

JANUARY 22-26, 2018
HOTEL CAPTAIN COOK & EGAN CENTER
ANCHORAGE, ALASKA

**SHOWCASING MARINE RESEARCH IN THE ARCTIC OCEAN,
BERING SEA, AND GULF OF ALASKA**

alaskamarinescience.org

Schedule

All workshops listed are open to the public.

	MONDAY, JANUARY 22	TUESDAY, JANUARY 23
<p>Morning Plenary Session 8:00 a.m. – 11:30 a.m.</p>	<p>Registration Opens, 10:00 a.m.</p> <p>Workshop, 9:00 a.m. – 12:00 p.m. Communicating Ocean Sciences with Chris Linder <i>Captain Cook Ballroom, Fore Deck</i></p>	<p>Continental Breakfast, 7:30 a.m. – 8:00 a.m.</p> <p>Registration Opens, 8:00 a.m.</p> <p>Gulf of Alaska Plenary</p> <p>Coffee Break, 9:30 a.m. – 10:00 a.m.</p>
<p>Lunch 11:30 a.m. – 1:00 p.m.</p>	<p>Lunch on your own</p>	<p>Lunch provided</p> <p>Workshop, 12:00 p.m. – 1:30 p.m. Understanding the Arctic Through a Co-production of Knowledge <i>Endeavor Room</i></p>
<p>Afternoon Plenary Session 1:00 p.m. – 5:00 p.m.</p>	<p>Symposium Begins</p> <p>Opening Remarks, 1:00 p.m. – 1:30 p.m.</p> <p>Keynote, 1:30 p.m. – 2:15 p.m. RDML Tim Gallaudet, Ph.D., USN Ret.</p> <p>Keynote, 2:15 p.m. – 3:00 p.m. Rick Thoman</p> <p>Coffee Break, 3:00 p.m. – 3:30 p.m.</p> <p>Keynote, 3:30 p.m. – 4:15 p.m. Dr. Lis Lindal Jørgensen</p> <p>Keynote, 4:15 p.m. – 5:00 p.m. Chris Linder</p>	<p>Gulf of Alaska Plenary</p> <p>Coffee Break, 2:30 p.m. – 3:00 p.m.</p> <p>5:00 p.m. – 6:15 p.m. NPRB Special Session <i>Captain Cook Ballroom</i></p> <p>Workshop, 5:00 p.m. – 7:00 p.m. Ocean Educator Night <i>Adventure Room</i></p>
<p>Evening 5:00 p.m. – 9:00 p.m.</p>	<p>Exhibits and Poster Reception, 6:30 p.m. – 9:00 p.m.</p> <p>Gulf of Alaska and Bering Sea/Aleutians</p> <ul style="list-style-type: none"> • Wave 1 – 6:30 p.m. – 7:45 p.m. • Wave 2 – 7:45 p.m. – 9:00 p.m. <p><i>Egan Center, Explorers Hall, Appetizers & No-Host Bar</i></p>	<p>Exhibits and Poster Reception, 6:30 p.m. – 9:00 p.m.</p> <p>Bering Sea/Aleutians and Arctic</p> <ul style="list-style-type: none"> • Wave 1 – 6:30 p.m. – 7:45 p.m. • Wave 2 – 7:45 p.m. – 9:00 p.m. <p><i>Egan Center, Explorers Hall, Appetizers & No-Host Bar</i></p>

Posters/Exhibits & Receptions

Egan Center
555 W. 5th Ave.
Shuttle service between Egan Center and Hotel Captain Cook provided at 15 minute intervals, 6:15 p.m. – 9:00 p.m.

All Other Events

Hotel Captain Cook
939 W. 5th Ave.
Keynotes, Plenaries, and provided lunches in Discovery Ballroom

WEDNESDAY, JANUARY 24	THURSDAY, JANUARY 25	FRIDAY, JANUARY 26
<p>Continental Breakfast, 7:30 a.m. – 8:00 a.m.</p> <p>Registration Opens, 8:00 a.m.</p> <p>Bering Sea and Aleutian Islands Plenary</p> <p>Coffee Break, 9:30 a.m. – 10:00 a.m.</p>	<p>Continental Breakfast, 7:30 a.m. – 8:00 a.m.</p> <p>Registration Opens, 8:00 a.m.</p> <p>Arctic Plenary</p> <p>Coffee Break, 9:30 a.m. – 10:00 a.m.</p> <p>Workshop, 10:00 a.m. – 12:00 p.m. Metadata Office Hours <i>Club I</i></p>	<p>Workshop, 7:00 a.m. – 5:00 p.m. Pollock Conservation Cooperative Research Center PI Symposium <i>Quadrant</i></p> <p>Workshop, 9:00 a.m. – 12:00 p.m. Metadata 411 <i>Club I</i></p> <p>Workshop, 9:00 a.m. – 12:00 p.m. Microplastics Contamination of the North Pacific and Bering Seas <i>Easter Island Room</i></p>
<p>Lunch on your own</p>	<p>Lunch provided</p>	
<p>Workshop, 12:00 p.m. – 1:30 p.m. Understanding the Arctic Through a Co-production of Knowledge <i>Endeavor Room</i></p>	<p>Workshop, 12:00 p.m. – 1:00 p.m. State of the Arctic – Circumpolar Biodiversity Marine Program Progress <i>Endeavor Room</i></p>	<p>Workshop, 9:00 a.m. – 5:00 p.m. Coastal Marine Institute Annual Research Review <i>Endeavor Room</i></p> <p>Workshop, 9:00 a.m. – 11:00 a.m. Circulation and Hydrography of the Northeastern Chukchi Sea <i>Voyager Room</i></p>
<p>Bering Sea and Aleutian Islands Plenary</p> <p>Coffee Break, 2:30 p.m. – 3:00 p.m.</p> <p>Workshop, 3:00 p.m. – 5:00 p.m. Metadata Office Hours <i>Club I</i></p> <p>Student Poster Presentation Award Announcements, 4:45 p.m. – 5:00 p.m.</p> <p>Workshop, 5:00 p.m. – 7:00 p.m. Alaska Climate Integrated Modeling (ACLIM) Project <i>Quadrant Room</i></p>	<p>Arctic Plenary</p> <p>Coffee Break, 2:30 p.m. – 3:00 p.m.</p> <p>Student Oral Presentation Award Announcements and Closing Remarks, 4:45 p.m. – 5:00 p.m.</p>	<p>Workshop, 8:30 a.m. – 5:00 p.m. Cook Inlet Beluga Whale Management, Research, and Partnership Opportunities <i>Adventure Room</i></p>
	<p>Workshop, 7:00 p.m. – 9:00 p.m. Arctic Research Planning Night <i>Quarter Deck</i></p>	

Lactation Station
Monday – Friday
Hotel Captain Cook
Library

Media Room
Monday – Thursday
Hotel Captain Cook
Easter Island Room

Keynote Speakers

Monday, January 22

1:30 p.m. – 2:15 p.m.

