ALASKA MARINE SCIENCE SYMPOSIUM

JANUARY 27 – 31, 2020

PLENARY SESSIONS - HOTEL CAPTAIN COOK
POSTER PRESENTATIONS - EGAN CENTER
ANCHORAGE, ALASKA

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

alaskamarinescience.org

ALASKA MARINE SCIENCE SYMPOSIUM

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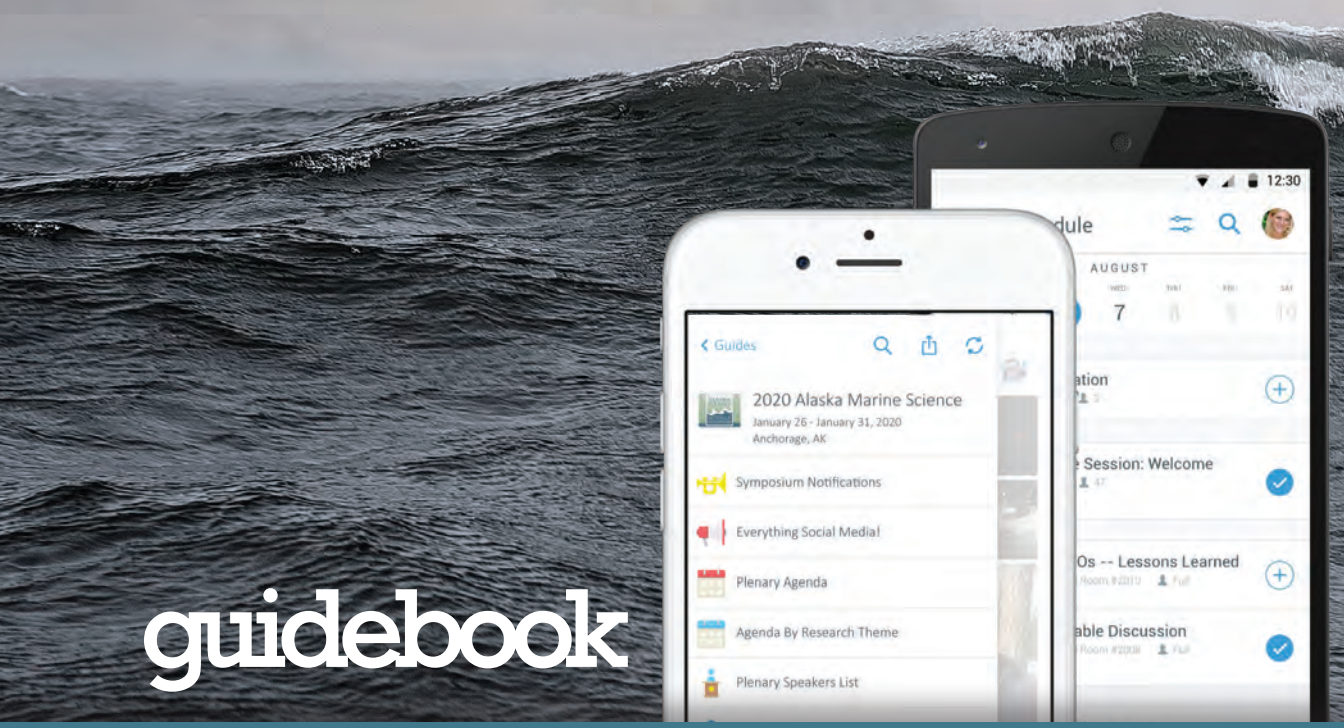

guidebook

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MONDAY, JANUARY 27, 2020

9:00 a.m. – 12:00 p.m.

COMMUNICATING OCEAN SCIENCES WORKSHOP

Featuring Dr. Brian Brettschneider

1:00 p.m. – 1:30 p.m.

WELCOME & OPENING REMARKS

Betsy Baker, Executive Director, North Pacific Research Board
Molly McCammon, Executive Director, Alaska Ocean Observing System
Mayor Ethan Berkowitz & Congressional Videos
Presentation of ASLC Ocean Leadership Awards

1:30 p.m. – 5:00 p.m.

KEYNOTES

6:00 p.m. – 9:00 p.m.

GULF OF ALASKA POSTER SESSION

Anchorage Mayor
Ethan Berkowitz

CONGRESSIONAL VIDEO ANNOUNCEMENTS

Senator
Lisa Murkowski

Senator
Dan Sullivan

@akmarinescience

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Brendan Smith/NPRB

Keynote Speakers

Monday, January 27

1:30 p.m. – 2:15 p.m.

MAIJA KATAK LUKIN, SUPERINTENDENT, NATIONAL PARK SERVICE'S WESTERN ARCTIC NATIONAL PARKLANDS

Maija Katak Lukin, Iñupiaq, was born in Kotzebue and raised on the shores of Cape Krusenstern National Monument at Sisualik. Her upbringing and traditional lifestyle lead her to advocate for the rights of the people of Northwest Alaska in her professional career, including; Regional Communications Director for NANA Regional Corporation, Environmental Program Manager for the 12 consolidated tribes of Maniilaq Association, and former Mayor of the City of Kotzebue.

Currently, Lukin is the superintendent at the National Park Service's Western Arctic National Parklands. The parks encompass over 9.2 million acres of federal public land in three parks in Northwest Alaska: Cape Krusenstern National Monument, Kobuk Valley National Park, and Noatak National Preserve. Lukin is responsible for protecting and preserving the natural and cultural resources within the parks, as well as community relationship building, subsistence management, and preparing for changes in the Arctic climate.

Katak and her husband reside in Kotzebue and have four children, one granddaughter, two dogs, and several chickens.

2:15 p.m. – 3:00 p.m.

