



## **Kodiak Seafood and Marine Science Center University of Alaska Fairbanks**

### **Annual Report FY2016 (July 1, 2015–June 30, 2016)**



prepared by Paula Cullenberg (Alaska Sea Grant) and Gordon Kruse (Fisheries Department) and the faculty and staff based at the Kodiak Seafood and Marine Science Center, College of Fisheries and Ocean Sciences, University of Alaska Fairbanks

December 2016



# **Kodiak Seafood and Marine Science Center University of Alaska Fairbanks**



## **Annual Activities Report FY2016 (July 1, 2015–June 30, 2016)**

### **Executive Summary**

#### **Introduction**

The Kodiak Seafood and Marine Science Center (KSMSC) is a unique facility including classrooms, laboratories, a test kitchen and a pilot seafood processing plant that enables the University of Alaska Fairbanks (UAF) to provide a statewide program of research, technical assistance, training and education. KSMSC is Alaska's only workforce development and applied research center focused on the seafood processing/fishing industry, as designated by the Alaska State Legislature in 1983. KSMSC also serves the Kodiak Island communities as a regional marine research and education center.

UAF personnel working at KSMSC currently consist of four faculty members (three Alaska Sea Grant Marine Advisory and one Fisheries Division) and two staff members all within the UAF College of Fisheries and Ocean Sciences (CFOS). In addition, the UAF Cooperative Extension Service's 4-H coordinator works at KSMSC. Graduate students and visiting UA faculty use the Center and a number of community groups make use of the space for meetings during the year.

Kodiak is the third largest seafood port in the nation and has a large resident seafood processing and fishing workforce, with plants operating 11 months a year. Statewide, the waters off Alaska produce over 60% of the nation's seafood and the seafood industry is the state's largest private employer. Kodiak Island also has a number of smaller outlying villages that have a strong subsistence economy based on marine resources, whose residents use the services at KSMSC.

The Kodiak Seafood and Marine Science Center is a hub of applied research, training and technical assistance for a statewide seafood industry audience. It supports food safety in Alaska and is recognized as a food process authority by the Alaska Department of Environmental Conservation.

#### **KSMSC's Activities in FY2016**

FY2016 was a busy and active year for the Kodiak Seafood and Marine Science Center. KSMSC hosted a meeting, training, class or event almost daily during the year with over 1,100 people using the building (including the classrooms, pilot processing plant and labs) for classes, meetings, training, seminars or events during the year.

Ten UAF undergraduate/graduate fisheries classes were taught or hosted at KSMSC this year, serving 25 graduate and undergraduate students. Four classes were taught by KSMSC-based faculty teaching to students across the state and six classes were taken by Kodiak-based students via videoconference in the building.

Two hundred sixty-five (265) people received workforce development training in 13 seafood processing/fishing industry classes offered by Alaska Sea Grant at KSMSC and in four additional

coastal communities. Workforce development classes generated over \$72,000 in training fees in FY2016.

Eleven research projects were conducted by all faculty members in the areas of seafood science and product development, marine mammal and fisheries interactions, and harmful algal blooms and safe subsistence harvest of shellfish. Seven peer-reviewed publications, two Alaska Sea Grant publications and two community or industry reports were produced by Marine Advisory and Fisheries faculty based at KSMSC.

Technical assistance and information was provided on an ongoing basis throughout the year by all faculty members, who engaged with over 70 different seafood businesses and individual food producers as well as with state and federal agencies, tribal representatives and nonprofit groups. Numerous outreach and marine education projects took place in the building, ranging from ComFish Alaska forums, paralytic shellfish poisoning community sampling and testing studies, and K-12 marine education events. Marine Advisory faculty at KSMSC engaged with over 400 local youth during the year in marine science classes and field trips.

External funding in FY2016 based at KSMSC was approximately \$883,000 from nine funders. Funders included USDA, Alaska Sea Grant, NOAA, Pollock Conservation Cooperative Research Center (PCCRC), UA Technical Vocational Education Program (TVEP), North Pacific Research Board, Alaska Seafood Marketing Institute, Alaska Native Tribal Health Consortium and the Southwest Alaska Municipal Conference (SWAMC). Significant this year is the establishment with SWAMC and the Marine Advisory faculty at KSMSC of a state Manufacturing Extension Partnership, with five years of funding to support seafood technology training and assistance through the US Dept. of Commerce's National Institute of Standards and Technology (NIST). Also this year is continuing, significant industry investment in product development research and development based at KSMSC from PCCRC, as well as new projects with the Alaska Seafood Marketing Institute.

