



ALASKA  
MARINE  
SCIENCE  
SYMPOSIUM

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**JANUARY 29-FEBRUARY 2, 2024**

Showcasing Marine Research in the  
Arctic Ocean, Bering Sea, and Gulf of Alaska

# MONDAY, JANUARY 29TH KEYNOTES & OTHER EVENTS



@AKMARINESCIENCE | #AMSS2024



## 9AM-12PM : COMMUNICATING OCEAN SCIENCES WORKSHOP

### USING VIRTUAL REALITY AS A SCIENCE COMMUNICATION TOOL

DR. THOMAS KELLY, COLLEGE OF FISHERIES AND OCEAN SCIENCES, UNIVERSITY OF ALASKA FAIRBANKS  
AMY LAUREN, AWARD-WINNING FILMMAKER

## 1PM-5PM : KEYNOTE PRESENTATIONS



### A SEABIRD'S VIEW OF THE PAST, PRESENT, AND FUTURE OF ALASKA'S OCEANS

DR. KATHY KULETZ, USFWS RETIRED

Alaska's marine ecosystems are connected physically and biologically, and seabirds move within, among, and beyond these oceans. Seabirds teach us about ecosystem stability, transformation, and adaptation. This presentation will discuss seabird trends in Alaska, the approaches used to better understand seabirds, and thereby the oceans on which they (and we) depend.



### A DEEP-DIVE INTO THE ZOOPLANKTON OF THE GULF OF ALASKA

DR. RUSSELL R. HOPCROFT, COLLEGE OF FISHERIES AND OCEAN SCIENCES, UNIVERSITY OF ALASKA FAIRBANKS

Zooplankton come in all shapes and sizes. While the "surface" waters of the Gulf of Alaska have been studied for decades, the communities in deeper water are virtually undescribed except for a few keystone species. Dr. Hopcroft will showcase the exquisite beauty of the deep-water macro fauna, including some species new to science.



### SELANGEQ 'TO BECOME AWARE' ON THE IMPORTANCE OF INCORPORATING TRADITIONAL KNOWLEDGE INTO WESTERN SCIENCE

SERENA 'CUUCITCUAR' ALSTROM FITKA, EXEC. DIR., YUKON RIVER DRAINAGE FISHERIES ASSOCIATION (YRDLA)

The stewardship of the land and animals has been looked after for thousands of years by observations of Indigenous peoples. As concern grows over declining Yukon River chinook and chum salmon, fishers are looking for ways to share their knowledge and participate in research. Serena will highlight how YRDLA incorporates traditional knowledge into the programs they operate.



### OSCAR-NOMINATED 'HAULOUT' DOCUMENTARY SCREENING & POPULATION BIOLOGY OF PACIFIC WALRUS

EVGENIA ARBUGAeva, PHOTOGRAPHER, HAULOUT DOCUMENTARY

DR. ANTHONY FISCHBACH, U.S. GEOLOGICAL SURVEY, ALASKA SCIENCE CENTER

Oscar-nominated short film *Haulout* follows Russian marine biologist, Maxim Chakilev, as he observes and documents the massive Pacific walrus haulout at Cape Heart Stone in the Chukchi Sea. Evgenia Arbugaeva, photographer and filmmaker, will introduce the film, followed by the film screening, and finally Dr. Anthony Fishbach will close the keynote discussing the population, conservation, and management of Pacific walrus from a U.S. perspective.