CISCO WERNER, PH.D., CHIEF SCIENCE ADVISOR, NOAA FISHERIES

RAPIDLY CHANGING OCEANIC CONDITIONS: RESPONSES AND NEXT STEPS

Francisco "Cisco" Werner is Chief Science Advisor and Director of Scientific Programs of U.S. NOAA's National Marine Fisheries Service (NMFS). He leads NMFS' efforts to provide the science needed to support sustainable fisheries and ecosystems, ending overfishing, rebuilding fish populations, saving critical species, and preserving vital habitats. Cisco supervises the planning, development, and management of a multidisciplinary scientific enterprise of basic and applied research, and he oversees NMFS' Science Centers and Office of Science and Technology. His research has included the development of numerical models of ocean circulation, the effects of physical forcing on lower trophic levels, and the subsequent effect on the structure, function, and abundance of commercially and ecologically important species. He has a Ph.D. in Oceanography from the University of Washington.

Brendan Smith/NPRB

Keynote Speakers

3:00 p.m. – 3:30 p.m. – BREAK
3:30 p.m. – 4:15 p.m.

SEBASTIEN DE HALLEUX, CHIEF OPERATING OFFICER, SAILDRONE

THE EVOLUTION OF AUTONOMOUS OBSERVATIONS IN THE ARCTIC USING SAILDRONE'S USVS

Saildrone has conducted five years of Arctic missions in partnership with NOAA and NASA scientists, collecting large amounts of *in-situ* ocean data using autonomous unmanned surface vehicles. This talk will present the results of this successful public-private partnership, and highlight some of the key learnings along the way. Opening new cost-effective ways of studying the Arctic, the Saildrone Arctic fleet has enabled scientists to quantify heat and carbon fluxes, study fish biomass distribution, monitor right whales, perform focal follow of individual tagged seals, and collect hundreds of days of oceanographic data from the remote Bering and Chukchi Seas to the marginal ice zone, often in difficult and dangerous conditions, shedding new insights into the fast changing arctic environment with a minimal environmental footprint.

Sebastien de Halleux is currently chief operating officer at Saildrone, a company that designs, manufactures, and operates a global fleet of wind- and solar-powered ocean drones monitoring the state of the planet in real time. Saildrone's mission is to quantify planetary systems that affect humanity like extreme weather, global fisheries, and carbon fluxes.

Before Saildrone, de Halleux co-founded a video games company called Playfish, which disrupted the industry by turning solitary game play into social experiences. Playfish attracted hundreds of million of users before being acquired by Electronics Arts. He also helped launch one of the very first mobile game companies back when mobiles had black and white screens and actual keypads, which IPOed on NASDAQ.

An internationally recognized leader, recipient of the Tech 100 and Tech Fellow Awards, member of the Aspen Global Leadership Network, de Halleux holds a master's in Civil and Environmental Engineering from Imperial College, London.

4:15 p.m. – 5:00 p.m.

ANDREW PLETRUSZKA, PH.D., UNDERWATER ARCHAEOLOGIST,
SCRIPPS INSTITUTION OF OCEANOGRAPHY

KISKA: ALASKA'S UNDERWATER BATTLEFIELD

In July 2018, members of Scripps Institution of Oceanography and the University of Delaware spent two weeks conducting an exploratory remote-sensing survey to locate and document WWII-era submerged archaeological sites in the waters off Kiska Island, Alaska, one of the last and most remote islands in the Aleutian chain. The often-forgotten Aleutian campaign was the sole WWII campaign fought on North American soil, and Kiska Island is one of the few U.S. territories occupied by foreign forces in the last 200 years. This talk explores the historical context of the Aleutian Campaign, project methodology, and results with an emphasis on the use of autonomous underwater vehicles (AUV) and other marine technologies for archaeological survey. The project was funded by a National Oceanic and Atmospheric Administration Office of Ocean Exploration and Research Grant, and Project Recover.

Dr. Andrew Pietruszka is an underwater archaeologist at the Scripps Institution of Oceanography at the University of California, San Diego specializing in the search, documentation, and recovery of U.S. service members missing in action as a result of our nation's previous conflicts. He received an M.A. in Underwater Archaeology/Maritime Studies from East Carolina University and a Ph.D. in Anthropology from Syracuse University. He has over 17 years of experience conducting underwater archaeological research around the world.

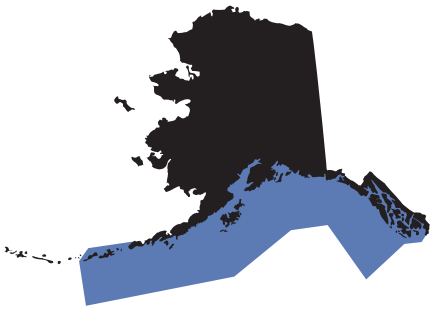
In 2011, he joined the Defense POW/MIA Accounting Agency as a forensic archaeologist overseeing global underwater recovery operations. In 2015, he served as the interim director of DPAA's laboratory at Offutt Air Force Base, Omaha, Nebraska. While at DPAA, Dr. Pietruszka successfully completed 2nd Class Diver training at the U.S. Naval Diving and Salvage Training Center, Panama City, Florida. In 2016, he left public service for an academic research position at the University of Delaware where he continues to serve as the forensic/archaeological expert for Project Recover—a collaborative effort to enlist 21st century science and technology in a quest to find the final underwater resting places of Americans missing in action since World War II.

6:00 p.m. – 9:00 p.m.

GULF OF ALASKA POSTER SESSION

Courtesy of Saildrone

Gulf of Alaska Plenary Session



Tuesday, January 28 7:30 a.m. – 5:00 p.m.

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

CLIMATE & OCEANOGRAPHY

8:00 - 8:15 **Mike Litzow** Novel Expressions of PDO Variability Accompany Warming in the Gulf of Alaska

8:15 - 8:30 **Bryan Black** Multi-Decadal to Multi-Centennial Histories of Climate, Productivity, and Teleconnections in Alaskan Marine Ecosystems

8:30 - 8:45 **Nicholas Bond** Warm Anomalies at Depth in the Northern Gulf of Alaska in Summer 2019

8:45 - 9:00 **Kristine Holderied** Impact of the Warm, Dry 2019 Summer on Nearshore Waters in Kachemak Bay Alaska – Rain Versus Glacial Melt?