Other substantial industry input came from the service of seven KSMSC Policy Council members who donated their time, support and energy to the Center and the University of Alaska. KSMSC-based faculty and staff thank the Policy Council members for their contribution.

### **KSMSC Operational Concerns Continue**

In August 2015, UAF leadership made public their intention to either transfer ownership of KSMSC to UAA for repurposing of the building or to close the Center. Due to budget issues, UAF stated concerns that KSMSC was too expensive to operate. Community and industry leaders expressed strong objections to closing the Center or changing the Center's mission. Letters were received by UAF from many industry and municipal stakeholders of KSMSC. In fall 2015, UA President Jim Johnsen and Vice President Dan White visited Kodiak and met with the KSMSC Policy Council and the City/Borough of Kodiak. In March 2016, Senator Lisa Murkowski met with the Policy Council to express her concern and support for the Center and wrote to President Johnsen. A diverse group of community members formed a new nonprofit called the Alaska Research Consortium (ARS) in spring 2016 with the intention of acting as an operating body for the Center. In spring 2016, UAF issued a Request for Information from groups interested in a new public/private partnership for KSMSC. The ARS was the sole respondent to the RFI, submitting details by the UAF deadline of July 1, 2016. As of December 2016, UAF had not responded to the RFI.



**Alaska Seafood Processing Leadership Institute 2015-16**

## **Kodiak Seafood and Marine Science Center University of Alaska Fairbanks**

### **FY2016 Annual Report**

#### **Background**

The University of Alaska Fairbanks Kodiak Seafood and Marine Science Center (KSMSC) is a 20,000 square foot, seafood processing and marine research and training/education facility serving a statewide role of research, technical assistance, education and workforce development training. KSMSC also serves the Kodiak Island communities as a regional marine research and education center.

The Kodiak Seafood and Marine Science Center's (formerly FITC) purpose is directed in AS.52.020. "The center shall create employment opportunities in the state's fishing industry and other benefits to the state by:

- (1) providing training opportunities to citizens of the state on the most efficient and appropriate technologies for the harvesting, processing, and conservation of the fishery resources of the state;
- (2) providing information and technical assistance on the adaptation of existing and new technologies to the users of the fishery resources of the state;
- (3) providing research and development activities to adapt existing technologies to enhance the economic viability of the industry;
- (4) providing research and development activities to create new technologies that will enhance the effectiveness of the industry, and provide economic benefits to state citizens; and
- (5) encouraging joint projects between industry and government in order to use industrial experience and government programs to enhance the productivity of the industry."

KSMSC is an important asset in the implementation of the Alaska Maritime Workforce Development Plan, endorsed by the Alaska State Legislature, the UA Board of Regents, the Alaska Department of Labor and Workforce Development, the Alaska Workforce Investment Board and the industry group Maritime Works.

## **Teaching and Training, FY2016**

Ten UAF undergraduate/graduate fisheries classes were taught or hosted at KSMSC this year serving 25 graduate and undergraduate students. Four classes were taught by KSMSC-based UAF faculty members teaching to students across the state and six classes were taken by two Kodiak-based students via videoconference in the building.

Two hundred sixty-five (265) people were trained in 13 seafood processing/fishing industry trainings offered by Alaska Sea Grant at KSMSC and in four additional coastal communities, generating over \$72,000 in program income from training fees.

### **UAF Fisheries Undergraduate and Graduate Credit Classes**

- Fish 261, **Introduction to Fisheries Utilization**, 3 credits, fall, eight students, Himelbloom
- Fish 340, **Seafood Business**, 3 credits, fall, two students, Fong
- Fish 611, **North Pacific Fishery Management Council**, 10 students, Criddle and Kruse
- Fish 494, **Fish Diseases and Pathology**, three students, Himelbloom
- Six UAF Fisheries classes were taken by two Kodiak-resident graduate students, Fish 611, Fish 612, Fish 494, Fish 426, Fish 427, Fish 433

### **Seafood Processing and Fisheries Workforce Development Training Classes**

#### **October**

- **Smoking Salmon for Fun and Profit**, 3 days, 22 participants, Sannito, course fee \$275.
- **Commercial Fishing Drill Conductor class**, USCG required class for commercial fishermen, 2 days, seven participants, Matweyou, N/C.
- **Starting Your Specialty Food Business**, 5 evening class offered with Cooperative Extension, distance delivered online to participants in Delta Junction, Fairbanks, Homer, Juneau, and Kodiak. 20 participants, Fong, course fee \$50.

