borealization, climate-ecosystem interactions, crab ecology, fisheries oceanography, ocean acidification

Email: mike.litzow@noaa.gov

Mike will contribute to modeling and synthesis efforts, particularly regarding transition of the Northern Bering Sea ecosystem, as well as analysis of top-down vs. bottom-up control of juvenile fish and crab.



Mike Lomas, PhD

Affiliation: Bigelow Laboratory for Ocean Sciences
Areas of Expertise: Phytoplankton, primary production, carbon cycling, ecological stoichiometry, ice algae
Email: mlomas@bigelow.org

Lomas is part of the "Lower Trophic Responses to Warming: Impacts of Sea Ice Loss on Productivity in a Heterogenous Northern Bering Sea". Lomas will manage the Bigelow Laboratory for Ocean Sciences component of the project, which includes overseeing the collection and analysis of picoplankton samples by flow cytometry and interpretation of the data in the context of the broader project. Lomas will also assist in size-fractionated chlorophyll and primary production measurements and contribute to integrating these data, with phytoplankton community measurements and other ecosystem elements of the project to test hypotheses related to changing phytoplankton (and ice algae) communities in response to a heterogenous and warming Northern Bering Sea, and the loss of sea ice.



Derek Martin

Affiliation: Nome Eskimo Community (NEC)
Areas of Expertise: Tribal housing administration, transportation planning & operations, rural Alaska community development, tribal government & public administration, subsistence and Indigenous community perspectives
Email: derek.martin@necalaska.org

Born and raised in Nome, Alaska, I come from a family with roots in Saint Lawrence Island and New York. Growing up, I lived a subsistence and cultural lifestyle that fostered a strong connection to the land, waters, and communities of the Bering Sea region. My grandparents, Tim and Anna Gologergen, were recognized members of the Nome Eskimo Community.

Prior to returning to Nome in 2017, I served for several years as City Manager for the City of Kotzebue. I currently serve as Housing and Transportation Director for the Nome Eskimo Community, where I work on housing, transportation, infrastructure, and community development initiatives. Through the NBS IERP, I hope to provide local and Indigenous perspectives, community insight, and regional knowledge that help connect scientific research with the needs and priorities of the people who live and depend on the Northern Bering Sea ecosystem.



Mary Elizabeth (Beth) Matta, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Age and growth; life history research; Alaska groundfish
Email: beth.matta@noaa.gov

Beth has over 25 years of experience studying the life history and ecology of Alaska's groundfish species. She is a co-investigator on the fish age and growth components of the NBS IERP's Research Objectives 2 and 4. Beth will assist in daily and annual age reading of otoliths and analysis of fish size and age data to address hypotheses regarding phenology, condition, growth, and age-related spatial distributions of commercially and ecologically important groundfish in the NBS.



Kay McMonigal, PhD

Affiliation: University of Alaska Fairbanks, CFOS

Areas of Expertise: Physical oceanography, climate modeling, ocean-climate interactions, moorings

Email: ktmcmonigal@alaska.edu

Dr. Kay McMonigal (he/him) is an assistant professor in the College of Fisheries and Ocean Sciences, University of Alaska Fairbanks. He is a physical oceanographer who focuses on the role of the ocean in climate variability and change. McMonigal uses both observations and climate models to investigate processes from across scales, from turbulence to large-scale gyre circulations. For the NBS IERP, McMonigal is the lead of the UAF physics team. He is leading the deployment of moorings, which will provide year-round coverage of the NBS, and will lead collection and data analysis of physical properties obtained on cruises, such as CTD and underway data. McMonigal is also passionate about altering the culture of seagoing research to better include and address local community input.



Todd Miller, PhD

Affiliation: NOAA Alaska Fisheries Science Center, Auke Bay Laboratories

Areas of Expertise: Food webs, trophic tracers, stable isotopes, source primary production, ecosystem processes

Email: todd.miller@noaa.gov

Todd is a co-collaborator with the Upper Trophic Level group, contributing to efforts to trace trophic shifts in target fish and invertebrate species and to quantify the extent of benthic–pelagic coupling alongside changes in primary (sympagic) production.



Lauren Moe

Affiliation: University of Alaska Fairbanks, CFOS

Areas of Expertise: Marine biology, movement patterns, elasmobranchs, fish ecology, data analysis

Email: lamoe@alaska.edu

PhD student in Dr. Sarah Mincks' lab



Calvin Mordy, PhD

Affiliation: University of Washington, PMEL

Areas of Expertise: Nutrient dynamics, lower trophic dynamics, innovative technology

Email: mordy@uw.edu

Dr. Calvin Mordy (PI) is a nutrient chemist with over 30 years of experience generating and synthesizing regional and global data sets. He works with physical oceanographers and fisheries scientists to better understand how Alaskan marine ecosystems respond to changes in the environment. This includes studies in the Arctic, Bering Sea, Gulf of Alaska, and Aleutian Islands. Some environmental changes that have occurred include stanzas of climate variability in the Bering Sea, and reductions of ice extent in the Arctic. He was the co-lead PI for the Innovative Technology for Arctic Exploration program which developed and deployed innovative platforms and sensors in the US Arctic including the Saildrone, the Oculus coastal glider, the air-deployed ALAMO floats, ice-responsive profiling moorings, and pop-up floats. He will manage the UW component of the project, manage deployment of the water samplers, and the SeaTrac ASV along with the collection of nutrient data.