LOWER TROPHIC LEVELS

9:00 - 9:15 **David Kimmel** Zooplankton Abundance Trends and Patterns in the Shelikof Strait, Western Gulf of Alaska 1990-2017: Is a Phenological Shift Underway?

9:15 - 9:30 *__Grace Crandall__ Effects of Bitter Crab Disease on the Gene Expression of Alaskan Tanner Crabs

9:30 - 10:00 COFFEE BREAK

10:00 - 10:15 *__Taylor White__ What Ever Happened to Alaskan Abalone? Insights and Historical Comparisons of Pinto Abalone Populations in Southeast Alaska

FISHES & FISH HABITAT

10:15 - 10:30 **Benjamin Jevons** Exploring the Trophic Ecology of Alaskan Populations of the Giant Pacific Octopus (GPO, *Enteroctopus dofleini*) Through a Multi-Tissue Stable Isotope Analysis

10:30 - 10:45 **Jan Ohlberger** Potential Causes and Consequences of Declines in Chinook Salmon Body Size

10:45 - 11:00 **Alysha Cypher** Influence of Embryonic Crude Oil Exposure on Overwinter Fasting and Disease Susceptibility in Juvenile Pacific Herring (*Clupea pallasi*)

11:00 - 11:15 *__John Trochta__ A Bayesian Analysis of the Utility of Ecosystem Information in a Stock Assessment Model of Prince William Sound Herring

*Student Presentation

11:15 - 11:30 **Dion Oxman** Reconstructing Reproductive Life Histories Using Hormones Recovered from Incrementally Grown Structures in Fish

11:30 - 1:00 LUNCH PROVIDED

1:00 - 1:15 *__Patrick Charapata__ Longitudinal Trends in Hormones and Development of Reproductive Parameters of a Long-Lived Teleost

1:15 - 1:30 **Wei Cheng** Developing Genetic Markers to Describe Population Structure for Black and Yelloweye Rockfish in Alaska: A Critical Management Need

1:30 - 1:45 **Steven Barbeaux** A Disaster in the Making: Heatwaves and Pacific Cod in the Gulf of Alaska

SEABIRDS

1:45 - 2:00 *__Sam Stark__ Removal of Introduced Mink Initiates the Recovery of an Important Pigeon Guillemot Sub-Population in Prince William Sound that Was Damaged by the *Exxon Valdez* Oil Spill

2:00 - 2:15 **Caroline Van Hemert** Harmful Algal Blooms and Alaskan Seabirds: An Emerging Issue in Northern Waters?

2:15 - 2:30 **Michael Goldstein** Aleutian Tern Abundance at Nest Colonies Based on Unmanned Aerial Systems (UAV) Photography

2:30 - 3:00 COFFEE BREAK

MARINE MAMMALS

3:00 - 3:15 **Jamie Womble** Calibrating and Adjusting Counts of Harbor Seals in a Tidewater Glacier Fjord in Glacier Bay National Park to Estimate Abundance and Trends from 1992 to 2017

3:15 - 3:30 **Eleanor Bors** An Epigenetic Clock to Estimate the Age of Cook Inlet Beluga Whales

3:30 - 3:45 **Verena Gill** The Alaska Beluga Monitoring Partnership: A Collaborative Citizen Science Monitoring Effort Exploring Endangered Beluga Habitat Use at Multiple Sites in Alaska's Cook Inlet

HUMANS

3:45 - 4:00 **Kimberly Raum-Suryan** The First Ocean Guardian School Program in Alaska: Inspiring Marine Stewardship in Schools

4:00 - 4:15 **Marysia Szymkowiak** Sustaining an Alaska Coastal Community: Integrating Place Based Well-being Indicators and Fisheries Participation

ECOSYSTEM PERSPECTIVES

4:15 - 4:30 **Cheryl L. Barnes** Development of a Predation Index to Assess Trophic Stability in the Gulf of Alaska

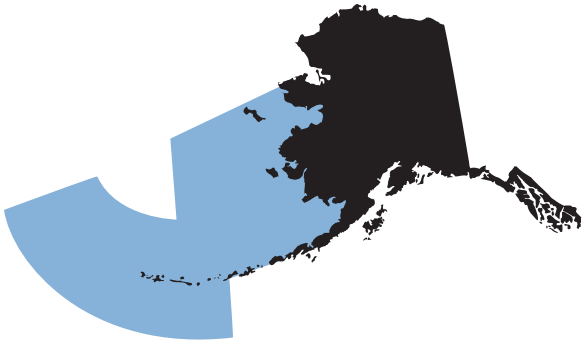
4:30 - 4:45 **Melissa Rhode-Reese** Developing a Placed-Based Participatory IEA Framework for Coastal Communities in the Gulf of Alaska

4:45 - 5:00 **Robert Suryan** Ecosystem Response to a Prolonged Marine Heatwave in the Gulf of Alaska: Perspectives from Gulf Watch Alaska

6:00 - 5:00 BERING SEA AND ARCTIC POSTER SESSION

*Student Presentation

Bering Sea Plenary Session



Wednesday, January 29 7:30 a.m. – 5:00 p.m.