#### **November**

- **HACCP (Hazard Analysis Critical Control Point)**, 2 day, 16 hour class in developing required HACCP plans. Certified by the Association of Food and Drug Officials (AFDO). Three participants, Sannito, course fee \$200.
- **Alaska Seafood Processing Leadership Institute**, 80 hour training, followed by trip to International Seafood Expo in Boston. Designed for mid-level seafood processing managers nominated by company. 24 participants from Silver Bay, Icicle, Unisea, Peter Pan, Alaska General Seafoods, Norton Sound Seafoods, Trident, Coastal Cold Storage, Aleutian Pribilof Island Community Development Association (APICDA), and Bristol Bay Economic Development Corporation (BBEDC). Fong and Sannito, course fee \$2,200 per person.



## February

- **Better Process Control School**, required class for thermal processing of fish/food and meets FDA and USDA regulations and training requirements, 3 days, 13 participants, Anchorage, Sannito, course fee \$450.
- **HACCP**, Anchorage, 23 participants, Sannito, course fee \$200.
- **Commercial Fishing Drill Conductor**, 2 days, 18 participants, Matweyou, N/C.

## March

- **Starting Your Specialty Food Business**, a 5 evening class offered with Cooperative Extension and distance delivered online to participants in Delta Junction, Fairbanks, Homer, Juneau, and Kodiak. 20 participants, Fong, course fee \$50.
- **Sanitation Control Procedures for Seafood Processors**, sanctioned by the Association of Food and Drug Officials, Anchorage, 22 participants, Sannito, course fee \$100.

## April

- **HACCP**, Anchorage, 22 participants, Sannito, course fee \$200.
- **Roe School**, Kodiak, 2 days, 28 participants, Sannito in partnership with Washington State University, course fee \$270.
- **Alaska Seafood Processing Leadership Institute**, session 2, Anchorage.

## May

- **HACCP**, Kodiak, 15 participants, Sannito, course fee \$200.
- **HACCP**, Petersburg, 13 participants, Sannito, course fee \$200.
- **Commercial Fishing Drill Instructor**, 2 classes, 2 days each, 15 participants, Matweyou.



**Students at Smoked Seafood School get hands-on instruction**



**Roe School, April 2016**



**HACCP, May 2016**



## Research

In FY2016, 11 research projects were conducted out of KSMSC, funded by the Alaska Seafood Marketing Institute, Alaska Sea Grant, NOAA Fisheries, North Pacific Research Board, Pollock Conservation Collaborative Research Center, Alaska Native Tribal Health Consortium and USDA. Twelve publications or final reports were produced by UAF KSMSC-based faculty.



- Summer 2016 marked the end of the Gulf Apex Predator prey (GAP) program. Started in 1999 by UAF faculty members Kate Wynne, Loren Buck and Bob Foy, GAP addressed the precipitous decline of the western stock of Steller sea lions. GAP explored the Kodiak waters' complex predator and prey dynamics through a series of discrete yet interrelated directed research projects. Led by Wynne and fellow Marine Advisory marine mammal specialist Bree Witteveen, along with GAP postdoc Lei Guo, GAP concentrated on the seasonal distribution, relative abundance and diets of fin and humpback whales, Steller sea lions and harbor seals. Total GAP funding: \$9,106,711. Students: four PhD, nine or more MSc. Publications: 38+. Numerous posters and presentations. For more information on the project and for publications, see <https://seagrant.uaf.edu/map/gap/index.php>.
- Two projects, the ANTHC-funded "Safe Subsistence Shellfish Harvest in the Face of Climate Change" and the NPRB-funded "Implementation of Community Based PSP Testing for Subsistence and Recreational Shellfish Harvesting in Southwestern Alaska" grew out of community concerns identified through the Kodiak Island Borough School District (KIBSD) ADEC PSP Beach Monitoring Project.
- Dr. Mehmet Cemal Oguz was in residence this year at KSMSC as a visiting scientist from Brigham Young University, researching fish parasites. He examined muscle tissue and otoliths of more than 200 fish including eight species of rockfish, pollock and Pacific cod.