Franz Mueter, PhD

Affiliation: University of Alaska Fairbanks

Areas of Expertise: Fisheries Oceanography, marine ecology, quantitative ecology, population dynamics, fisheries management

Email: fmueter@alaska.edu

I am the Principal Investigator for the University of Alaska Fairbanks portion of the upper trophic level component. I supervise a MS student in Fisheries who will be working on the role of benthic shrimp in the northern Bering Sea using historical survey data and other data sources to quantify the responses of shrimp (distribution, abundance, species composition , and possibly energetic condition) to warming and environmental variability in the Bering Sea, as well as their role as prey for upper trophic levels. UAF also manages subcontracts to UW (Jens Nielsen), ABR, Inc (Adrian Gall) and the Nome Eskimo Community (Derek Martin).



James Murphy, PhD

Affiliation: NOAA Alaska Fisheries Science Center

Areas of Expertise: Yukon River salmon, surface trawl, otolith chemistry, age and growth

Email: Jim.Murphy@noaa.gov

I will serve as chief scientist on the Northern Bering Sea Ecosystem and Surface Trawl (NBEST) survey, which will support both lower and upper trophic level research proposals. I will lead a project that evaluates the role of a warming climate on the life history and age of smoltification in coho salmon using otolith chemistry and examines how this alters their survival, run size, and harvest opportunities in the Yukon River.



Rylie Neely

Affiliation: University of Alaska Fairbanks CFOS
Areas of Expertise: Chemical oceanography, inorganic carbon dynamics, carbon budget, physical oceanography
Email: raneely@alaska.edu

My name is Rylie, I am a first year PhD student in the Oceanography Department at University of Alaska Fairbanks, in the College of Fisheries and Ocean Sciences. My research centers around inorganic carbon chemistry in high latitude oceans, and I will be analyzing carbonate system data from the NBS IERP cruises.



Jens Nielsen, PhD

Affiliation: University of Washington, CICOES
Areas of Expertise: Biological oceanography, phytoplankton, predator-prey interactions, stable isotopes, Fatty acids
Email: jmniel@uw.edu

Nielsen's primary involvement in the upper trophic level projects work focuses on how sea ice cover affects benthic-pelagic energy pathways, food web structure - and their consequences. In particular, he will play one of the leading roles in synthesis of trophic level, food web data, and in particular, fatty acid and isotope biomarker data. That includes various statistical models, for example, working with isotope data to use for isotope mixing models, and linking those data to other diets, fatty acid and trophic information collected by the team. He will also work with cross-collaboration across the lower and upper trophic level projects as needed.



Deion Noongwook, Tribal Council Vice President

Affiliation: Native Village of Savoonga/Federally Recognized Tribe
Areas of Expertise:
Email: snunguk@gmail.com

I am part of the Tribal Government. I am also a local subsistence harvester with some local traditional knowledge of St. Lawerance Island.



Edwin Noongwook

Affiliation: Native Village of Savoonga/Federally Recognized Tribe
Areas of Expertise: Subsistence Harvester, Local Traditional Knowledge
Email: bugsnunguk@gmail.com

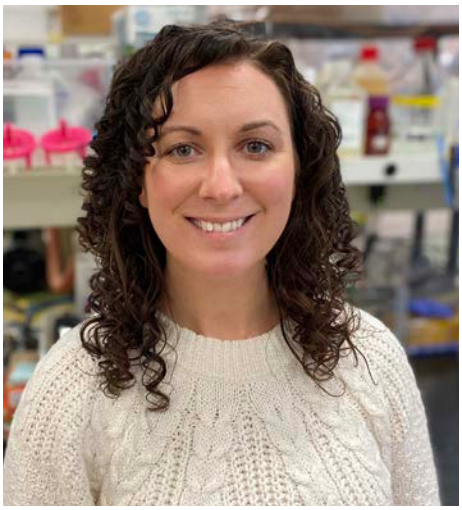
I am part of the Tribal Government. I am also a local subsistence harvester with local traditional knowledge of St. Lawerance Island



Melanie Paquin, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Fish ecology, taxonomy, genetics
Email: melanie.paquin@noaa.gov