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

CLIMATE & OCEANOGRAPHY

8:00 - 8:15 **Darren Pilcher** Projections of Ocean Acidification on the Bering Sea Shelf

8:15 - 8:30 **Scott Durski** Modeling Wintertime Changes in the Salinity Distribution on the Bering Sea Shelf

LOWER TROPHIC LEVELS

8:30 - 8:45 **James Thorson** Seasonal Spatio-Temporal Models for *Calanus* Index Standardization and Phenology in the Eastern Bering Sea

8:45 - 9:00 *__Jared Weems__ Have Alaska Blue King Crab Come Home to Roost? An Overfishing, Habitat, and Climate Induced Vise-Grip on Early Life History Stages of *Paralithodes platypus*

FISHES & FISH HABITAT

9:00 - 9:15 *__Cory Lescher__ Selecting Vitality Assessment Metrics to Predict Discard Survival for Red King Crab (*Paralithodes camtschaticus*) in the Bristol Bay Groundfish Trawl Fishery

9:15 - 9:30 *__Laura Slater__ Mating Dynamics of Eastern Bering Sea Snow Crab

9:30 - 10:00 COFFEE BREAK

10:00 - 10:15 **Susanne McDermott** Satellite Tagging of Pacific Cod in the Aleutian Islands

10:15 - 10:30 **Lisa Eisner** Oceanographic Impacts on Walleye Pollock Distributions in the Northern Bering Sea

10:30 - 10:45 **Vanessa von Biela** Examining Heat Stress During the Freshwater Migration of Adult Pacific Salmon

10:45 - 11:00 **Kathrine Howard** The Future of Yukon River Chinook Salmon in a Warming World

*Student Presentation

SEABIRDS

11:00 - 11:15 **Julia Parrish** Unabated Mass Mortality of Marine Birds in the Northeast Pacific

11:15 - 11:30 **Kate Martin** Changes in Late Winter Distribution of Spectacled Eiders in Response to Sea Ice Retreat in the Bering Sea

11:30 - 1:00 LUNCH ON YOUR OWN

1:00 - 1:15 **Barbara Bodenstein** Measuring the Lethal and Sublethal Effects of Saxitoxin Ingestion Using Avian Model Species, Mallard (*Anas platyrhynchos*) and Zebra Finch (*Taeniopygia guttata*): Implications for Naturally Exposed Seabirds in Alaska

MARINE MAMMALS

1:15 - 1:30 **Stephanie Grassia** Mystery Call in the Southeastern Bering Sea

1:30 - 1:45 **Alexey Altukhov** Adopting Semantic Segmentation and Classification Neural Network Models to Extract Steller Sea Lion Brands Form Remote Cameras

1:45 - 2:00 *__Marianne Lian__ Assessing Oxidative and Antioxidant Status of Steller Sea Lions (*Eumetopias jubatus*): Associations with Mercury and Selenium Concentrations

2:00 - 2:15 **Michael Cameron** Observations During a Springtime Bering Sea Research Cruise in a Year of Record-Low Sea Ice Extent

2:15 - 2:30 *__Valentina Melica__ Determining Biomarkers for Reproduction and Nutritional Status in Gray Whales (*Eschrichtius robustus*) From the Eastern North Pacific Ocean

2:30 - 3:00 COFFEE BREAK

HUMANS

3:00 - 3:15 **Gay Sheffield** Lessons Learned: Moving Forward Marine Wildlife Response, Health Investigations, and Research in Western and Northern Coastal Alaska During Unparalleled Ecosystem Transition

ECOSYSTEM PERSPECTIVES

3:15 - 3:30 *__Alexzandrea DePue__ Signs of Large-Scale Recent Patterns of Dynamic Change in Beringian Food-Webs Using Seabirds as Indicators

3:30 - 3:45 *__T. Scott Smeltz__ The Global Habitat Cost of Wild Seafood Production: Solutions to Overcome These Trade-offs

3:45 - 4:00 **Matt Reimer** Defining the Economic Scope for Ecosystem-Based Management

4:00 - 4:15 **Phyllis Stabeno** Reduction of Sea Ice in the Bering Sea in 2018 and 2019, and Some Implications for the Ecosystem

4:15 - 4:30 *__Scott Gabara__ Kelp Forest Deforestation Leads to Community-Wide Dietary Niche Contraction

4:30 - 4:45 *__Benjamin Weitzman__ What Can Sea Urchin Ecology Tell Us About Coastal Habitats in a Changing Climate?

4:45 - 5:00 BEST STUDENT POSTER PRESENTATION WINNERS ANNOUNCED

*Student Presentation

Arctic Plenary Session

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

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

CLIMATE & OCEANOGRAPHY

8:00 - 8:15 **Jifeng Peng** A Comprehensive, Process-Based Model for Arctic Coastal Erosion

8:15 - 8:30 **Li Erikson** Dynamics of Arctic Barrier Islands and its Influence on Nearshore Wave Energy

8:30 - 8:45 **Lucia Hosekova** The Role of Ocean Waves and Sea Ice in the Arctic Coastal Erosion

8:45 - 9:00 **Stephen Okkonen** Diel Vertical Migration: A Diagnostic for Variability of Wind Forcing Over the Beaufort and Chukchi Seas

LOWER TROPHIC LEVELS

9:00 - 9:15 **Kristina Baker** The Genomic Capabilities of Microbial Communities Track Seasonal Variation in Arctic Lagoons

FISHES & FISH HABITAT

9:15 - 9:30 *__Morgan Bender__ Polar Cod Early Life Stages Under a Warming Scenario Exhibit Extreme Sensitivity to Low Levels of Crude Oil

9:30 - 10:00 COFFEE BREAK

SEABIRDS

10:00 - 10:15 **Sharon Poessel** Movements and Habitat Use of Loons Along the Arctic Coastal Plain of Northern Alaska

10:15 - 10:30 **Richard Lanctot** Use of Satellite Tagged Birds and At-Sea Surveys to Document Red Phalarope Distribution and Migration Routes in the Beaufort, Chukchi, and Bering Seas

10:30 - 10:45 **Pierre-Loup Jan** Alaska's Most Northern Seabird is Going Extinct

10:45 - 11:00 **Kathy Kuletz** Seabirds Signal Changes in the Pacific Arctic

*Student Presentation

MARINE MAMMALS

11:00 - 11:15 **Catherine Berchok** Marine Mammals in the Northern Bering and Southern Chukchi Seas: What Eavesdropping Can Tell Us

11:15 - 11:30 **John Spiesberger** Locating and Censusing Calling Marine Mammals Amongst Black Holes