## Research Projects FY2016

- **Shelf Stable Pet Treats from Pollock Skins.** Principal investigators (PIs) Chris Sannito and Quentin Fong, PCCRC
- **Freshness and Nutritional Value of Alaska Pollock Products and Byproducts.** PIs Quentin Fong and Jae Park (OSU), PCCRC
- **Utilization of Nano Fish-scale Bone.** Quentin Fong and Jae Park (OSU), PCCRC
- **Developing Alternative Product Forms for Pollock Roe.** PIs Quentin Fong, Chris Sannito, PCCRC
- **Inactivation of Fish Parasites: Exploration of Current Regulatory Guidelines for Freezing and Cooking.** PIs Brian Himelbloom and Chris Sannito, Alaska Seafood Marketing Institute
- **Fisheries to Schools: A Model to Enhance Food Security in Alaskan Communities.** Co-PI Quentin Fong, USDA

- **Gulf Apex Predator Prey Research Program.** PIs Kate Wynne and Bree Witteveen, NOAA
- **Industry Based Documentation of the Effectiveness of F3 “Whale Pingers” at Reducing Humpback Whale Interactions with Alaska Salmon Fisheries.** PIs Kate Wynne, Bree Witteveen and Allison Rice, Alaska Sea Grant
- **Evaluation of the Abraxis Saxitoxin Enzyme-Linked Immunosorbent Assay (ELISA) for Testing Subsistence Alaska Shellfish.** PIs Brian Himelbloom, Julie Matweyou and Raymond RaLonde, NPRB
- **Alaska’s Next Generation of Fishermen.** PIs Courtney Caruthers, Rachel Donkersloot and Paula Cullenberg, NPRB and Alaska Sea Grant
- **Safe Subsistence Shellfish Harvest in the Face of Climate Change.** PI Julie Matweyou, ANTHC

## Publications and Reports

- Lee, J., Q. Fong, and J.W. Park. In Press. Effect of Various Postharvest Treatments on the Quality of Alaska Pollock Fillets. LWT Food Science and Technology.
- Chen, J.Q., M. Haws, Q.S. Fong, and P.S. Leung. In Press. Economic Feasibility of Producing Oysters Using a Small-Scale Hawaii Fishpond Model. Aquaculture Reports.
- Xu, P., Q. Fong, A. Bersamin, and B. Izumi. 2015. Fisheries-to-School in Alaska: A Food Service Directors’ Perspective. International Journal of Business and Management 10(2):142-149.
- Fong, Q., and Q. Zheng. 2016. Synopsis of the Hong Kong Seafood Market. Alaska Sea Grant, University of Alaska Fairbanks, MAB-68. <http://doi.org/10.4027/shksm.2016>
- Nu, J., Q. Fong, and A. Bersamin. 2015. Alaska Seafood Purchasing Guide for Schools. Alaska Sea Grant, University of Alaska Fairbanks, MAB-66. 25 pp.
- Matweyou, J.A. 2016 (Mar). Quality Assurance Project Plan for Safe Subsistence Shellfish Harvest in the Face of Climate Change. Prepared for: Alutiiq Tribe of Old Harbor, Alaska Native Tribal Health Consortium Community Environmental Demonstration Project Grant. Mar. 24, 2016.
- Matweyou, J.A. 2015. Report (letter) Documenting PSP Results/interpretation for the Uganik Blue Mussel Samples for Polar Seafoods. Dec 15, 2015.
- Matweyou, J.A., and K. Bartz. 2015. (Sept) Recreational Shellfish Project Final Report (7.1.12- 6.30.15); written and submitted to ADEC on behalf of KIBSD.
- Wright, D.L., B.H. Witteveen, K. Wynne, and L. Horstmann-Dehn. 2016. Fine-scale Spatial Differences in Humpback Whale Diet Composition near Kodiak, Alaska. Marine Mammal Science. <http://doi.org/10.1111/mms.12311>
- Witteveen, B.H., and K. Wynne. 2016. Trophic Niche Partitioning and Diet Composition of Sympatric fin (*Balaeantopera physalus*) and Humpback Whales (*Megaptera novaeangliae*) in the Gulf of Alaska Revealed through Stable Isotope Analysis. Marine Mammal Science. doi 10.1111/mms.12333
- Wright, D.L., B.H. Witteveen, K. Wynne, and L. Horstmann-Dehn. 2015. Evidence of Two Subaggregations of Humpback Whales on the Kodiak, Alaska, Feeding Ground Revealed from Stable Isotope Analysis. Marine Mammal Science 31:1378-1400.
- Witteveen, B.H., A. De Robertis, L. Guo, and K.M. Wynne. 2015. Using Dive Behavior and Active Acoustics to Assess Prey Use and Partitioning by Fin and Humpback Whales near Kodiak Island, Alaska. Marine Mammal Science 31:255-278.