Melanie Paquin is a research fisheries biologist for the EcoFOCI program at the NOAA Fisheries Alaska Fisheries Science Center with > 15 years of experience studying fish ecology, taxonomy, and the application of DNA tools to fisheries biology. Melanie currently is the lead Archivist of the AFSC Ichthyoplankton Collection and a co-PI on the NBS IERP project "Larval Gadid Diets." Prior to coming to AFSC she studied population structure of Steelhead. Her research interests have led to advances in the collection of genetic data from small source tissue to study larval fish taxonomy and identification, and to develop low-cost rapid genetic protocols to identify stomach contents of marine fishes. She has also used genetic techniques to identify the occurrence of a sixth species of smelt that expanded into the Salish Sea, the occurrence of which may be due to advection from the outer coast and possibly due to environmental change.



Jennifer Questel, PhD

Affiliation: University of Alaska Fairbanks, CFOS
Areas of Expertise: Biological oceanography; zooplankton ecology; population genetics; DNA barcoding; eDNA/metabarcoding
Email: jmquestel@alaska.edu

Dr. Jennifer Questel (she/her) holds a Research Assistant Professor position at the College of Fisheries and Ocean Sciences, University of Alaska Fairbanks (CFOS, UAF). She is a Biological Oceanographer who specialized in zooplankton and molecular ecology of polar and subpolar ecosystems. Her research takes her from the Arctic Ocean, to breathtaking mountainscapes and tidewater glaciers in coastal fjord systems in Southeast Alaska, to seamounts and the abyssopelagic zone in the Gulf of Alaska. Questel uses a suite of molecular techniques (e.g., DNA barcoding, population genetics, phylogeography, metabarcoding) to better understand the structure and biodiversity within zooplankton communities. For the NBS IERP, Questel is the Principal Investigator for the zooplankton discipline. Her major objectives for the program are to characterize the meso- and macrozooplankton community of the Northern Bering Sea and to determine if water column stratification influences the vertical positioning of species in the ocean.



Anna Roat

Affiliation: American University
Areas of Expertise: Phytoplankton biomarkers, trophic dynamics
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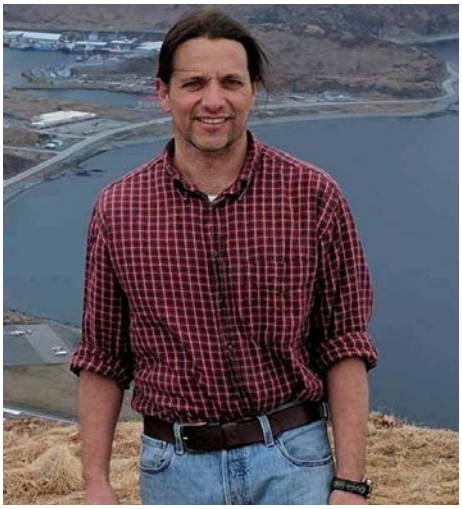
Anna is a master's student studying changing trophic dynamics of juvenile snow crab. She uses sea ice biomarkers and other phytoplankton biomarkers to evaluate the impact of sea ice loss on juvenile crab diet and their energetic condition.



Alex De Robertis, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Fisheries Acoustics
Email: alex.derobertis@noaa.gov

Alex is a fisheries acoustician, specializing in measuring fish and zooplankton abundance using sonar. His work revolves around improving methods to detect fish and zooplankton with sound. As part of this project, he plans to make year-round observations from echosounders mounted on the seafloor to better understand fish and zooplankton abundance in the Northern Bering Sea.



Matthew Rogers, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Food webs, nutritional ecology, stable isotopes, analytical chemistry
Email: matthew.rogers@noaa.gov

Matthew is a nutritional ecologist whose research focuses on studying the food webs of Alaska's Large Marine Ecosystems. He is a Co-PI for the NBS IERP upper trophic level group and will be involved in studying energy flow in the NBS and the effect of ice cover on benthic-pelagic coupling. He is involved in developing long-term data sets and ecosystem metrics to help scientists and managers understand marine trophic relationships and the nutritional condition of fish and marine mammals. He is also the Chemistry Lab coordinator at the NOAA AFSC Auke Bay Laboratories in Juneau, AK.



Emily Seelen, PhD

Affiliation: University of Alaska Fairbanks
Areas of Expertise: Chemical oceanography, mercury cycling, methylmercury accumulation
Email: eseelen@alaska.edu

I am a collaborative researcher to the NBS IERP program. My research generally focuses on the Arctic mercury cycle, specifically factors that lead to methylmercury accumulation in the base of aquatic food-webs. For this project, I am evaluating how stratification influences where methylmercury is formed in the water column and whether the shallow system with high resuspension enhances benthic sources of methylmercury to the water column. How much of that methylmercury is accumulating in local plankton, the first step for animal exposure, will be assessed using bioconcentration factors. Altogether, I hope to disentangle factors that enhance, or reduce, mercury exposure to Arctic marine food-webs.