RDML TIM GALLAUDET, PH.D., USN RET., ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE AND ACTING UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE



Timothy Gallaudet, Ph.D., was confirmed by the U.S. Senate on October 5, 2017, as the Assistant Secretary of Commerce for Oceans and Atmosphere for the Department of Commerce in the National Oceanic and Atmospheric Administration.

Dr. Gallaudet was previously a Rear Admiral in the U.S. Navy, where his most recent assignment was Oceanographer of the Navy and Commander of the Navy Meteorology and Oceanography Command. During his 32 years of military service, Dr. Gallaudet has had experience in weather and ocean forecasting, hydrographic surveying, developing policy and plans to counter illegal, unregulated and unreported fishing, and assessing the national security impacts of climate change. He has led teams of Navy sailors and civilians performing such diverse functions as overseeing aircraft carrier combat operations, planning and conducting humanitarian assistance and disaster response efforts, assisting Navy SEAL teams during high visibility counter-terrorism operations, and developing the Navy's annual \$52 billion information technology, cyber security and intelligence budget.

Dr. Gallaudet holds a Bachelor's degree from the U.S. Naval Academy and Master's and Doctoral degrees from Scripps Institution of Oceanography, all in oceanography.

2:15 p.m. – 3:00 p.m.

RICHARD THOMAN, NATIONAL WEATHER SERVICE ALASKA REGION, CLIMATE SCIENCE AND SERVICES MANAGER

Visitors from Distant Seas: Typhoons and Tropical Cyclones in Alaska



The southern and Caribbean portions of the United States were devastated in 2017 by a series of Category 5 hurricanes with direct and indirect casualties, billions of dollars in economic damages, and unprecedented precipitation, flooding and storm surge. These events were likely exacerbated by climate change. In Alaska, we do not have “hurricanes,” but rather western Pacific typhoons. Western Pacific typhoons and their offspring can be just as severe climatically and atmospherically as those experienced by the lower 48, producing significant damage to coastal communities and infrastructure and bringing copious moisture to inland areas of Alaska. Mr. Thoman will describe these events, their characteristics, and how they are similar and different from lower 48 hurricanes.

Richard Thoman grew up in the Amish country of Pennsylvania dreaming of life in Alaska. He has worked in the weather and climate business for the past 34 years in both the private and public sectors, and realized his childhood dreams when he joined the National Weather Service Alaska Region in 1988. He currently works as the National Weather Service Alaska Region Climate Science and Services Manager. He is the author or co-author on a dozen papers on aspects of Alaska climate and climate variability, including basic climate analysis, wildfires, and marine heat waves. He holds a B.S. in meteorology from Penn State and an M.A. in Athabaskan Linguistics from the University of Alaska. He lives with his wife in Fairbanks, and, after 30 years, is now comfortable calling himself an Alaskan.

Keynote Speakers

3:00 p.m. – 3:30 p.m. COFFEE BREAK

3:30 p.m. – 4:15 p.m.

LIS LINDAL JØRGENSEN SENIOR SCIENTIST, INSTITUTE OF MARINE RESEARCH (IMR) NORWAY

PanArctic Benthic Monitoring: A Fast-changing Environment



Global climate change, harvest of marine resources, exploitation and invasion of new species place pressure on marine ecosystems. To be able to identify and follow impacts on the ecosystem, long-term monitoring is necessary, which can provide a cost and time-efficient PanArctic baseline overview of megabenthic invertebrate distribution and diversity. A trait-based approach is used, resulting in maps of temperature sensitivity and trawl vulnerability for the Barents Sea, Chukchi Sea and Bering Sea. These analyses show areas where different stressors can act on different species components of the community and cause a possible rapid change in biodiversity and habitat complexity. Such findings are critical and call for increased

awareness from management authorities and global awareness of community impact from multiple, rather than single stressors.

Dr. Lis Lindal Jørgensen has been a senior scientist at the *Institute of Marine Research* (IMR) Norway since 2003. The focus of her work has been to understand how communities of benthic species are structured in space and in time by the surrounding natural and anthropogenic settings in the Northern Atlantic and Arctic Seas. Together with *Polar Research Institute of Marine Fisheries and Oceanography* (PINRO), Russia, Dr. Jørgensen and colleagues annually identify the megabenthos taken with trawls in the Barents Sea. Questions such as “how does the benthic community change” when impacted by invasive species such as king crab and snow crab, and increased temperature and bottom trawling, have become increasingly important with climate change. In 2017, Dr. Jørgensen started a PanArctic network with the seven Arctic member states to investigate changes of megabenthos in time and space. Together with scientists from the Alaska Fisheries Science Center (NOAA), this network will be used to evaluate how benthic distribution and vulnerability are distributed in the Eurasian and in the Pacific Arctic.

4:15 p.m. – 5:00 p.m.

CHRIS LINDER EXPEDITION MULTIMEDIA SPECIALIST, WOODS HOLE OCEANOGRAPHIC INSTITUTION SENIOR FELLOW, INTERNATIONAL LEAGUE OF CONSERVATION PHOTOGRAPHERS