## Technical Assistance

Technical assistance and information was provided on an ongoing basis throughout the year by all faculty members engaging with over 70 different seafood businesses and individual food producers as well as with state and federal agencies, tribal representatives, nonprofit groups, schools, youth and the public.

### Highlights:

- The Alaska Department of Environmental Conservation (ADEC) endorsed Alaska Sea Grant Marine Advisory faculty member Chris Sannito and Fisheries faculty member Brian Himelbloom as Process Authorities in the State of Alaska. The Food and Drug Administration recognizes Process Authorities as experts in the field of high-risk food processing. ADEC also noted that the UAF Kodiak Seafood and Marine Science Center is a “one of a kind facility serving Alaska, accommodating several faculty-led programs to provide vital training workshops, applied research and problem-solving on behalf of Alaska’s food processing industry.” The letter continues “It is without reservation that I recommend that both Drs. Sannito and Himelbloom be recognized as Process Authorities in the State of Alaska, and that the UAF Kodiak Seafood and Marine Science Center be similarly recognized as a valuable resource to the Alaskan food processing industry and the many consumers that are kept safe by the training in safe food processes that it facilitates.”
- The Alaska Sea Grant Marine Advisory Program is now a collaborator in the Hollings Manufacture Extension Partnership (MEP) 5-year federal grant recently awarded to the Southwest Alaska Municipal Conference (SWAMC). The MEP in each state provides manufacturing companies with services and resources to enhance growth, improve productivity, reduce costs, and expand capacity. Seafood harvesting and processing will be the focus of the new Alaska MEP, and Marine Advisory faculty based at KSMSC will be providing seafood processing training and technical assistance. Other partners include Southeast Conference and the Anchorage Economic Development Corporation. PIs are Fong and Sannito.
- Seafood quality specialist Chris Sannito and seafood specialist Brian Himelbloom are collaborating with the Maniilaq Association to study processing of toxin-free seal oil. Chris and Brian are members of the interagency Seal Oil Task Force (SOTF). SOTF’s goal is to support efforts by Alaska Natives to comply with Alaska Department of Environmental Conservation regulations for serving traditional foods, specifically bearded seal oil, in eldercare facilities. Chris and Brian recently ran tests on seal samples and are preparing a critical food safety handling plan for the permitting process.



### Technical assistance was provided in areas listed below:

- Retort jarred salmon processing
- Salmon jerky production
- CAS (cells alive system) freezing explanation

- Low acid canned foods
- Seafood industry overview
- HACCP plan
- Laboratory RTE (ready-to-eat) product testing
- Salmon parasite information
- Salmon chowder production
- Salmon pouch retort processing
- RTE mustard testing, process schedule evaluation
- Characterizing salmon waste stream
- Waste stream solids test for new plant
- Introduced seafood buyer to Kodiak processors
- Small scale production equipment
- Cold smoked HACCP plan
- Salmon processing venture assistance
- Shortraker rockfish processing
- Heat distribution information for retort
- Retort selection
- Assisted in used seafood processing equipment
- Consulted salmon jerky project
- Date coding, recall program, vodka processing
- Food composition analysis
- Jerky sample production, Hong Kong test
- 2016 processing permit
- Roe processing
- Fresh shipping
- Smoked seafood
- Process evaluation
- Salmon handling
- Food plant video surveillance
- Salmon pressure bleeding
- Boiler sizing
- Cold process approval
- Bait oil percentage test
- Reissued processing authority letter
- Fish smoking
- Process schedule revision
- Backpacker foods
- Business plan development
- Marketing opportunities

**Some of the companies and groups seeking assistance from KSMSC included:**

- Community of Pilot Point
- Alaska Pacific Seafoods,
- Alaska Seafood Company,
- Moosetards, Inc.,
- Silver Bay Seafoods
- Trident Seafoods
- Community of Port Heiden
- Pacific Sun Products
- Cooperative Extension Service
- Kahtnuht'ana
- Meshik Corporation
- Pacific Seafoods
- Ekuk Fisheries
- Ocean Beauty Seafoods
- Wildfish Cannery
- Naknek Family Fisheries
- Bambino's Baby Food
- Hydaburg Project
- Island Processing
- Northern Smokeries

## Public Service and Marine Education

Numerous outreach and marine education projects took place in the KSMSC building ranging from ComFish Alaska forums, paralytic shellfish poisoning community sampling and testing studies, and K-12 marine education events. Faculty at KSMSC engaged with over 400 local youth during the year in marine science classes and field trips.