## 6-9PM : POSTER PRESENTATIONS AT THE EGAN CENTER, MONDAY & TUESDAY

# SYMPOSIUM SUPPORTERS



# TUESDAY, JANUARY 30<sup>TH</sup> GULF OF ALASKA

\* Master's Candidate  
\*\* Doctoral Candidate

TIME	TITLE	PRESENTER	SECTION
8:00-8:15	Consequences of the North Pacific marine heatwave on phytoplankton abundance in the Gulf of Alaska	Loïck Kléparski	Climate & Oceanography
8:15 - 8:30	Investigating the Alaska Coastal Current under various forcing scenarios in a high-resolution model	Thilo Klenz	Climate & Oceanography
8:30 - 8:45	Genomic tracking of the invasive green crab expansion into Alaska	Carolyn Tepolt	Climate & Oceanography
8:45 - 9:00	Indoor cultivation protocols for the rhodophytes, <i>Devaleraea mollis</i> and <i>Palmaria hecatensis</i> from Alaska	Muriel Dittrich*	Lower Trophic Levels
9:00 - 9:15	Phytoplankton response to volcanic ash and dust in the high-nutrient, low-chlorophyll Northeast Pacific	Karen Stamieszkin	Lower Trophic Levels
9:15 - 9:30	Unexpected high importance of the smallest phytoplankton in the northern Gulf of Alaska	Suzanne Strom	Lower Trophic Levels
9:30 - 10:00	<i>Coffee Break</i>		
10:00 - 10:15	Resource use of the Pacific oyster and the Pacific blue mussel in a macroalgae-dominated system	Josianne Haag**	Lower Trophic Levels
10:15 - 10:30	Winter marine ecology of chum salmon in the Gulf of Alaska	Lukas DeFilippo	Fishes & Fish Habitat
10:30 - 10:45	Habitats occupied by chinook salmon in the Gulf of Alaska and in the U.S. Navy's Temporary Maritime Activities Area	Michael Courtney	Fishes & Fish Habitat
10:45 - 11:00	Combining predator diets and survey data for spatio-temporal analysis of forage fish in Alaska	Lindsay Turner*	Fishes & Fish Habitat
11:00 - 11:15	Seascape heterogeneity influences Alaskan eelgrass fish communities	Lia Domke	Fishes & Fish Habitat
11:15 - 11:30	Cryptic genetic forms of Pacific Ocean perch mix in the Gulf of Alaska	Diana Baetscher	Fishes & Fish Habitat
11:30 - 1:00	<i>Lunch (Provided)</i>		
1:00 - 1:15	Optimizing egg harvest strategies for people and gulls through co-stewardship in Glacier Bay	Tania Lewis	Seabirds
1:15 - 1:30	Cultural and ecological relationships between the Unangax and seabirds on Sanak Island, Alaska	Miranda LaZar**	Seabirds
1:30 - 1:45	Response of harbor seal pups to cruise ships: A conservation concern in Alaska's glacial fjords	John Jansen	Marine Mammals
1:45 - 2:00	Inferred mass mortality of humpback whales in Southeast Alaska since the Northeast Pacific marine heatwave	Janet Neilson	Marine Mammals
2:00 -2:15	Inter- and intra-annual variation in humpback whale body condition on their foraging grounds	Martin van Aswegen**	Marine Mammals
2:15 - 2:30	Drivers of seasonal sea otter distribution in Cook Inlet, Alaska	Nicole LaRoche	Marine Mammals
2:30 - 3:00	<i>Coffee Break</i>		
3:00 - 3:15	Sea otter interactions with mariculture oyster farms	Emily Reynolds*	Marine Mammals
3:15 - 3:30	Ways of knowing abalone and sea otters in Sitka Sound, Alaska	Taylor White**	Humans
3:30 - 3:45	Conflict transformation in Alaskan fisheries: New ways forward in herring social-ecological systems	Lauren Eckert	Humans
3:45 - 4:00	PhytoCLAS: Learning about phytoplankton in the Gulf of Alaska through culture, language, art, and science	Katie Gavenus and Dehrich Schmidt-Chya	Humans
4:00 - 4:15	Where ice meets ocean: Monitoring fjord and coastal marine ecosystems in the eastern Gulf of Alaska	Jamie Womble	Ecosystem Perspectives
4:15 - 4:30	The Knik Tribe and ADEC's Paralytic Shellfish Poisoning Risk Management Project – Year 1 Results	Solomia Bushell	Ecosystem Perspectives
4:30 - 4:45	Salmon trophic interactions in the pelagic ecosystem of the Gulf of Alaska	Szymon Surma	Ecosystem Perspectives
4:45 - 5:00	Outcomes of the 2023 NOAA Ocean Exploration Seascape Alaska Expedition Series	Sam Candio	Ecosystem Perspectives