11:30 - 1:00 LUNCH PROVIDED

1:00 - 1:15 **Nathan Hostetter** Data Integration Approaches to Estimate Polar Bear Abundance, Survival, Movement, and Recruitment

1:15 - 1:30 **Irina Trukhanova** Distribution and Abundance of Polar Bears and Ice-Associated Seals from a U.S. - Russia Multispecies, Instrument-Based Aerial Survey in the Chukchi Sea

1:30 - 1:45 *__Malia Smith__ Where to Place the Alaskan Polar Bear Border: Insights from Stable Isotope Analysis

HUMANS

1:45 - 2:00 *__Rowenna Gryba__ Indigenous Knowledge for Species Habitat and Movement Models: A Case Study on Ice-Seals in Alaska

2:00 - 2:15 **Tracy Romano** Research-Based Educational and Cultural Exchange Program for Alaska Native and Native American Youth Focused on the Arctic, Beluga Whales and Climate Change

2:15 - 2:30 **Janet Warburton** But Did They Learn Anything?

2:30 - 3:00 COFFEE BREAK

ECOSYSTEM PERSPECTIVES

3:00 - 3:15 **Matthew Galaska** Biodiversity Patterns Recovered in the Chukchi Sea from Metabarcoding and Environmental DNA (eDNA) of Plankton Samples and Seawater

3:15 - 3:30 **Donald Anderson** Evidence for Massive and Expanding Harmful Algal Blooms in the Alaskan Arctic

3:30 - 3:45 **Kathi Lefebvre** Algal Toxins in Alaskan Arctic Food Webs: Krill, Clams, Benthic Worms, Fish, Ice Seals, Walruses and Whales!

3:45 - 4:00 **James McClelland** Organic Matter Dynamics in Arctic Lagoons: Linking Seasonal and Spatial Patterns to Terrestrial Inputs and Ocean Exchange

4:00 - 4:15 **Kenneth Dunton** The Ecological Significance and Astonishing Resiliency of Arctic Lagoon Benthic Communities

4:15 - 4:45 **Edward Farley** The Arctic Integrated Ecosystem Research Program: Are We Experiencing the Future Arctic?

4:45 - 5:00 BEST STUDENT ORAL PRESENTATIONS WINNERS ANNOUNCED & CLOSING REMARKS

*Student Presentation

Workshops

Workshops held at Hotel Captain Cook

All Week

Lactation Station
8:00 a.m. – 5:00 p.m., Inquire at Registration

Media Room
8:00 a.m. – 5:00 p.m., Adventure Room

Sunday 1/26

AMERICAN GEOPHYSICAL UNION'S SHARING SCIENCE SCIENCE COMMUNICATION WORKSHOP

All day, NPRB/AOOS Office, 1007 West 3rd Ave, Ste. 100

This year, the Alaska Marine Science Symposium is partnering with the American Geophysical Union and their "Sharing Science" group to deliver a one day science communication workshop. Open to all scientists, science communicators, media, and other audiences. Critique and evaluation of materials, products, and project ideas will be encouraged. Visit their website at: https://sharingscience.agu.org/

Monday 1/27

COMMUNICATING OCEAN SCIENCES WORKSHOP FEATURING DR. BRIAN BRETTSCHNEIDER

9:00 a.m. – 12:00 p.m., Ballroom

Each year, the Communicating Ocean Sciences Workshop provides practical information, great speakers and information on current best practices in education, outreach and media. In this hands-on workshop, Dr. Brettschneider will focus on how to effectively use social media to deliver scientific content. Dr. Brettschneider is one of Alaska's esteemed climatologists with a social media following of over 17,000 people. This workshop is free and space is not limited. Details to follow as the symposium draws closer.

METADATA 411

9:00 a.m. – 12:00 p.m., Whitby Room

Presented by Axiom Data Science, this newly-redesigned workshop includes a general introduction to metadata and its importance to the scientific community, as well as hands-on workbook exercises designed to improve your metadata-writing skills. Using an example dataset and the Research Workspace's metadata editor, workshop attendees will learn how to apply the current best practices for scientific metadata to improve the content of a metadata record. The workshop is aimed at scientists and technicians tasked with writing metadata or who want to better understand metadata and its creation. For more information, email your questions to metadata@axiomdatascience.com.

Tuesday 1/28

OCEAN ACIDIFICATION TOWN HALL

5:00 p.m. – 6:00 p.m., Resolution Room

This session will include 5 minute updates from ocean acidification researchers ranging from open ocean and nearshore monitoring to species response in the lab. Then the floor will open for Q&A and discussion. The intent of this session is to keep the science community updated on current research activities related to ocean acidification and promote collaboration.

Wednesday 1/29

OCEAN EDUCATOR NIGHT

5:00 p.m. – 7:00 p.m., Adventure Room

Educators and scientists - Please join us Wednesday, 5:00 p.m. - 7:00 p.m. at the Hotel Captain Cook for the fourth annual Ocean Educator Night. Featured at this event will include presentations on teacher research experience programs including PolarTREC and NOAA Teacher at Sea led by Janet Warburton, Britta Culbertson, Katie Gavenus, Cara Nelson, and Mark Van Arsdale. A second session will feature a topic addressing increasing Alaska Native and rural Alaskan participation in Arctic STEM.

COMMUNITY SCOPING FOR OCEAN EXPLORATION SCIENCE AND INFORMATION PRIORITIES IN DEEP ALASKAN WATERS

5:30 p.m. – 8:30 p.m., Quarter Deck

Starting in 2021, the NOAA Office of Ocean Exploration and Research (OER) intends to support deep-sea (200 meters and deeper) exploratory fieldwork in the Alaska region. In light of that, we propose to hold an OER informational town hall at AMSS and announce our intentions to put out a call for white papers (Spring 2020) soliciting scientific and technological rationales for multidisciplinary exploration in the region. The town hall will be an opportunity to introduce our program and mission to scientists, marine resource managers, and the interested community doing complementary work off Alaska, to discuss potential areas of collaboration, and to encourage white paper submissions. The white paper call will be platform-agnostic and should not be predicated on current asset holdings of OER or NOAA; submissions will help identify priority investment areas and build out goals for region-specific investigations, and potentially a planning workshop.

