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**eNews Spring 2019** 



**UAF Kodiak Seafood and Marine Science Center** 



# **KSMSC Spring Update**

Spring in Kodiak is a special time of year. Here at the Kodiak Seafood and Marine Science Center (KSMSC) we are enjoying this beautiful season and looking forward to the promise of summer right around the corner. Our faculty have been busy with research, academic-related service, and attending and presenting at conferences. We have a Kodiak student defending her master's thesis this week, and we also have more information on a new Kodiak-based position at University of Alaska Fairbanks College of Fisheries and Ocean Sciences (UAF CFOS). We hope you enjoy this spring edition of our newsletter.

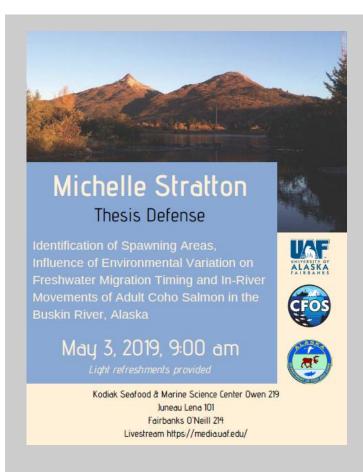


# **Local Student Michelle Stratton to Defend Thesis on Coho in the Buskin River**

Michelle Stratton, a University of Alaska Fairbanks graduate student, will defend her master's thesis at KSMSC on Friday, May 3rd, at 9 a.m. Stratton's research is based in Kodiak.

The title of her thesis is Identification of Spawning Areas, Influence of Environmental Variation on Freshwater Migration Timing and In-river Movements of Adult Coho Salmon in the Buskin River, Alaska.

The thesis defense is open to the public.



# **UAF College of Fisheries Mariculture Position Update**

We have exciting news to share! The UAF College of Fisheries and Ocean Sciences is hiring a tenure-track faculty to support research and academics in mariculture. This tripartite faculty position comes with four years of support and will be based at our Kodiak facility.

The hiring committee has narrowed its search to three potential candidates. Each will be interviewed and have the opportunity to present and visit Kodiak. They are currently visiting the Fairbanks and Kodiak campuses.

Candidate seminars, open to the public, are being video streamed to Kodiak and recorded for viewing at a later time. Join us at KSMSC Room 219 or find the recorded presentations <a href="https://example.com/here">here</a> (search CFOS).

Candidate #1 Matt Hawkyard - Seminar on April 29 from 2:30-3:30 p.m. Candidate #2 Schery Umanzor - Seminar on May 10 from 2-3 p.m. Candidate #3 Simona Augyte - Seminar on May 14 from 2-3 p.m.

# Research at KSMSC

#### **Climate and Fisheries**

Mike Litzow, research assistant professor at UAF CFOS, has two recent publications (citations below) that address how the Aleutian Low atmosphere pattern drives the Pacific Decadal Oscillation ocean climate pattern, which in turn drives productivity in Gulf of Alaska fisheries.

These papers show how periods of stronger and weaker interactions between the Aleutian Low and Pacific Decadal Oscillation produce changing climate effects on Gulf of Alaska fisheries over different decades.

Litzow and Franz Mueter, CFOS associate professor based in Juneau, secured funding

from the Pollock Conservation Cooperative Research Center to study the response of pollock to the ongoing climate transition in the Bering Sea. They are currently advertising for a postdoc to work on the study.

Litzow and Mueter have also begun work on a study, funded by the NOAA Saltonstall-Kennedy program, to understand the factors regulating weight-at-age in Bering Sea and Gulf of Alaska pollock. The goal is to improve the quota setting process.



Litzow and CFOS fisheries researcher Alisa Abookire have been working on a project to improve understanding of how warming temperatures affect the condition and post-settlement survival of juvenile Pacific cod. Sampling was conducted during July and August 2018 on the western Gulf of Alaska. Laboratory analysis to measure Pacific cod condition and stomach fullness was conducted this past fall. Pacific cod were the most



abundant species captured in beach seines, and juveniles of several other commercially important species were also well sampled. Length of age-0 Pacific cod in western bays was highly variable, and the researchers believe this could reflect a more prolonged spawning season near the Shumagin Islands. When compared with the long-term Kodiak mean catch, the data indicate a strong 2018 year-class of Pacific cod. These results were presented in January at the Alaska Marine Science Symposium in the poster "Juvenile Pacific cod abundance and condition in the western Gulf of Alaska."