### ComFish Alaska



This year, KSMSC and Alaska Sea Grant continued to have a strong presence at ComFish, Alaska's annual industry trade show held in March 2016 in Kodiak. Julie Matweyou coordinated speakers and topics for the ComFish Forum including an update from UAA professor Gunnar Knapp on "Salmon Markets and Alaska's Fiscal Climate." Julie assisted in the

organization of a professional fish-filleter contest, co-hosted with Kodiak's seafood processors. Judges included Julie and Chris Sannito. New this year, Julie Matweyou and Astrid Rose organized the Fisherman's Showcase. This event was an energized competition among 15 fishermen in skills such as knot tying and buoy tossing. The competition drew a great deal of interest not only from participants but also more than 60 audience members.

During ComFish Alaska, KSMSC hosted a daylong US Coast Guard stakeholder meeting on development of Alternative Safety Compliance Program regulations.

### PSP Community Sampling Project

Marine Advisory agent Julie Matweyou concluded a multiyear project with residents of Ouzinkie and Old Harbor to analyze subsistence harvested shellfish toxin levels in partnership with the Kodiak Island Borough School District, funded by Alaska Department of Environmental Conservation.

Analysis of toxin levels in community harvested shellfish continued with the Alutiiq Village of Old Harbor on a Climate Change–Paralytic Shellfish Poisoning (PSP) project funded through the Alaska Native Tribal Health Consortium (ANTHC). Old Harbor residents rely heavily on a subsistence diet including locally harvested shellfish, a culturally important food source. Traditional knowledge and shellfish harvest practices are at risk with climate change, which increases the variability of weather and extreme events and influences harmful algal bloom (HAB) frequency and distribution and breaks down clear seasonal boundaries. In addition, Julie Matweyou is working with Mercury Scientific to pilot and demonstrate a quick-test PSP analysis prototype.



In June, Julie Matweyou responded with information and warnings in Kodiak when a local resident became severely ill from PSP. Shellfish toxin levels were close to the highest recorded in Kodiak. Julie held informal discussion sessions at KSMSC and had one-on-one communication with Kodiak residents, harmful algal bloom experts, state epidemiologists and public health agents.

## **Marine Mammal Response Network**

NOAA officially declared the deaths of about 30 whales in the Gulf of Alaska an Unusual Mortality Event (UME) on August 20, 2015. Kate Wynne and Bree Witteveen were named onsite coordinators and members of the core team for the UME. Bree regularly presented review and status updates to the UME working group. Bree was interviewed by weather.com for a story on whale deaths and harmful algal blooms. Julie Matweyou provided onsite HAB analysis for whale specimens. <http://alaskafisheries.noaa.gov/newsreleases/2015/whales-ume082015.html>



Bree Witteveen and Kate Wynne both participated in NOAA Marine Mammal Stranding Network responding to dead and stranded marine mammals. With the retirement of Wynne and resignation of Witteveen, Kodiak has lost its response personnel to marine mammals.

## **Marine Education for Youth**

During the 8th Grade Marine Science Day, Marine Advisory agent Julie Matweyou presented a lesson on plastic microbeads, which are common in cosmetics and end up in marine ecosystems after being discarded. The Kodiak Seafood and Marine Science Center partnered with the Ocean Science Discovery Program to host six education stations, attended by 150 students and 10 teachers and parents.

Julie Matweyou also presented a paralytic shellfish poisoning lesson to 144 Kodiak Middle School 8th graders over a 3-day period. She taught students to record butter clam measurements, prepare the homogenate and extract, and run a PSP toxin test using a commercially available kit. For the fourth year of conducting this lesson, all classroom samples were positive for PSP, demonstrating that Kodiak has a background toxin concentration approaching or above 80 micrograms per 100 grams of shellfish tissue, a level not recommended for consumption.

In Kodiak, Julie Matweyou instructed 70 6th graders and 15 teachers and chaperones about paralytic shellfish poisoning on Kodiak Island (photo). Students learned about monitoring programs and PSP

detecting tools. In August, Julie worked at the Old Harbor culture camp.