Laura Spencer, PhD

Affiliation: University of Washington, Alaska Fisheries Science Center
Areas of Expertise: Fisheries genetics and genomics, population genomics, environmental genomics, climate stress physiology and adaptation, fisheries ecology and management
Email: laura.spencer@noaa.gov

Laura Spencer is a Co-Investigator on Pacific cod stock composition in the Northern Bering Sea, a project within the NBS IERP's higher trophic level research component. Her research uses genetic stock identification to investigate the origins of Pacific cod occurring in the northern Bering Sea and how contributions from different spawning populations vary across years, life stages, and locations. By distinguishing locally originating fish from those migrating into the region, this work will help clarify the population dynamics underlying changes in Pacific cod distribution and abundance. Spencer leads the project's genetic and statistical analyses and coordinates research activities across survey and fishery partners. The findings will contribute to a broader understanding of how environmental change is affecting groundfish populations and fisheries in the northern Bering Sea.



Ingrid Spies, PhD

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Population genetics, population dynamics modeling, stock structure, stock assessment, fisheries
Email: ingrid.spies@noaa.gov

As a Co-Investigator, I will provide a direct pathway for incorporating project results into ongoing assessment discussions and future evaluation of stock structure, connectivity, and movement. As a geneticist, I will assist with technical aspects of the project, sample collection, and analysis as necessary.



Kali Stone, MSc

Affiliation: NOAA Alaska Fisheries Science Center, Age & Growth Program
Areas of Expertise: Fish age & growth, otolith microchemistry, phenology
Email: kali.stone@noaa.gov

Kali ("Kaylee") is a Fish Biologist at the NOAA Alaska Fisheries Science Center. For the NBS IERP, she will assist in the collection and analysis of phenological and life history information for key sub-Arctic gadids (Pacific cod and Alaska pollock). Otolith-based methods will be used to measure age, growth, and hatch phenology and to examine how thermal conditions and growth during the first year of life influence subsequent life stages. Her work aims to clarify how climate variability influences the distribution, development, and survival of these species in the Northern Bering Sea.



Heather Tabisola

Affiliation: University of Washington CICOES at NOAA PMEL
Areas of Expertise: Program management & project coordination, science communication and stakeholder engagement, technology integration for oceanographic research
Email: hnmac@uw.edu, heather.tabisola@noaa.gov

Heather Tabisola coordinates the NOAA PMEL and AFSC EcoFOCI program. Her work spans program leadership, technology development, and strategic project management, including previous contributions to the Innovative Technology for Arctic Exploration programs in Seattle, WA. Her work has been instrumental in the transition and application of emerging technologies such as Saildrone and the Oculus glider. She also contributes to big-picture, cross-cutting initiatives and proposals. In addition, Tabisola leads EcoFOCI mentorship and engagement efforts for NOAA Hollings and NOAA-supported EcoFOCI internship programs, fostering the next generation of scientists and leaders. She plays a central role in integrating research, technology, and communication—driving coordination across teams while shaping how EcoFOCI science and efforts are shared. Tabisola will play a key role in project coordination across the team while leading communications and engagement efforts and working closely with our Tribal partners. She hopes to participate in and contribute to science efforts along the way.



Alexis Will, PhD

Affiliation: World Wildlife Fund
Areas of Expertise: Seabird ecology & physiology, seabird movement, community collaboration
Email: kali.stone@noaa.gov

Alexis Will is a co-PI on supplemental projects under the Food Web Effects On Species Distribution and Interactions in The Northern Bering Sea theme. Both projects are based in Savoonga. Will serves as both a content expert and researcher-to-community liaison, working to build local science capacity, collect relevant data on auklet breeding and foraging parameters and coordinate contributions of local observations and Indigenous Knowledge.



Tonya Zeppelin, MSc

Affiliation: NOAA Alaska Fisheries Science Center
Areas of Expertise: Foraging ecology, food habits, northern fur seals, predation
Email: tonya.zeppelin@noaa.gov

Tonya's contribution to the IERP addresses the decline of Yukon River salmon stocks by investigating how warming temperatures may increase top-down predation pressure from northern fur seals on the Pribilof Islands, Alaska. Her research quantifies prey species by analyzing fecal (scat) and regurgitation (spew) samples collected from rookery sites. By integrating traditional hard-parts analysis (identification of fish otoliths, bones, and cephalopod beaks) with DNA metabarcoding, she provides accurate, species-level resolution of seal diets. Tonya is a Research Fisheries Biologist at the Alaska Fisheries Science Center focusing on foraging ecology of pinnipeds.