\* Puerta, P., Ciannelli, L., Rykaczewski, R., Opiekun, M., and Litzow, M.A. 2019. Do Gulf of Alaska fish and crustacean populations show synchronous non-stationary responses to climate? Prog. Oceanogr. 175: 161-170. doi:10.1016/j.pocean.2019.04.002.

\* Litzow, M.A., Ciannelli, L., Puerta, P., Wettstein, J.J., Rykaczewski, R.R., and Opiekun, M. 2018. Non-stationary climate-salmon relationships in the Gulf of Alaska. Proc. R. Soc. B Biol. Sci. 285(1890): 20181855. The Royal Society. doi:10.1098/rspb.2018.1855.

## **Harmful Algal Blooms**

Alaska Sea Grant's Julie Matweyou, Marine Advisory agent in Kodiak, is continuing work to address subsistence shellfish harvest on Kodiak Island. Paralytic Shellfish Poisoning remains a concern which has limited bivalve mariculture. Matweyou has been leading community-based monitoring of PSP toxins and has been working to answer community concerns. Last summer, Matweyou's team focused on the distribution of saxitoxin in butter clam tissues and looked at three clam cleaning methods to determine if the risk of toxin exposure can be reduced through removing certain tissues. This summer the team will be conducting similar studies using razor clams.

The Kodiak harmful algal bloom (HAB) network is continuing to grow. The Sun'aq Tribe of Kodiak and the Kodiak Area Native Association have partnered with Matweyou, and are able to work out of the KSMSC HAB laboratory. <u>A recent Kodiak Daily Mirror article</u> describes this partnership.



## **Fisheries Anthropology**

CFOS research associate Danielle
Ringer recently traveled to Portland,
Oregon, to attend the 79th
annual meeting of the Society for
Applied Anthropology. She co-hosted a
panel with colleague Jesse Coleman
titled "Equity and Well-Being in
Fisheries Governance" that explored
pressing inequities within global
contemporary resource
allocation regimes and discussed
direction for future management

paradigms promoting equity and human well-being as management objectives. At the meeting she helped her research team facilitate a dialogue on Indigenous-centered collaborations in applied environmental anthropology. As summer approaches, Ringer is excited for the upcoming salmon season and is preparing to conduct interviews

covering topics including Indigenous knowledge, values, and stewardship practices within Alaska's salmon systems.

# ComFish 2019 Recap

The Alaska Sea Grant Marine Advisory Program remains active in Alaska ComFish! This year ASG sponsored the 4th Annual Flshermen's Showcase and co-sponsored Sea Stories Above the Harbor, organized by the Alaska Marine Conservation Council. Kodiak MAP agent Julie Matweyou is active on the Kodiak Chamber of Commerce ComFish planning committee, assists with planning and moderating the informational forums, and assists with other events such as the fish taco event, processor event, and shark dissection. Matweyou and Astrid Rose, Alaska Sea Grant program assistant, orchestrated the fourth annual Fisherman's Showcase Competition. This fun event highlights some of the deck skills necessary to successfully fish on our waters. The competitors had to demonstrate five deck skills and were timed in their heats. The five areas of competition were knot tying, coiling, buoy rail tie, hook throw and survival suit donning. New this year was an event for "next generation fisher-kids" who each had an experienced fisherman as a mentor to help them through the skills. The kids were enthusiastic participants, and audience members were on the edge of their seats.





We had a total of nine participants, both kids and adults. The three top place winners were:

- 1. Perry Nelson, time 0:01:45
- 2. Michael Johnson, time 0:02:00
- 3. Anitra Winkler, time 0:02:25

THANK YOU TO OUR LOCAL SPONSORS FOR SUPPORTING THIS EVENT! This year prizes were donated by Nick Szabo, Big Ray's, Sutliff True Value, and Kodiak Marine Supply.