ALASKA'S ROLE IN ADVANCING THE WHITE HOUSE SUMMIT ON PARTNERSHIPS IN OCEAN SCIENCE & TECHNOLOGY

5:00 p.m. – 6:00 p.m., Fore Deck

The focus of this town hall, hosted by AOOS and BOEM, is to begin a community discussion on Alaska's role in advancing new ocean science technologies and inter-agency and public-private partnerships on behalf of ocean science. This session follows up on the White House Summit on Partnerships in Ocean Science & Technology hosted by the Office of Science and Technology Policy and Council on Environmental Quality in November 2019, as well as the June 2018 Executive Order on "Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States." This interactive discussion will touch on ocean exploration, ocean science and emerging technologies, and promotion of the Blue Economy. Researchers, agencies, non-profits and the private sector are encouraged to attend.

Friday 1/31

COOK INLET BELUGA WHALE MANAGEMENT, RESEARCH, AND PARTNERSHIP OPPORTUNITIES

8:00 a.m. – 5:00 p.m., Voyager 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 2020 Alaska Marine Science Symposium. This year, the Cook Inlet Beluga Whale Recovery Implementation Task Force will also meet during this session and will share progress to date. The session is scheduled for 8:30 a.m. - 4 p.m. on Friday February 21st, 2020.

Workshops

Friday 1/31

HABS RISK COMMUNICATION

8:00 a.m. – 5:00 p.m., Club Room 2

The job of discussing potential coastal natural hazard risks and solutions—and motivating people to take action—is definitely not a "one size fits all" challenge. In this course, participants will learn how to: respond to difficult questions with more confidence using social science and risk communication principles; develop an effective risk communication strategy that incorporates these principles; recognize differing values within their audience; identify why people perceive and respond to risk the way they do; and practice these new skills.

COORDINATING FUTURE RESEARCH EFFORTS IN THE BERING SEA/STRAIT AND ADJACENT REGIONS

8:30 a.m. – 12:00 p.m., Aft Deck

USARC, NPRB, AOOS, and NOAA invite you to a workshop to discuss a planning framework for new, coordinated, and comprehensive studies of the Bering Sea/Strait and adjacent regions, which are experiencing rapid and extreme climate-related environmental variability unparalleled in recent history. All are welcome to join the conversation, including researchers, indigenous knowledge holders, coastal community and fishery industry representatives, resource managers, policy makers, and potential institutional contributors of financial or in-kind support. Broad and diverse perspectives are sought on: 1) emerging research questions and needs; 2) methods to facilitate research design and implementation that draw on indigenous, traditional, local, and scientific knowledge; and 3) approaches for gathering input from interested audiences on an ongoing basis and communicating back to them the resulting research plans and results in a timely and appropriate manner.

The organizers seek to ensure that any new research efforts will coordinate to: 1) be responsive to local community concerns; 2) build upon the scientific foundations laid by previous studies; 3) complement current research efforts, and 4) facilitate necessary research in the near-term to document the rapid changes underway while planning for longer-term research and monitoring efforts by multiple organizations.

Please be prepared to share: 1. What do you consider to be the most pressing marine research priority for the Bering Sea/Bering Strait and adjacent regions? 2. What do you consider to be the most important data or information gap to fill.

Note that no funding opportunities will be discussed at this meeting. Its purpose is to provide a forum for researchers, community members, funders, and other stakeholders to identify important research needs and gaps and be aware of each other's plans and interests, for possible future coordination.

Finally, we will be hosting a similar session February 12 (2:00-3:15 p.m.) at the Alaska Forum on the Environment (AFE) and inviting AFE participants to share their research priorities. We hope you can join as at AMSS, AFE, or both.

MAPPING ECOLOGICAL AND CULTURAL VALUES IN ALASKA'S WATERS: APPROACHES AND OPPORTUNITIES

9:00 a.m. – 12:00 p.m., Quarter Deck

This workshop invites your insight and input as we discuss the utility and limitations of a variety of methods and approaches to mapping biodiversity, subsistence resources, and ecological processes. We will begin by briefly presenting on multiple efforts before exploring the value and potential applications for this type of work. Presenters will include representatives from work by Audubon Alaska, Oceana, World Wildlife Fund, Aleutian-Bering Sea Initiative, Aleut International Association, Aleut Community of St. Paul Island Ecosystem Conservation Office, and the U.S. Fish and Wildlife Service.

ALASKA COASTAL MARINE INSTITUTE, ANNUAL STUDIES REVIEW

11:30 a.m. – 3:30 p.m., Quadrant Room

This workshop presents updates on ten current environmental research projects, including graduate student works, funded through the CMI 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.