Science on Ice

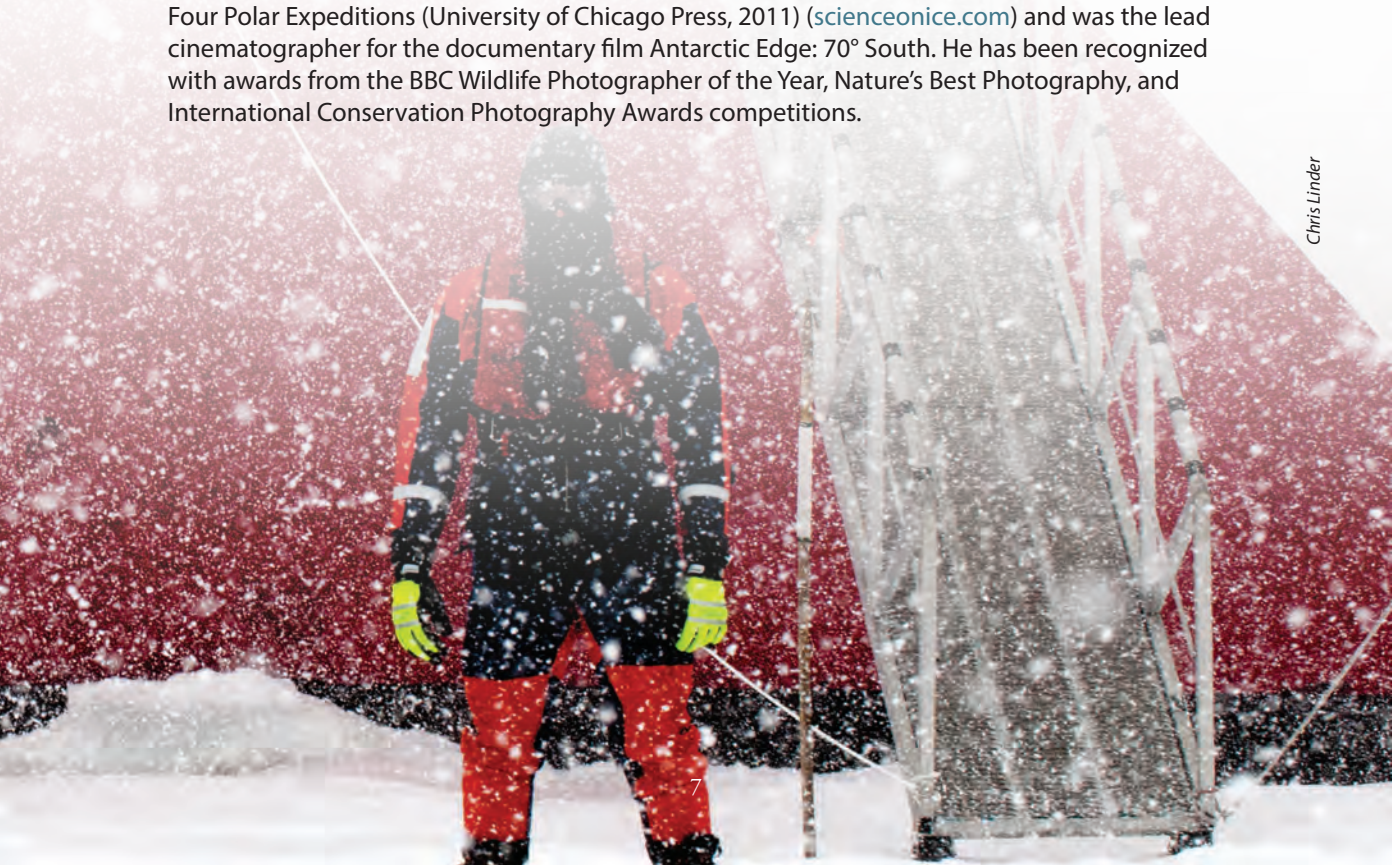


Mike Carlowicz

“Polar exploration is at once the cleanest and most isolated way of having a bad time which has been devised,” wrote Apsley Cherry-Garrard of his time with the 1910 Scott expedition to the South Pole. And that is how most of us still imagine polar expeditions: stolid men with ice riming their beards risking death for scientific knowledge. But polar science has evolved over the past century. Using images from his book *Science on Ice* and recent work in Siberia and Antarctica, oceanographer-turned-photographer Chris Linder will demonstrate the power of photography to educate the public about science and inspire the next generation of scientists.

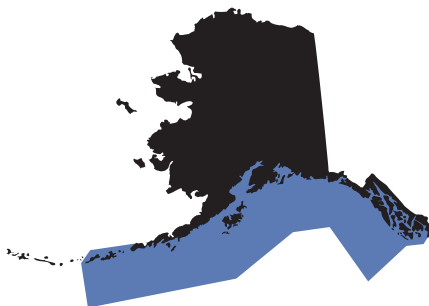
Chris Linder (www.chrislinder.com) is a professional photographer, filmmaker, and lecturer. Chris holds a Master’s degree from the Massachusetts Institute of Technology and the Woods Hole Oceanographic Institution. His education and training as an oceanographer give him a special insight into photographing science. For over a decade, Chris has focused on communicating the stories of scientists working in the Arctic and Antarctic. He has documented 50 scientific expeditions and has spent over two years of his life exploring the polar regions.

Chris’s images have appeared in museums, books, calendars, and international magazines, including *Smithsonian*, *Audubon*, *Nature’s Best*, and *Wired*. A solo exhibition of his photographs, titled “Exploring the Arctic Seafloor,” was displayed at the Field Museum in Chicago and the Carnegie Museum of Natural History. He is the author of the hardcover book *Science on Ice: Four Polar Expeditions* (University of Chicago Press, 2011) (scienceonice.com) and was the lead cinematographer for the documentary film *Antarctic Edge: 70° South*. He has been recognized with awards from the BBC Wildlife Photographer of the Year, *Nature’s Best Photography*, and International Conservation Photography Awards competitions.



Chris Linder

Gulf of Alaska Plenary Session



Tuesday, January 23 7:30 a.m. – 5:00 p.m.

7:30 A.M. – 8:00 A.M. CONTINENTAL BREAKFAST

CLIMATE & OCEANOGRAPHY

- 8:00 - 8:15 **Kari Lanphier** Toxic Tides: To Clam or Not to Clam? Tracking Shellfish Toxins in Southeast Alaska
- 8:15 - 8:30 **Esther Kennedy** Assessing Ocean Acidification and Harmful Algal Blooms in Southeast Alaska
- 8:30 - 8:45 **Richard Feely** The Relationship Between Ocean Acidification and Respiration in the Gulf of Alaska

LOWER TROPHIC LEVELS

- 8:45 - 9:00 **Robert Campbell** A Profiling Observatory for High Resolution Oceanographic, Biogeochemical, and Plankton Observations in Prince William Sound
- 9:00 - 9:15 **John Crusius** A Mountainous Coastline Fertilizes the Ocean
- 9:15 - 9:30 **Esther Goldstein** Dispersal, Cross-shelf Transport, and the Delivery of Larval Arrowtooth Flounder (*Atheresthes stomias*) to Suitable Nursery Habitats in the Gulf of Alaska
- 9:30 - 10:00 **BREAK**

FISHES & FISH HABITATS

- 10:00 - 10:15 **Mike Booz** Refining Monitoring Efforts for Improved Stock Assessment of East Side Cook Inlet Razor Clams
- 10:15 - 10:30 **Carol Stepien** Metagenomic Assays to Assess Alaskan Marine Community Species Identities, Diversity, Representation, and Population Patterns
- 10:30 - 10:45 **Kristin Carpenter** Salmon Blitz: Engaging Citizen Scientists in Documenting Salmon Habitat in the Copper River Watershed
- 10:45 - 11:00 **William Sydeman** Puffins as Samplers of Forage Fish: Variation in Length and Condition Relative to Ocean Climate in the Gulf of Alaska

SEABIRDS

- 11:00 - 11:15 **Michael Goldstein** Interseasonal Movements and Non-breeding Locations of Aleutian Terns (*Onychoprion aleuticus*)

11:15 - 11:30 **Don Lyons** Investigating Aleutian Tern Breeding and Foraging Ecology Using Satellite Telemetry

11:30 - 1:00 LUNCH PROVIDED

1:00 - 1:15 **Tania Lewis** Experimental Harvests of Gull Eggs in Glacier Bay National Park

MARINE MAMMALS

1:15 - 1:30 **Jamie Womble** Combining Spatiotemporal Models and Aerial Photographic Techniques to Estimate Sea Otter Colonization and Abundance in Glacier Bay, Alaska

1:30 - 1:45 **Charlotte Boyd** Estimating the Population Size of a Coastal Cetacean with Highly Variable Group Sizes from Aerial Survey Data

1:45 - 2:00 **Kim Parsons** Water, Water Everywhere: Can eDNA from Seawater Provide Insight into Population Structure of Small Cetaceans?