### **Boards and Councils served by faculty at KSMSC**

- ADEC Alaska Food Safety Advisory Committee
- NMFS Marine Mammal Stranding Group
- Kodiak Whalefest Steering Committee
- ASMI Technical Committee
- Latina Association of Women Board
- Kodiak Comprehensive Economic Development Committee
- Large Whale Disentanglement Network
- Kodiak College Vessel Repair & Maintenance Local Advisory Committee
- Kodiak Workforce Regional Advisory Council
- Western Regional Aquaculture Consortium Extension Technical Committee

### **Press Coverage**

- ComFish interview with L. Welch (Alaska Fish Radio) and (Alaska Fish Factor)
  - <http://www.alaskafishradio.com/fishermens-skills-showcased-at-comfishkodiak/>
- ComFish interview with J. Herman (KDM)
  - [http://www.kodiakdailymirror.com/news/article\\_8858b5bc-e23b-5beb-817d-29a2d1d8d837.html](http://www.kodiakdailymirror.com/news/article_8858b5bc-e23b-5beb-817d-29a2d1d8d837.html)
- ComFish interview with K. Desroches (KMXT)
  - <http://kmxt.org/2016/04/fishermen-compete-comfish-2016/>

- Unusual mortality event with whale die off
  - <http://www.weather.com/science/news/largest-whale-stranding-in-history>, and a story in KMXT
  - <http://kmxt.org/2016/05/two-marine-mammal-specialists-conduct-kodiaks-first-whale-survey-2016/>
- Update on pollock skins pet treats project
  - <http://www.alaskapublic.org/2015/12/09/pollock-skins-for-fido/>
- Paralytic shellfish toxin levels high
  - <http://kmxt.org/2016/06/person-falls-ill-due-parasitic-shellfish-poisoning/>
  - <http://kmxt.org/2016/08/talk-rock-faster-cheaper-way-monitor-pp/>

## Other Meetings and Visitors to KSMSC in FY2016



- NOAA budget director Gary Reisner and Congressional CSJ Appropriations Committee staff tours KSMSC, August 2015 (photo).
- Sen. Murkowski, March 2016, staff aides, fall 2015.
- Open House at KSMSC for members and participants in the North Pacific Fishery Management Council meeting in Kodiak. Dean S. Bradley Moran also present, 75 attending, June 2016.
- During the year, Kodiak Island Arts Council, Providence Hospital Mental Health Board, State of Alaska, and Latin Women of Alaska Board meeting used the building for community meetings.
- Dr. Eric Johnson, University of Wisconsin Madison, presented at KSMSC to the public on “Safety Concerns for Traditional Native Foods” and worked with Chris Sannito and Brian Himelbloom.

# KSMSC Operations

## Ongoing Operations Concerns Continue

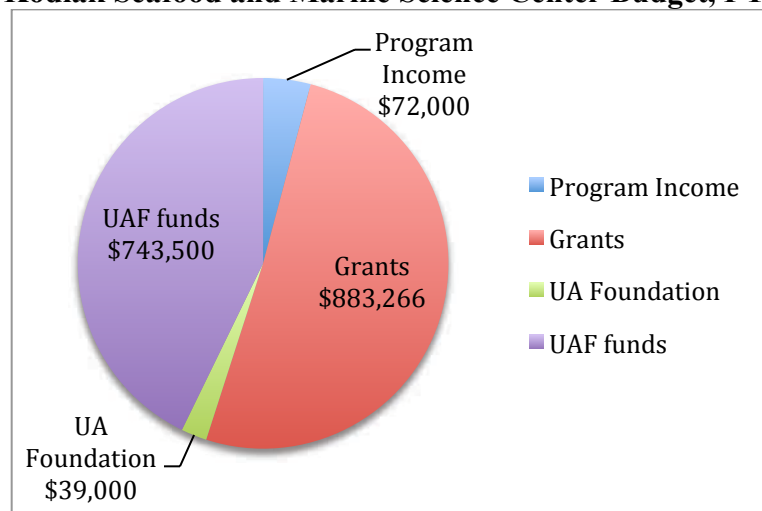
FY2016 began with a notification to faculty and staff at KSMSC from UAF Provost Susan Henrichs and School of Fisheries and Ocean Sciences interim dean that due to budget concerns UAF was considering transferring ownership of KSMSC to UAA for repurposing. Alternately UAF was considering closing the Center by the end of FY2016. In an energetic response, community and industry leaders contacted UAF to express strong objections to closing the Center and/or changing the Center's mission, citing importance of the mission, the seafood industry to the economy and UA's statutory responsibility. The City and Borough of Kodiak as well as industry groups such as Trident Seafoods, Alaska Pacific Seafoods, Alaska Seafood Marketing Institute, Seafood Producers Association, Icicle Seafoods and others sent letters protesting the proposed transfer/closure to UA leadership.

In fall 2015, UA President Jim Johnsen visited Kodiak and met with the KSMSC Policy Council and the City and Borough of Kodiak in a working group meeting. Mayor Pat Branson pledged support from the City and Borough to find a solution to keep KSMSC operating. In March 2016, Senator Lisa Murkowski met with the KSMSC Policy Council to express her concern and support for the Center.