# WEDNESDAY, JANUARY 31<sup>ST</sup> ARCTIC OCEAN

\* Master's Candidate  
\*\* Doctoral Candidate

TIME	TITLE	PRESENTER	SECTION
8:00 - 8:15	Weaving oceanography with Indigenous observations to understand the seasonality of Kotzebue Sound	Alexandra Ravelo	Climate & Oceanography
8:15 - 8:30	Ikaagvik Sikukun - Inupiaq for Ice Bridges	Andy Mahoney and Ajit Subramaniam	Climate & Oceanography
8:30 - 8:45	Winter refugia for subarctic species in the Pacific Arctic: A newly emerging seafloor habitat?	Seth Danielson	Climate & Oceanography
8:45 - 9:00	Monitoring for toxic algal blooms in the Bering Sea and Alaskan Arctic through shipboard deployments	Mrunmayee Pathare	Lower Trophic Levels
9:00 - 9:15	Vertical carbon export by frontal dynamics during an underice phytoplankton bloom in the Chukchi Sea	Robert Pickart	Lower Trophic Levels
9:15 - 9:30	Seasonal patterns of benthic metabolism and nutrient fluxes in Beaufort Sea coastal lagoons	Brian Kim**	Lower Trophic Levels
9:30 - 10:00	<i>Coffee Break</i>		
10:00 - 10:15	What fuels fish? Determining trophic resource use by Arctic fishes across Beaufort Sea lagoons	Sydney Wilkinson**	Fishes & Fish Habitat
10:15 - 10:30	They're here! Pacific salmon are spawning in Arctic Rivers	Peter Westley	Fishes & Fish Habitat
10:30 - 10:45	eDNA detection of gadids: Metabarcoding assay validation and application to range shifts	Kimberly Ledger	Fishes & Fish Habitat
10:45 - 11:00	Spatial and foraging ecology of Cape Parry thick-billed murre, eastern Beaufort Sea	Stephen Insley	Seabirds
11:00 - 11:15	Body condition of Pacific common eiders along the Arctic Coastal Plain of Alaska	Elyssa Watford*	Seabirds
11:15 - 11:30	Seasonal and population level variation in the skin transcriptome of the beluga whale	Ebru Unal	Marine Mammals
11:30 - 1:00	<i>Lunch (On Your Own)</i>		
1:00 - 1:15	Assessing the population consequences of disturbance and climate change for the Pacific walrus	Devin Johnson	Marine Mammals
1:15 - 1:30	Predictive trophic transfer models help assess exposure risks of saxitoxins to Pacific walrus	Patrick Charapata	Marine Mammals
1:30 - 1:45	Gliders detect the northward movements of subarctic marine mammals in the Pacific Arctic	Kate Stafford	Marine Mammals
1:45 - 2:00	Microplastics in marine mammal blubber, melon, & other tissues: Evidence of translocation	Greg Merrill**	Marine Mammals
2:00 - 2:15	Trends in vessel traffic in the Bering Strait and implications for changing bowhead whale migration	Angela Szesciorka	Humans
2:15 - 2:30	Community collaborations around a coastal Alaska Arctic observatory & knowledge hub	Donna Hauser	Humans
2:30 - 3:00	<i>Coffee Break</i>		
3:00 - 3:15	Tamamta (All of Us): Transforming western and Indigenous fisheries and marine sciences together	Courtney Carothers	Ecosystem Perspectives
3:15 - 3:30	Using bathymetric data analysis tools to map Alaska	Caroline Wilkinson	Ecosystem Perspectives
3:30 - 3:45	High temporal resolution measurements of water quality in Hotham Inlet	Ajit Subramaniam	Ecosystem Perspectives
3:45 - 4:00	A nutrient flux synthesis for the Bering Strait inflow using Distributed Biological Observatory Data	Lee Cooper	Ecosystem Perspectives
4:00 - 4:15	Ocean acidification in the Pacific-Arctic Region: Bridging carbonate system observational gaps	Thomas Caero*	Ecosystem Perspectives
4:15 - 4:30	Trophic roles of spotted seals in Alaskan Arctic marine ecosystems	Peter Boveng	Ecosystem Perspectives
4:30 - 4:45	Spatiotemporal variability of Pacific Arctic marine ecosystems	Silvana Gonzalez	Ecosystem Perspectives