HUMAN DIMENSIONS

2:00 - 2:15 **Suzanne Teerlink** Watching Whales in Juneau, Alaska: The Many Dimensions of This Thriving Tour Industry

2:15 - 2:30 **Scott Gende** A Holistic Approach to Reducing the Chance of Lethal Ship-Whale Collisions in Alaska

2:30 - 3:00 BREAK

3:00 - 3:15 ***Benjamin Williams** An Agent-based Model for Examining Parallel and Divergent Fishery Management Strategies for Transboundary Stocks

ECOSYSTEM PERSPECTIVES

3:15 - 3:30 ***Sarah Inman** Data Upstream: A Design Charrette for Data Visualizations

3:30 - 3:45 **Martin Renner** Ecosystem Variability in Lower Cook Inlet Across Trophic Levels, Space, Seasons, and Climate Regimes

3:45 - 4:00 **Mike Litzow** Nonstationary Gulf of Alaska Ocean-Atmosphere and Climate-Biology Relationships Under Different Modes of North Pacific Climate Variability

4:00 - 4:15 **James Bodkin** Detecting and Inferring Cause of Change in an Alaska Nearshore Marine Ecosystem: An Approach Using Sea Otters as a Component of the Nearshore Benthic Food Web

4:15 - 4:30 **Mayumi Arimitsu** Changes in Forage Fish During the Winter 2015-16 Seabird Die-off and the North Pacific Marine Heat Wave

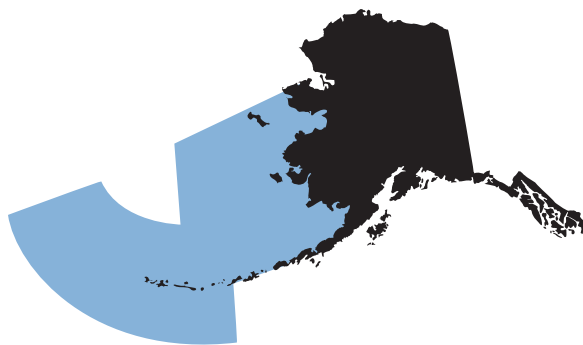
4:30 - 4:45 **John Piatt** Unprecedented Scale of Seabird Mortality in the NE Pacific During the 2015-2016 Marine Heat Wave

4:45 - 5:00 **Jan Straley** Have Gulf Of Alaska Humpback Whales Reached Carrying Capacity or Has the Blob Made the Food Web Screwy?

5:00 - 6:15 Tuesday NPRB Special Session - Captain Cook Ballroom

6:30 - 9:00 Tuesday Poster Session

Bering Sea & Aleutian Islands Plenary Session



Wednesday, January 24 7:30 a.m. – 5:00 p.m.

7:30 A.M. – 8:00 A.M. CONTINENTAL BREAKFAST

CLIMATE & OCEANOGRAPHY

8:00 - 8:15 **Nicholas Bond** What is the Crystal Ball Indicating with Respect to Extreme Climate Forcing Events in Alaskan Waters?

LOWER TROPHIC LEVELS

8:15 - 8:30 **Jacquelyn Overbeck** Coastal Hazards 2012—Five Year Report Card on Baseline Data

8:30 - 8:45 ***Leah Zacher** King Crab Zombification – Can Metabolites Tell Us How It Happens?

8:45 - 9:00 **Hongsheng Bi** Estimating Krill Abundance and Spatial Distribution Using an Optical Plankton Imaging System and Multifrequency Echo Sounder

9:00 - 9:15 ***Benjamin Weitzman** Sea Urchin Demography and Ecosystem Consequences Across the Aleutian Archipelago: A Story from the Top-down, Bottom-up, and Side-to-side?

FISHES & FISH HABITATS

9:15 - 9:30 ***Brianna King** Quantifying Seafloor Contact and Clearance in Commercial Fishing Gear

9:30 - 10:00 BREAK

10:00 - 10:15 **Craig Rose** Monitoring Survival of Trawler Deck-released Pacific Halibut, Using Satellite Reporting Accelerometer Tags

10:15 - 10:30 **Jim Murphy** Juvenile Chinook Salmon Abundance in the Northern Bering Sea: Implications for Future Returns and Fisheries in the Yukon River

10:30 - 10:45 **Krista Oke** How Consistent are Declines in the Size and Age of Alaska Salmon?

10:45 - 11:00 ***Kaitlyn Manishin** Exploring the Potential Role of an Apex Marine Predator: Prey Consumption Estimates of Salmon Sharks in North Pacific

SEABIRDS

- 11:00 - 11:15 ***Abram Fleishman** Using Red-legged Kittiwakes to Understand Spatial and Oceanographic Patterns of Mercury in the Northwestern Pacific and Bering Sea
- 11:15 - 11:30 ***Veronica Padula** Plastics and Phthalate Plasticizers in Aleutian Seabirds
- 11:30 - 1:00 LUNCH (ON YOUR OWN)

MARINE MAMMALS

- 1:00 - 1:15 **Mandy Keogh** Fasting Status of Steller Sea Lion Pups as an Index of Potential Nutritional Stress in Decreasing and Increasing Metapopulations
- 1:15 - 1:30 **Carey Kuhn** Fur Seals, Fish, and Saildrones: A Test of Unmanned Surface Vehicles to Examine Relationships Between Northern Fur Seals and Their Prey
- 1:30 - 1:45 **Michael Cameron** Habitat Selection and Seasonal Movements of Young Bearded Seals (*Erignathus barbatus*) in the Bering Sea

HUMAN DIMENSIONS

- 1:45 - 2:00 **Melanie Smith** Ecological Atlas of the Bering, Chukchi, and Beaufort Seas
- 2:00 - 2:15 **Caroline Brown** Patterns and Trends in Salmon Fishing on the Yukon River
- 2:15 - 2:30 **Amanda Faig** Predicting Future Management and Catch Under the Bering Sea and Aleutian Islands Ecosystem Cap
- 2:30 - 3:00 BREAK

ECOSYSTEM PERSPECTIVES

- 3:00 - 3:15 ***Jacob Metzger** Aleutian Archipelago Nearshore Community Variation Following the Loss of a Keystone Species
- 3:15 - 3:30 **Jim Ruzicka** Examining the Ecological Role of Jellyfish in the Eastern Bering Sea Ecosystem
- 3:30 - 3:45 **Daniel Schindler** Effects of Warming Climate, Fishing, and Basin-scale Stocking on Life-history Characteristics of Alaska Sockeye Salmon
- 3:45 - 4:00 **Ellen Yasumiishi** Differential North-South Ecosystem Response of Juvenile Marine Growth Rates for Chinook Salmon (*Oncorhynchus tshawytscha*) from the Yukon and Kuskokwim Rivers in the Eastern Bering Sea, 1972-2010
- 4:00 - 4:15 **Jonathan Reum** A Qualitative Modeling Approach to Assess the Potential Effects of Management Actions and Environmental Changes on Pribilof Islands Blue King Crab (*Paralithodes platypus*)
- 4:15 - 4:30 **Kerim Aydin** The Evolution of a Management-operational Atmosphere-to-fish Ecosystem Modeling Suite from the Bering Sea Project
- 4:30 - 4:45 **Elizabeth Siddon** Using Alaska Marine Ecosystem Science to Inform Fisheries Management
- 4:45 - 5:00 **Best Student Poster Presentation Winners Announced**

Arctic Plenary Session



Thursday, January 25 7:30 a.m. – 5:00 p.m.