2020 AMSS Exhibitors

Alaska Ocean Observing System
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Cook Inlet Regional Citizens Advisory Council
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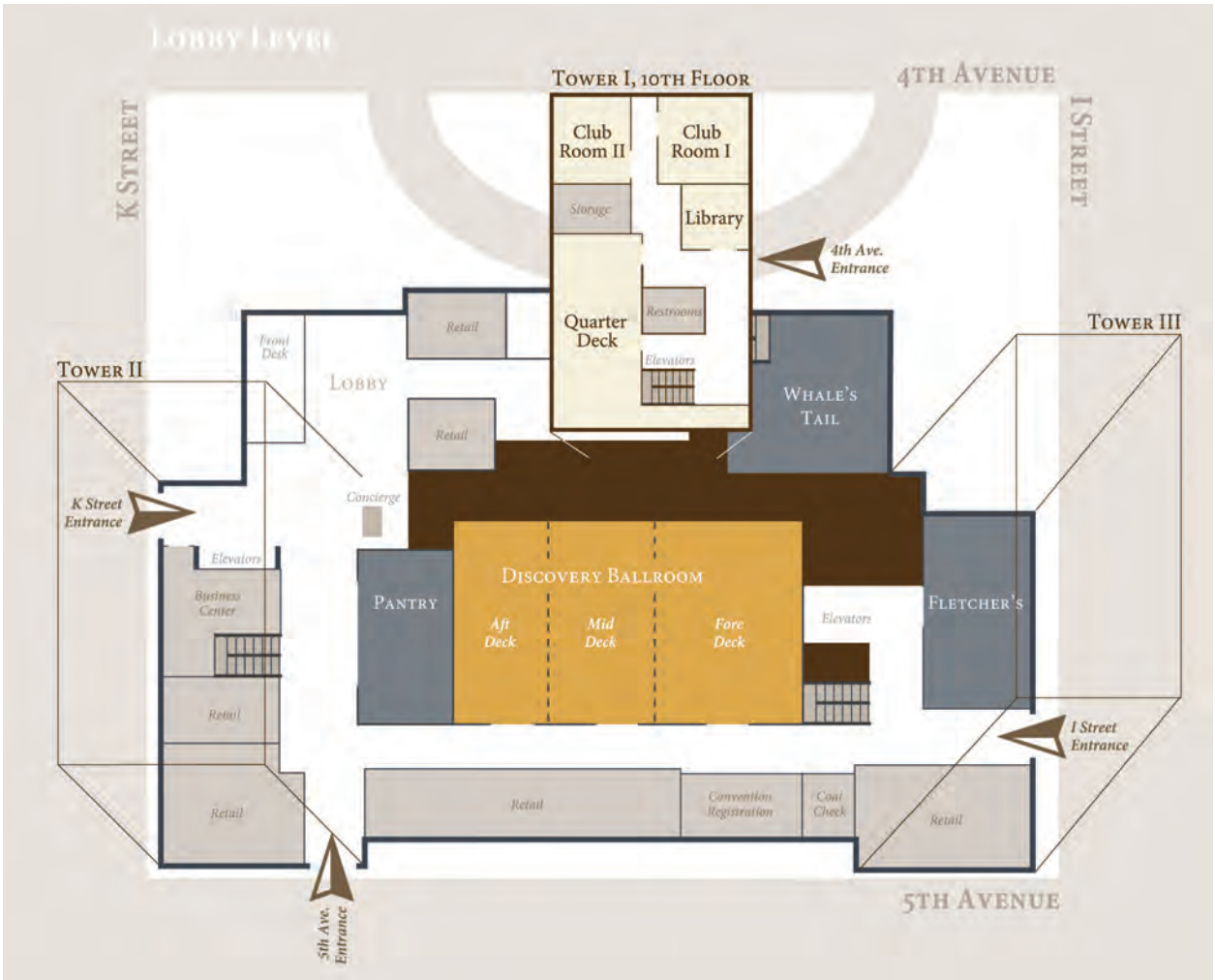
Marine Mammal Commission
NOAA Alaska Regional Team
North Pacific Research Board
Prince William Sound Science Center
SciStarter
Support Vessels of Alaska, Inc.
UAF College of Fisheries and Ocean Sciences
U.S. Arctic Research Commission
U.S. Geological Survey
U.S. Navy

Hugh Rose

Venue Maps

Plenary Sessions & Workshops held at Hotel Captain Cook

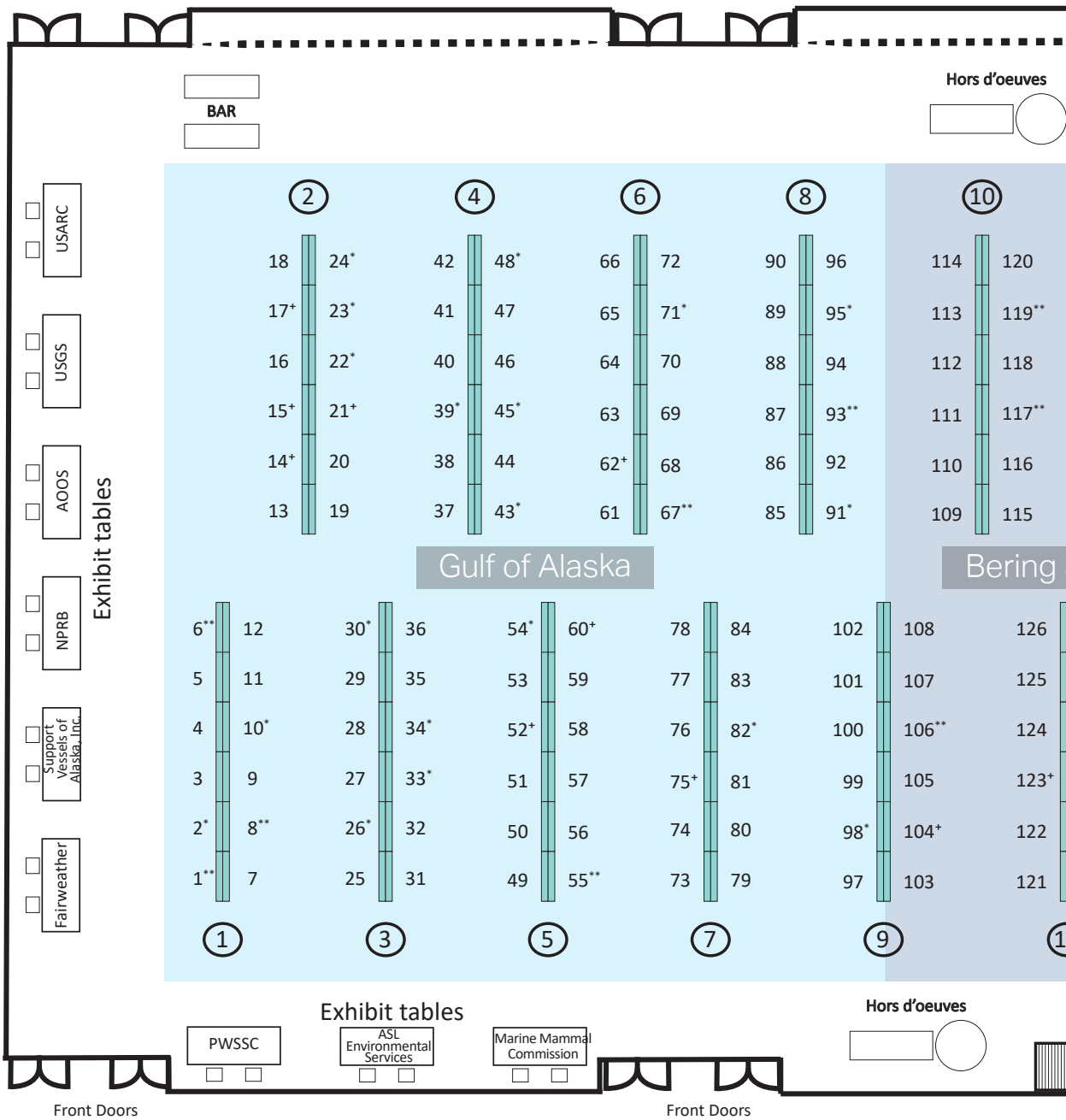
Hotel Captain Cook, 939 W. 5th Ave.
Lobby Level and Tower