# **Alaska Marine Science Symposium Update**

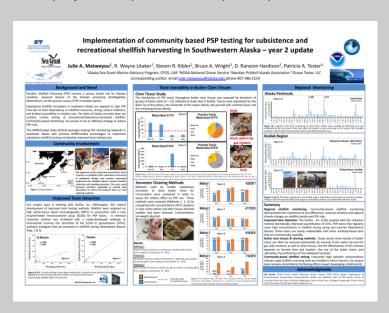
The Alaska Marine Science Symposium (AMSS) is Alaska's premier marine research conference, held annually in January. The conference highlights important Alaskan marine ecosystems and

brings together scientists, educators, resource managers, students, and interested public for a week-long event.

Matweyou and Litzow, as well as Alaska Sea Grant-funded students, presented at the 2019 symposium through oral and poster presentations. Access the full abstract book here.

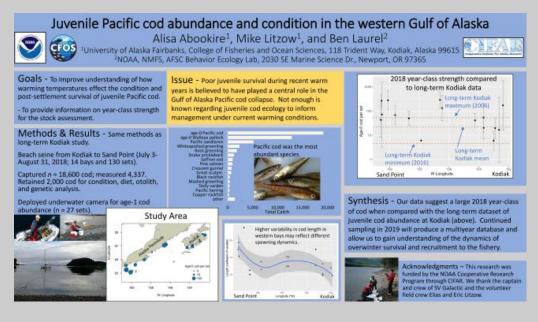
Matweyou shared results of her work to evaluate the Paralytic shellfish toxins in butter clamtissues and the effect of cleaning methods used by Kodiak harvesters, as an oral presentation during the Gulf of Alaska session. The presentation entitled "Paralytic shellfish toxins in butter clam tissues and effect of cleaning methods used by Kodiak harvesters" explores the investigation into the distribution of saxitoxin in butter clam tissues and harvester cleaning methods. Results showed great variably in toxin distribution among tissues, with seasonal changes in congener distribution. On average, discarding tissues deemed inedible via the three cleaning methods reduced overall clam toxicity. They found that high toxin levels still remained in edible tissues. Results varied with location and season, anatomical distribution of toxins, individual clam toxicity and precision of cleaning. However, removing certain tissues can reduce exposure to PSP toxins in butter clams. Work in this direction continues, with the goal of providing guidance to help reduce PSP risk in southwest Alaska.

This project component is part of more comprehensive project funded by the North Pacific Research Board and has the overall objective of reducing the risk of PSP in personally harvested shellfish. An update on the project was provided as a poster presentation.



Poster title: "Implementation of community based PSP testing for subsistence and recreational shellfish harvesting in Southwestern Alaska - year 2 update"

Authors: Julie A. Matweyou, R. Wayne Litaker, Steven R. Kibler, Bruce A. Wright, D. Ransom Hardison, Patricia A. Tester



Poster title: "Juvenile Pacific cod abundance and condition in the western Gulf of Alaska" Authors: Alisa Abookire, Mike Litzow, and Ben Laurel

The goal of this project is to improve our understanding of how warming temperatures affect the condition and post-settlement survival of juvenile Pacific cod. Sampling was conducted during July and August on the western Gulf of Alaska cruise for the NOAA Cooperative Research project "Understanding post-settlement survival for juvenile Pacific cod in the Gulf of Alaska (Yr1)." The study area and sampling design are described in the poster, and a total of 130 beach seine sets were made in 14 bays on Kodiak Island, the Alaska Peninsula, and the Shumagin Islands. Pacific cod were the most abundant species captured in beach seines, and juveniles of several other commercially important species were also well sampled. We found high variance in length of age-0 Pacific cod in western bays, and we believe this may reflect a more prolonged spawning season near the Shumagin Islands. When compared with the long-term Kodiak mean catch, our data indicate a strong 2018 year-class of Pacific cod. Continued sampling in 2019 will produce a multiyear database and allow us to gain understanding of the dynamics of overwinter survival and recruitment to the fishery.