7:30 A.M. – 8:00 A.M. CONTINENTAL BREAKFAST

CLIMATE & OCEANOGRAPHY

- 8:00 - 8:15 **Robert Pickart** Ventilation of the Pacific Halocline in the Canada Basin
- 8:15 - 8:30 **Kevin Wood** The Promise of Real-time Autonomous Systems in Alaska's Northern Seas
- 8:30 - 8:45 **Katherine Hedstrom** Arctic Ice-Ocean Circulation Modeling: Recent Improvements and Applications
- 8:45 - 9:00 ***Michelle Wilber** Numerical Thermal Model to Predict Thaw Depth in Arctic Coastal Settings with Application to Geomorphic Change Modeling for Barter Island, Alaska

LOWER TROPHIC LEVELS

- 9:00 - 9:15 ***Craig Connolly** Groundwater as a Source of Dissolved Organic Matter and Inorganic Nitrogen to Lagoons of the Eastern Alaskan Beaufort Sea Coast
- 9:15 - 9:30 **Lauren Juranek** Responses of Western Arctic Biogeochemistry and Lower Trophic Level Productivity to Late Season Episodic Nutrient Inputs
- 9:30 - 10:00 **BREAK**
- 10:00 - 10:15 ***Virginia Selz** Sea Ice Algal Production in the Chukchi Sea (1979 to present)

FISHES & FISH HABITATS

- 10:15 - 10:30 **Ben Laurel** Temperature Sensitivity in the Eggs and Larvae of Arctic and Sub-Arctic Gadids
- 10:30 - 10:45 ***Alyssa Frothingham** Determining Natal Origin and Early Movement of Arctic Cod (*Boreogadus saida*) from the Chukchi and Beaufort Seas Utilizing Otolith Microchemistry
- 10:45 - 11:00 **Vanessa von Biela** Nearshore Fish Assemblages in a Changing Beaufort Sea

SEABIRDS

- 11:00 - 11:15 **George Divoky** Was the 2017 Breeding Season a Tipping Point for Mandt's Black Guillemot in Alaska? An Ice-associated Seabird Continues to Struggle in a Melting Arctic

11:15 - 11:30 **Kathy Kuletz** Seabirds as Indicators for the Distributed Biological Observatory and Other Long-term Marine Monitoring Programs

11:30 - 1:15 LUNCH PROVIDED

MARINE MAMMALS

1:15 - 1:30 **Ryan Wilson** Potential Impacts of a Large Offshore Oil Spill on Polar Bears in the Chukchi Sea.

1:30 - 1:45 **Casey Clark** Past Changes in Sea Ice Cover Drive Shifts in Walrus Diet

1:45 - 2:00 **Stephen Insley** Marine Mammals and Noise in the Arctic Marine Environment: Measuring Baselines and Considering Impacts

2:00 - 2:15 **Catherine Berchok** Overwintering Walrus on the Northern Chukchi Shelf

HUMAN DIMENSIONS

2:15 - 2:30 **John Seigle** Factors Influencing Harvest Rates of Arctic Cisco During the Annual Colville River Delta Under-ice Subsistence Fishery

2:30 - 3:00 BREAK

3:00 - 3:15 **Henry Huntington** Climate Change, Marine Mammals, and Indigenous Hunting in Northern Alaska: Insights from a Decade of Traditional Knowledge Interviews

3:15 - 3:30 **Candace Nachman** Strengthening Community-Researcher Engagement: IARPC Principles for the Conduct of Research in the Arctic

ECOSYSTEM PERSPECTIVES

3:30 - 3:45 **Sheyna Wisdom** Effective Cross-Cultural Awareness and Communication Strategies with Alaska Native Communities

3:45 - 4:00 **Matthew Wooller** Determining Primary Production Sources to Benthic Organisms in the Arctic Using Stable Isotope Fingerprinting

4:00 - 4:15 ***Anne Jensen** Domoic Acid and Long-Headed Polar Bears: Using Archaeological Sites to Study Marine Species and Ecosystems Over Time

4:15 - 4:30 ***Christina Bonsell** Ecosystem Studies of the Stefansson Sound Boulder Patch Connect Environmental Dynamics to Biodiversity and Production in the Nearshore Beaufort Sea

4:30 - 4:45 **Kenneth Dunton** The Beaufort Lagoons LTER: An Arctic Coastal Ecosystem in Transition

4:45 - 4:55 Best Student Oral Presentations Winners Announced and Closing Remarks

Workshops

Workshops held at Hotel Captain Cook

All Week

Lactation Station

8:00 a.m. – 5:00 p.m., Library

Media Room

8:00 a.m. – 5:00 p.m., Easter Island Room

Monday 1/22

Communicating Ocean Sciences Workshop Featuring Chris Linder

9:00 a.m. – 12:00 p.m., Captain Cook Ballroom Fore Deck

Each year, the Communicating Ocean Sciences Workshop provides practical information, great speakers and information on current best practices in education, outreach and media. Join internationally acclaimed outdoor and conservation photographer, Chris Linder (<http://www.chrislinder.com>) as he will be leading a hands-on workshop that focuses on effective still and video imagery in the field, how to tell a story with science photography, and how to improve your images without breaking the budget. This workshop is free and space is not limited.

Tuesday 1/23

Understanding the Arctic Through a Co-production of Knowledge

12:00 p.m. – 1:30 p.m., Endeavor Room

The Arctic is changing at an accelerated rate due to climate change and increased anthropogenic activity. Given the rate of change, never has it been more important to work toward a holistic understanding of the Arctic's interconnecting systems. A co-production of knowledge framework will provide the holistic view and comprehension needed to inform effective and adaptive policies and practices. We underscore the role and value of different knowledge systems with different methodologies and the need for collaborative approaches in identifying research questions. We hope that participants come away from this workshop with an understanding of some of the most important components that form a co-production of knowledge framework. If you have any questions regarding the workshop content, please contact one of the organizers: Carolina Behe (carolina@iccalaska.org), Julie Raymond-Yakoubian (juliery@kawerak.org) or Raychelle Daniel (rdaniel@pewtrusts.org).

NPRB Special Session

5:00 p.m. – 6:15 p.m., Captain Cook Ballroom

The NPRB is working on updating our Core program proposal process to provide a more stable and flexible funding platform to our researchers. The Board's preferred alternative is to move from the current fixed proposal deadline with one funding meeting a year to a rolling submissions approach with no deadline and funding decisions spread between two annual meetings. NPRB will host an information session at AMSS at 5:00 p.m. on Tuesday, January 23, 2018, in the main ballroom of the Captain Cook Hotel, to provide more details and solicit feedback from the community. After the session, additional information on the process will be posted on the NPRB website and comments will be accepted at nprb.org through March 12, 2018.