Hotel Captain Cook, Lower Lobby Level

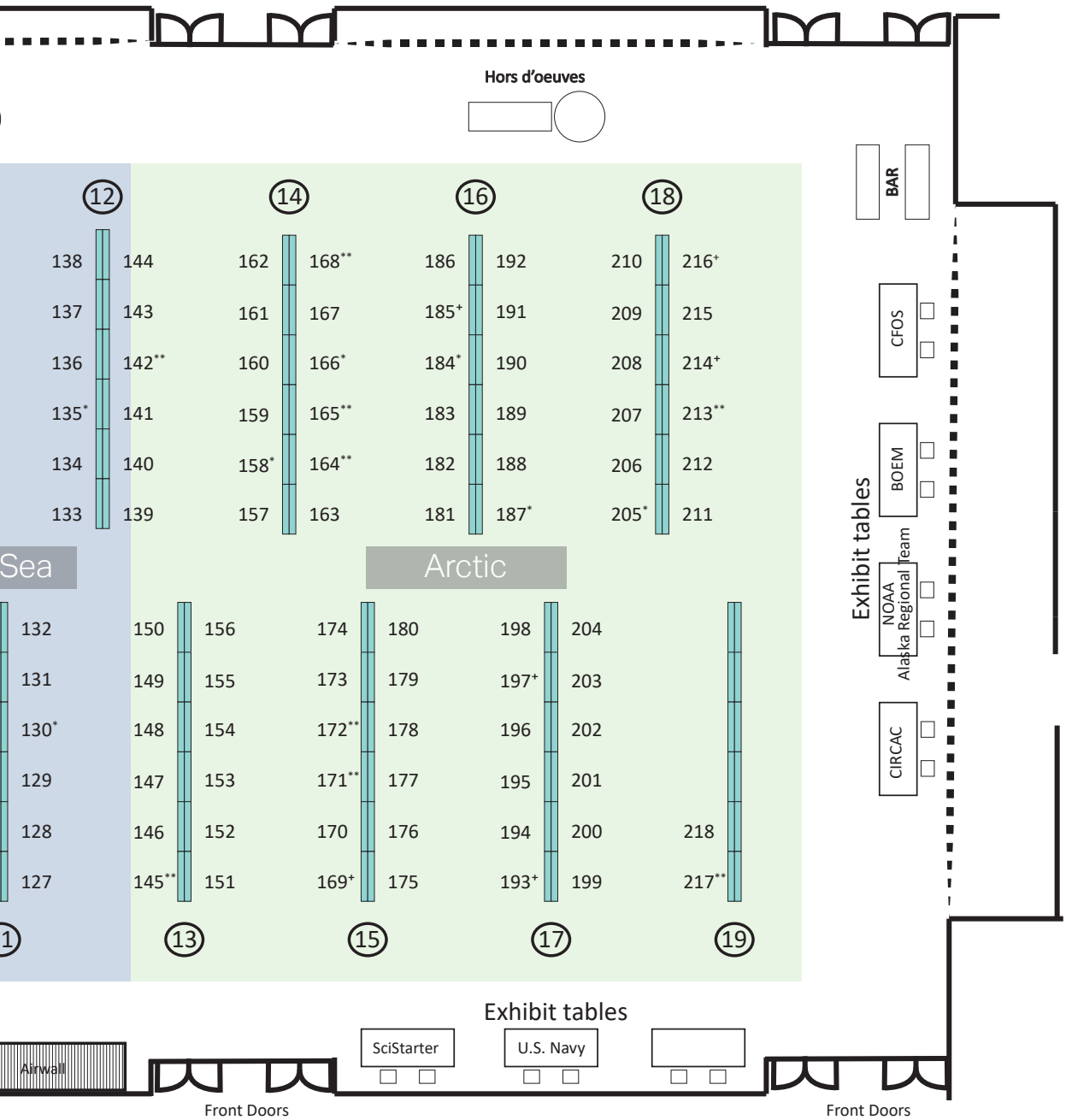
Venue Maps

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



15 Row # * Denotes Master's Poster ** Denot

Monday, January 27, Gulf of Alaska Poster Session
Tuesday, January 28, Bering Sea and Arctic Poster Session



es Doctorate Poster + Denotes Bachelors Poster

Thank You!

AMSS 2020 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!

Sponsor list as of January 16, 2020.
For a complete listing, visit the 2020 AMSS Guidebook App and Official Website.

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United States Arctic Research Commission

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