## **Alaska Sea Grant Grad Student Posters:**

"<u>Using Local Ecological Knowledge (LEK) to Understand Long-Term Changes in Rockfish Populations</u>" Jesse Gordon, Ann Beaudreau, Maggie Chan, Phillip Loring

"Innovating Kelp Mariculture Methods by Studying the Life Cycle of Saccarina latissima"
Annie Raymond and Michael Stekoll

"Can Seaweeds be sustainably harvested in Kachemak Bay?" Brian Ulaski & Brenda Konar

# **Kodiak 4-H Update**

Kate Schaberg, our local 4-H coordinator, has been busy keeping track of all of the projects 4-H members are working on this year. 4-H currently has over 20 volunteer leaders who offer 14 different project opportunities for youth members in

Kodiak. Some of the newest project offerings include photography, dog agility & veterinary science.

Schaberg has also been working to expand the 4-H program to reach youth outside of the 4-H community club. Schaberg & 4-H leader Miquela Rogers have been partnering with the Kodiak Soil & Water Conservation District to offer workshops at the Kodiak Community Gardens. On April 13th, Rogers taught community members how to build a hoop for their garden beds, while Schaberg worked with youth to create a "Jack and the Pea Stalk," learning about seeds and what they need in order to grow. The next workshop in the series "Finding Your Green Thumb" will be held at 2:00pm on May 1 at the Community Gardens, and will cover soil testing and amendments. Schaberg was happy to present on 4-H opportunities at the Introduction to Farming and Ranching on Kodiak Conference, organized by the Kodiak Archipelago Leadership Institute and

offered this March. She is hoping 4-H will be able to reach youth in the rural communities of the Kodiak Archipelago in the future! As we move into the summer, Schaberg will be busy planning a Cloverbud camp and 4-H camp for the month of June, and she hopes to see you at 4-H's 32nd Annual Pancake Breakfast at the Elks on Memorial Day. Visit the 4-H website for more information.



# **COMING UP:**

## **Sanitation Workshop**

#### May 17, 2019 at the Kodiak Seafood & Marine Science Center

This one day sanitation control procedures workshop is designed for all seafood processors. The workshop covers the basic 8 points of sanitation as well as documentation requirements. Several demonstrations will be conducted for using test kits to monitor common sanitizer residuals. <u>View our events page for more information and to sign up.</u>

## **AMSEA Drill Conductor Training**

## May 21-22 2019 at the Kodiak Seafood and Marine Science Center

Get the training you need to survive emergencies at sea. This workshop meets U.S. Coast Guard requirements for fishing vessels and is free for commercial fishermen, \$175 for all others. To register call 907-747-3287 or visit <a href="www.amsea.org">www.amsea.org</a>.

#### **Smoked Seafood School**

#### October 10-11 2019

#### Kodiak, Alaska - Kodiak Seafood & Marine Science Center

Seafood scientists at the Kodiak Seafood and Marine Science Center will lead lectures and hands-on activities that include the principles of fish smoking; safety of smoked products; brining; filleting sockeye for curing and cold smoking; hot-smoking chum, coho, and black cod; preparation of fish sausage; and processing salmon roe for production of ikura. The registration fee is \$270.00. This workshop is provided in partnership between Alaska Sea Grant and the Manufacturing Alaska Extension Partnership, which is part of the National Institute of Standards and Technology national network.

For more information and to register, visit the Alaska Sea Grant Events Page.

## **Alaska Seafood Processing Leadership Institute**

November 11-15, 2019

## Kodiak, Alaska - Kodiak Seafood & Marine Science Center

Do you have an employee who, with key training, could help lead your business into the future? The Alaska Seafood Processing Leadership Institute (ASPLI) offers 80-hours of intensive professional development for employees recognized as having potential to move up in your company. The institute is designed for mid-level managers in seafood plant-production, QC supervisors, seafood engineers, human resources, and corporate or administrative personnel identified by their employer as having leadership potential. Others who might benefit include practicing direct marketers, small seafood processors or others closely involved in the seafood industry. ASPLI provides the technical training needed in the seafood industry to master leadership and management skills.

For more information and to register, visit Alaska Sea Grant's events page.

For more information on trainings visit the:
Alaska Sea Grant Meetings and Workshops Page

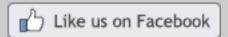


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