Ocean Educator Night

5:00 p.m. – 7:00 p.m., Adventure Room

Educators and scientists - Please join us Tuesday, 5:00 p.m. - 7:00 p.m. at the Captain Cook Hotel for the second annual Ocean Educator Night, which will feature presentations by Mark Van Arsdale, Eagle River High School, and Kaare Erickson, Ukepeagvik Inupiat Corporation and Leslie Pierce, Department of Wildlife Management, Utqiagvik (Barrow).

Wednesday 1/24

Understanding the Arctic Through a Co-production of Knowledge

12:00 p.m. – 1:30 p.m., Endeavor Room

Metadata Office Hours

3:00 p.m. – 5:00 p.m., Club I

An open session for metadata help and questions about data. There will be no formal session, just scheduled office hours staffed by Axiom Data Science.

Alaska Climate Integrated Modeling (ACLIM) Project: Stakeholder Workshop

5:00 p.m. – 7:00 p.m., Quadrant Room

North Pacific waters are warming. Come hear how the Alaska Climate Integrated Modeling (ACLIM) Project team is evaluating what a changing environment means for Bering Sea fisheries management. We will discuss current research and some of the lessons learned about how changing climate impacts marine populations in the Bering Sea and Aleutian Islands, the Gulf of Alaska, and the US West Coast. We need your help and input! What are your concerns regarding climate change? What impacts do you anticipate? What scientific questions would you like answered? How will you adapt? How can management help ease the burden?

Thursday 1/25

Metadata Office Hours

3:00 p.m. – 5:00 p.m., Club I

State of the Arctic – Circumpolar Biodiversity Marine Program Progress

12:00 p.m. – 1:00 p.m., Endeavor Room

Come hear about accomplishments of the Circumpolar Biodiversity Monitoring Program. Since 2014 this international network brought together scientists, governments, Indigenous organizations and conservation groups to monitor Arctic changes. Endorsed by the Arctic Council, the CBMP is the biodiversity component of the Sustaining Arctic Observing Networks (SAON). Don't get lost in the acronyms – come learn about the program components (from plankton to marine mammals) and who is involved. A recent program accomplishment was completion of the State of the Arctic Marine Biodiversity Monitoring Program. We will cover highlights of the report and preview program plans to facilitate rapid detection, communication and response to the biodiversity trends and pressures in the circumpolar Arctic. Share your thoughts on data and reporting; coordination and outreach; capacity building – help further our understanding and tracking of the rapidly changing Arctic. (see CAFF website, <https://caff.is/marine>).

Arctic Research Planning Night

7:00 p.m. – 9:00 p.m., Quarter Deck

Fairweather Science is hosting the annual Arctic Research Planning Night at the Quarterdeck. This event is held to facilitate collaboration, networking, and knowledge sharing among Arctic researchers. We welcome everyone interested in discussing Arctic research. As with previous years, please either send in advance or bring a thumb drive with a few slides that outlines your research plans for 2018 and beyond. Please include vessel, location of study, duration of cruise, objectives, types of data to be collected, available bunk space, and length of contract. Onshore researchers are also welcome to share information. Slides may be sent to Sheyna Wisdom at Fairweather Science (sheyne.wisdom@fairweather.com). No RSVP is required and it is an open invitation. Beer/wine and appetizers will be provided by Fairweather Science. The Arctic Research Consortium of the U.S. (ARCUS) will have a resource table at the event, with staff present to help you get better connected with the broader Arctic research community through communication, coordination, and collaboration.

Friday 1/26

Pollock Conservation Cooperative Research Center PI Symposium

7:00 a.m. – 5:00 p.m., Quadrant Room

The PCCRC PI Symposium features progress reports and project completion reports for current projects funded by the PCCRC. A schedule of presentations will be posted at PCCRC.org.

Circulation and Hydrography of the Northeastern Chukchi Sea

9:00 a.m. – 11:00 a.m., Voyager Room

An intensive sampling program of the northeastern Chukchi Sea was conducted from 2009 to 2014 with BOEM and partner funding. Thomas Weingartner will present a synthesis of data collected during this program, along with that from other agencies, to develop an improved understanding of the physical oceanography of the northeastern Chukchi shelf, as well as exchanges between the Chukchi/Beaufort shelves and the adjacent basin.

Metadata 411

9:00 a.m. – 12:00 p.m., Club I

This workshop will provide an overview of how to write metadata to describing scientific datasets. Presenters will demystify the content and scope of scientific metadata, describe its value to funders and scientists, and guide attendees on best practices for writing standards-compliant metadata. Attendees will gain a practical understanding of the information that makes up a metadata record while practicing by using the Research Workspace Metadata Editor. This workshop is aimed at scientists and technicians tasked with writing metadata or who want to better understand metadata and its creation. Attendees should bring a laptop and dataset of their own that they want to begin documenting. For more information, email your questions to metadata@axiomdatascience.

Microplastics Contamination of the North Pacific and Bering Seas

9:00 a.m. – 12:00 p.m., Easter Island Room

CMI Annual Research Review

9:00 a.m. – 5:00 p.m., Endeavor Room

This workshop presents updates on 15 current environmental research projects, including graduate student works, funded through the Coastal Marine Institute Program. The CMI, a collaboration between the University of Alaska, the Bureau of Ocean Energy Management, and the State of Alaska, works to inform management of petroleum resources in Alaska's Outer Continental Shelf regions. The public is encouraged to attend and participate in learning about ongoing research programming.

Cook Inlet Beluga Whale Management, Research, and Partnership Opportunities

8:30 a.m. – 5 p.m., Adventure Room

Does your work involve studying, monitoring, managing, permitting, or funding projects related to Cook Inlet beluga whales? Do you want to share your knowledge, collaborate with, or develop partnerships with others conducting similar activities? If so, consider participating in the Cook Inlet Beluga Whale Management, Research, and Partnership Opportunities session during the 2018 Alaska Marine Science Symposium. This year, the National Marine Fisheries Service is partnering with the Alaska Department of Fish and Game to host this session. The agenda includes conference-style presentations followed by a panel discussion to foster information sharing, collaboration, and improved partnership opportunities amongst groups. At the end of the day, the Alaska Department of Fish and Game will be offering an opportunity for the public to provide comments regarding Cook Inlet beluga whales. The session is scheduled for 8:30am-5pm on Friday January 26, 2018, in the Adventure Room of the Captain Cook Hotel in Anchorage, Alaska.