# THURSDAY, FEBRUARY 1<sup>ST</sup> BERING SEA & ALEUTIAN ISLANDS

\* Master's Candidate  
\*\* Doctoral Candidate

TIME	TITLE	PRESENTER	SECTION
8:00 - 8:15	Western Alaska storm surge amplified by basin shape	Steven Dykstra	Climate & Oceanography
8:15 - 8:30	Climate change adaptation in the Yukon-Kuskokwim Delta through a community-based vulnerability assessment	Joseph Molina	Climate & Oceanography
8:30 - 8:45	The Yukon River Delta and Norton Sound Biogeochemical Modeling System	Blake Clark	Climate & Oceanography
8:45 - 9:00	Coastal processes enhance bottom water acidification rates on the Bering Sea shelf	Darren Pilcher	Climate & Oceanography
9:00 - 9:15	Satellite detection of harmful dinoflagellate blooms in the Bering and Chukchi Seas	Priscila Kienteca Lange	Lower Trophic Levels
9:15 - 9:30	Changes in copepod size in response to warm and cold conditions during spring in the eastern Bering Sea	Deana Crouser	Lower Trophic Levels
9:30 - 10:00	<i>Coffee Break</i>		
10:00 - 10:15	Poor energetic condition of Bering Sea snow crab during a population collapse	Erin Fedewa	Lower Trophic Levels
10:15 - 10:30	Peering into the data-poor season: Distribution models to aid Bristol Bay red king crab management	Emily Ryznar	Fishes & Fish Habitat
10:30 - 10:45	Movement modeling of Tanner crabs ( <i>Chionoecetes bairdi</i> ) via multi-platform acoustic telemetry	Elizabeth Hasan	Fishes & Fish Habitat
10:45 - 11:00	Differential sensitivities to ocean acidification and warming in early life stages of Alaskan fishes	Emily Slesinger	Fishes & Fish Habitat
11:00 - 11:15	Capelin condition and abundance through multiple heatwaves in Alaska	Rob Suryan	Fishes & Fish Habitat
11:15 - 11:30	Building confidence in predictions of Pacific cod spawning habitat with new temperature observations	Lauren Rogers	Fishes & Fish Habitat
11:30 - 1:00	<i>Lunch (Provided)</i>		
1:00 - 1:15	Characterizing Pacific halibut movement dynamics with respect to current management practice in the Bering Sea	Austin Flanigan**	Fishes & Fish Habitat
1:15 - 1:30	From Arctic Hotspot to Bering Sea Cold Pool: The nonbreeding distribution of a cryopelagic seabird	George Divoky	Seabirds
1:30 - 1:45	Changing forage conditions for molting Steller's eiders in Izembek Lagoon, Alaska	Anastasia Maligne*	Seabirds
1:45 - 2:00	SPLASH twenty years later: What do we know about the humpback whales of the eastern Aleutian Island	Heather Riley	Marine Mammals
2:00 - 2:15	Foraging niche, resource partitioning, and mercury concentrations of male Steller sea lions	Amy Bishop	Marine Mammals
2:15 - 2:30	Saxitoxin and domoic acid exposure risks to northern fur seals on St. Paul Island, Alaska	Chelsea Kovalcsik*	Marine Mammals
2:30 - 3:00	<i>Coffee Break</i>		
3:00 - 3:15	Aulukluki neqkat: Centering care of salmon and relational research in Indigenous fisheries in the Kuskokwim River, Alaska	Janessa Esquible and Jacqueline Cleveland**	Humans
3:15 - 3:30	Immeasurable sovereignty: Accounting for Indigenous well-being in fishery science and sustainability	Rachel Donkersloot	Humans
3:30 - 3:45	Arctic governance: Local voices in multi-level decision-making - A Gambell, Alaska perspective	Shauna Burnsilver	Humans
3:45 - 4:00	Relationships first: Learning to build capacity for actionable management in the Bering Sea	Sarah Wise	Ecosystem Perspectives
4:00 - 4:15	Food sovereignty as well-being in Igiugig Village	Harmony Jade Sugaq Wayner*	Ecosystem Perspectives
4:15 - 4:30	Proposing coproducing knowledge to develop a sustainable model of use in the Bering Strait	Heather Sauyaq Jean Gordon and Ashok Pandey	Ecosystem Perspectives
4:30 - 4:45	Killer whale behavior around non-pelagic trawl vessels and gear modifications to reduce bycatch risk	Hannah Myers and John Gauvin	Ecosystem Perspectives