In response, a new nonprofit called the Alaska Research Consortium (ARS) was formed in Kodiak with the intent of acting as an operating body for the Center. ARS has formed a 501c3 nonprofit and worked with Foraker Foundation to develop a board of directors, bylaws and strategic direction. At the end of FY2016, UAF had issued a Request for Information (RFI) from groups interested in developing a public/private partnership for KSMSC. ARS was the sole responder, sending their proposal to UAF on July 1, 2016.

## Budget

**Kodiak Seafood and Marine Science Center Budget, FY2016**



- UAF funds: \$743,500
  - faculty and staff salaries and program support: \$444,500
  - operations and maintenance FY2016: \$299,000
- Grants: \$883,266
  - Alaska Sea Grant, faculty salaries: \$54,658
  - Southwest Alaska Municipal Conference, Manufacturing Extension Partnership, PIs Quentin Fong and Chris Sannito: \$152,000
  - TVEP, Seafood Processing Training Program, PI Chris Sannito, \$44,000
  - Pollock Conservation Cooperative Research Center (PCCRC)
    - Shelf stable pet treats from pollock skins, PIs Chris Sannito and Quentin Fong, \$94,000.
    - Freshness and nutritional value of Alaska pollock products and byproducts, PIs Quentin Fong and Jae Park (OSU), \$81,000.
    - Utilization of nano fish-scale bone, PIs Quentin Fong and Christina DeWitt (OSU), \$63,044
    - Developing alternative product forms for pollock roe, PIs Quentin Fong and Chris Sannito, \$69,000.
  - Alaska Seafood Marketing Institute, Inactivation of Fish Parasites: Exploration of current regulatory guidelines for freezing and cooking, PIs Brian Himelbloom and Chris Sannito, Alaska Seafood Marketing Institute, \$59,000.
  - USDA, Fisheries to schools: a model to enhance food security in Alaskan Communities, co-PI Quentin Fong, \$69,000.
  - NPRB, Implementation of Community Based PSP Testing for Subsistence and Recreational Shellfish Harvesting in Southwestern Alaska, co-PI Julie Matweyou, \$77,564.
  - NOAA, Gulf Apex Predator, PI Kate Wynne, \$120,000.
- UAF Foundation funds: \$39,000
- Program income: \$72,000

## **Personnel**

In FY2016, long-time Marine Advisory professor and marine mammal specialist Kate Wynne retired and was appointed to an emeritus faculty position. Research professor Brianna Witteveen moved to Oregon to attend school and continues as an affiliate faculty member in the Marine Advisory Program. UAF did not refill these positions. Loss of personnel this year was two faculty positions in Kodiak.

## **Administration**

- Paula Cullenberg, Alaska Sea Grant (based in Anchorage) and Gordon Kruse, Fisheries Division (based in Juneau) serve as co-directors of KSMSC.
- Quentin Fong, Marine Advisory associate professor, seafood marketing, is KSMSC onsite coordinator.

## **UAF CFOS Faculty Based at KSMSC**

- Quentin Fong, seafood marketing specialist, associate professor, Marine Advisory Program,



KSMSC coordinator

- Brian Himelbloom, microbiology, associate professor, Fisheries Division
- Julie Matweyou, Marine Advisory agent, assistant professor
- Chris Sannito, seafood processing specialist, research assistant professor, Marine Advisory Program

#### **Staff**

- Astrid Rose, Marine Advisory Program administrative assistant
- Laurinda (“Kay”) Bodi, KSMSC facilities manager
- Kate Schaberg, 4-H coordinator, Cooperative Extension Service

#### **Students**

- Danielle Ringer, MA interdisciplinary studies, political ecology fisheries
- Natura Richardson, MS fisheries, ADF&G employee
- Michelle Stratton, MS fisheries, ADF&G employee
- Joe Bottoms, MS fisheries, Kodiak Regional Aquaculture Association (KRAA) employee
- Michael Knutson, MS fisheries, ADF&G employee

#### **Interns**

- Steven Greenlaw, fisheries undergraduate
- Mark Young, fisheries undergraduate

#### **KSMSC Policy Council Members**

- Jay Stinson, chairman
- Jeff Stephan, vice chairman
- Greg Peters, Alyeska Seafoods
- Mark Palmer, Ocean Beauty Seafoods
- Alan Austerman, retired legislator
- Paul Lumsden, Trident Seafoods
- Dean Adams, retired fisherman
- Heather McCarty, fisheries consultant