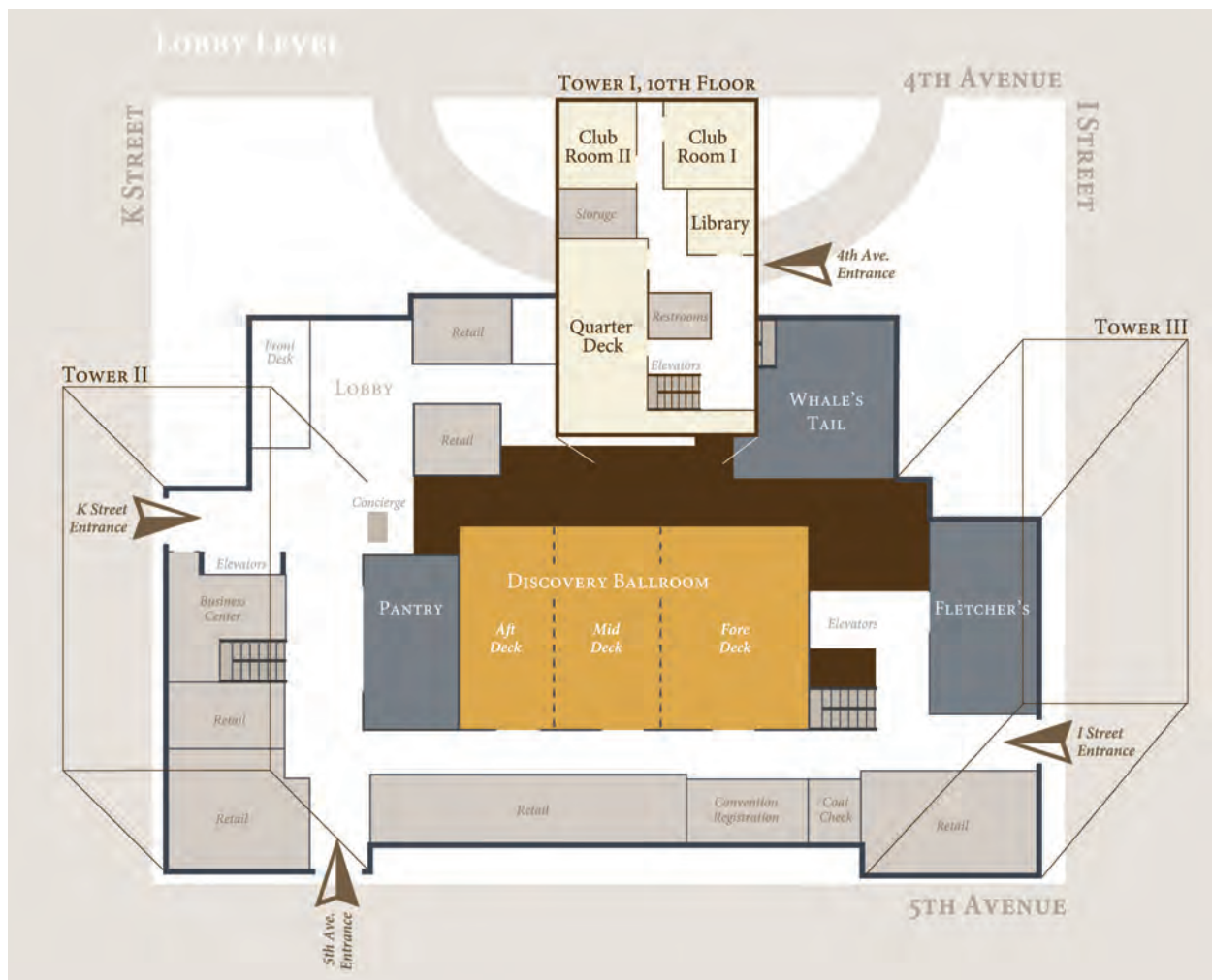
Exhibitors

Alaska Ocean Observing System
Alaska Sea Grant
Alaska SeaLife Center
ASL Environmental Sciences
Environmental Resources Management
Exxon Valdez Oil Spill Trustee Council
Fairweather Science
National Park Service
North Pacific Research Board

Ocean Marine Services Inc.
Seafood Analytics
Sitka Sound Science Center
Southern Cross, LLC - R/V *Ukpik* & R/V *Annika Marie*
Support Vessels of Alaska, Inc.
UAF College of Fisheries and Ocean Sciences
U.S. Arctic Research Commission
U.S. Geological Survey

Venue Maps

Hotel Captain Cook, 939 W. 5th Ave. Lobby Level and Tower



Shuttle service is provided between the Hotel Captain Cook (939 W. 5th Ave.) and the Egan Center (555 W. 5th Ave.) from 6:15 p.m. – 9:00 p.m. for those going to and from Poster Sessions.

Hotel Captain Cook, Lower Lobby Level



Shuttle service is provided between the Hotel Captain Cook (939 W. 5th Ave.) and the Egan Center (555 W. 5th Ave.) from 6:15 p.m. – 9:00 p.m. for those going to and from Poster Sessions.

Venue Maps

Egan Civic & Convention Center, 555 W. 5th Ave. Explorers Hall

Shuttle service is provided between the Hotel Captain Cook (939 W. 5th Ave.) and the Egan Center (555 W. 5th Ave.) from 6:15 p.m. – 9:00 p.m. to assist those needing transportation to and from the Poster Sessions.

15 Row #

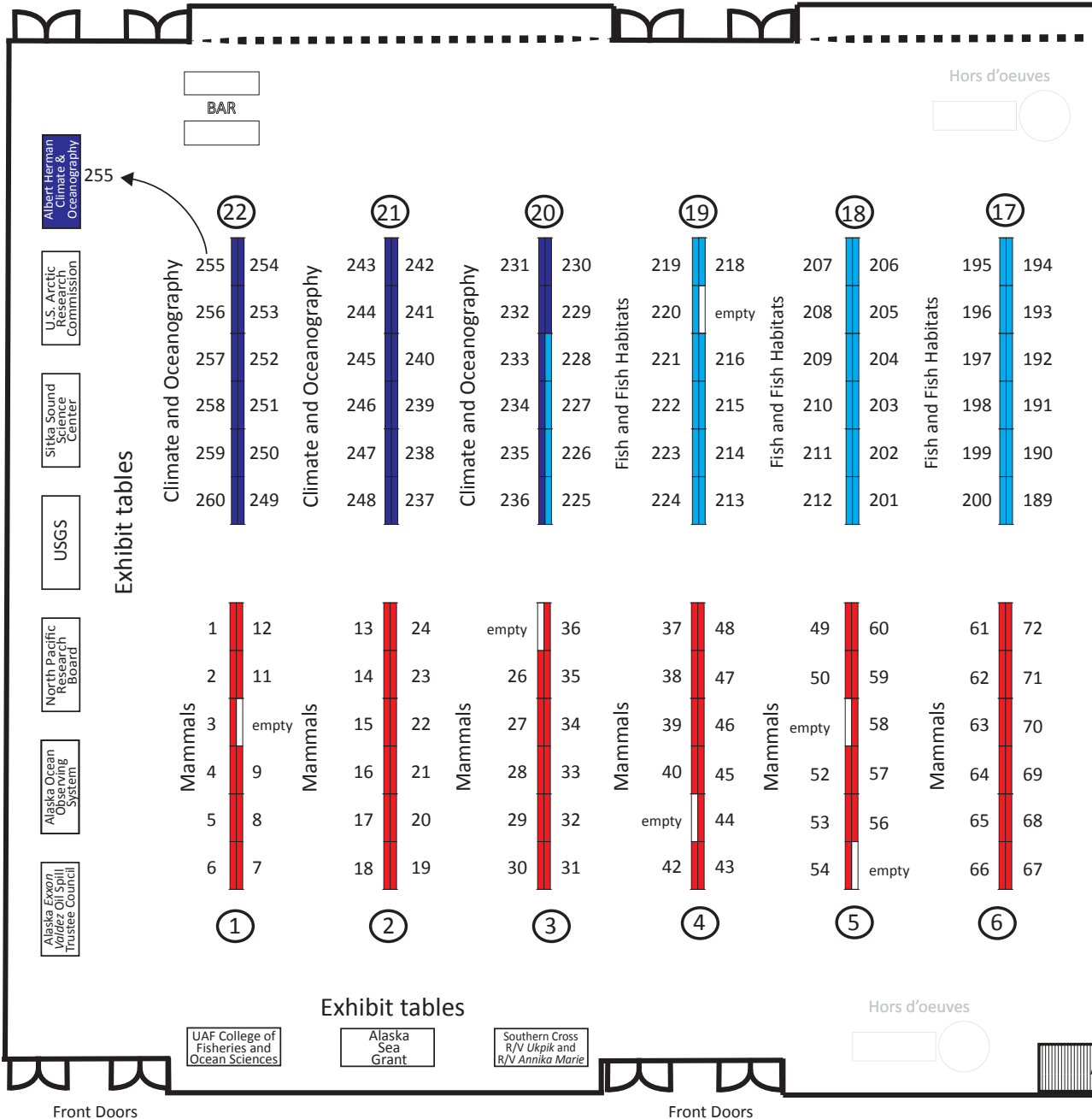
bold = student poster

Mammals

Seabirds

Lower Trophic Levels

Hors d'oeuvres



ic Humans AIERP Ecosystem Perspectives Fish and Fish Habitats Climate and Oceanography

Hors d'oeuvres

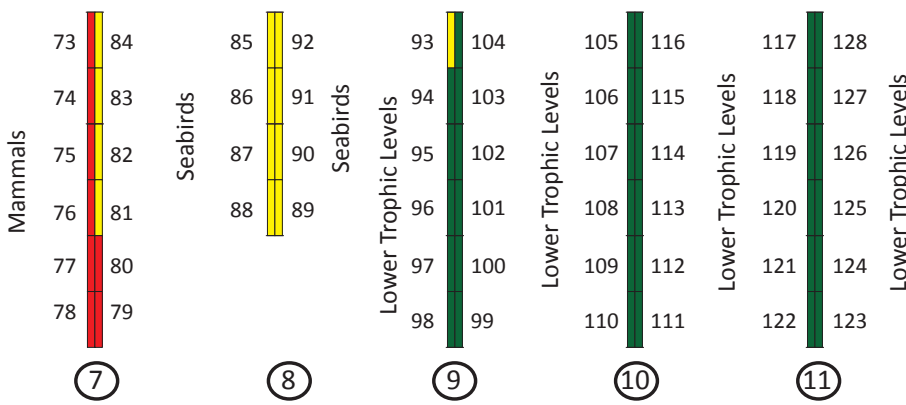
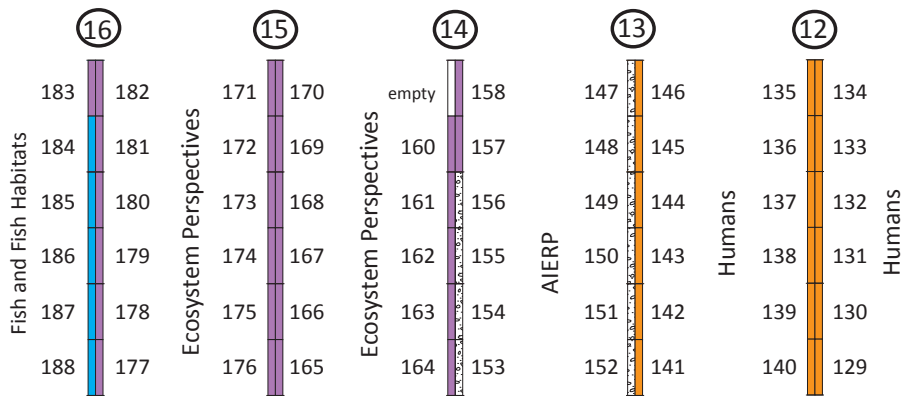


Exhibit tables

- BAR
- Ocean Marine Services, Inc.
- Seafood Analytics
- ASL Environmental Science
- Alaska Sealife Center
- Support Vessels of Alaska, Inc.

Hors d'oeuvres



Exhibit tables

- Environmental Resources Management
- Fairweather Science
- National Park Service

Front Doors

Front Doors

Thank You!

The Symposium would not have been possible without the help of many volunteers!

Thank you to the **AMSS Organizing Committee** and a special thanks to the following for a substantial contribution by coordinating key aspects of the Symposium:

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Registration, Time Keeping, Student Judging, and Poster Volunteers
We Cannot Thank You Enough for Donating Your Time!

Thank You Sponsors!

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Alaska Department of Fish and Game

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Alaska Ocean Observing System



U.S. Bureau of Ocean Energy Management



Coastal Marine Institute



Cook Inlet Regional Citizens Advisory Council



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North Pacific Marine Science Organization



North Pacific Research Board



Oil Spill Recovery Institute



Prince William Sound Science Center



Pollock Conservation Cooperative Research Center



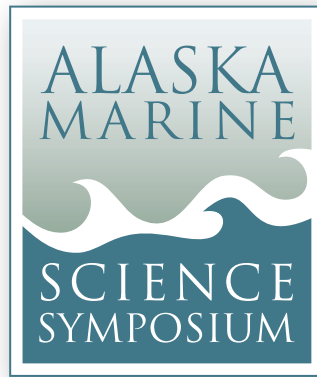
United States Arctic Research Commission



University of Washington, School of Aquatic and Fishery Sciences

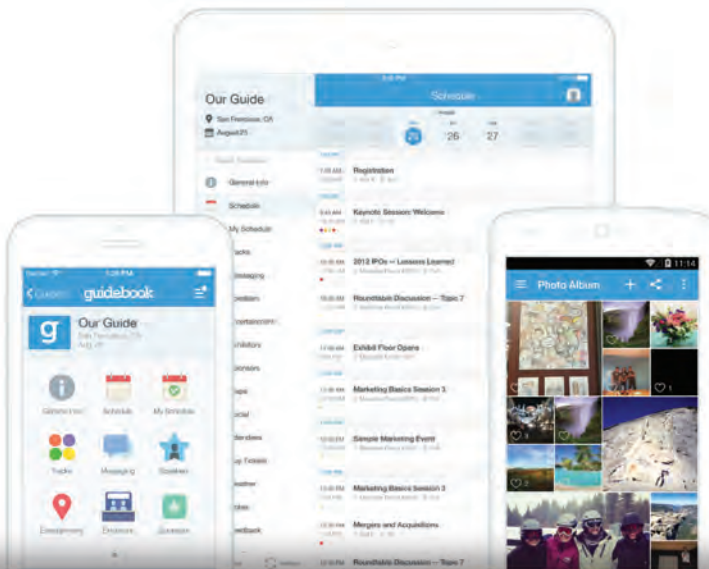


U.S. Geological Survey Alaska Science Center
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