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Cooperative Research

A scientific activity involving two or more partners who gain more collectively than each would separately in the pursuit of a shared research goal.



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AFSC Cooperative Research



- ✓ Better science
- ✓ Relationships
- ✓ Improves knowledge
- ✓ Credibility
- ✓ Address resource constraints
- ✓ Complete Mission

Cooperative Research



NOAA FISHERIES

- 26 Projects
- 30 cooperative partners



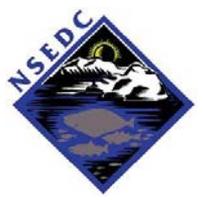
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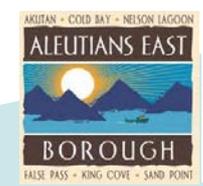
OCEAN PEACE INC



Universität Rostock



Northwest Fisheries Science Center



Stock Assessment



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Project	Cooperative Partners
<p>Tagging of Pacific Cod in the Northern Bering Sea (2019/2020)</p>	<p>Norton Sound Community Development Corporation, Kingfisher Marine Enterprises, Pacific States Fishery commission</p>
<p>Use of fishing industry catch and effort data for informing Gulf of Alaska rockfish stock assessments (2019/2020)</p>	<p>Brad Harris, Alaska Pacific Univ.; John Gauvin, Alaska Seafood Cooperative; Julie Bonney, Alaska Groundfish Data Bank; Bob Hezel, F/V US Intrepid; Erin Moore, F/V American #1; Paul Ison, F/V Unimak; Terry Fisher, F/V Ocean Peace.</p>
<p>Seabed mapping to develop a habitat-based catchability function for the Bristol Bay red king crab (<i>Paralithodes camtschaticus</i>) stock assessment (ongoing)</p>	<p>Scott Goodman (Bering Sea Fisheries Research Foundation)</p>
<p>Seabed mapping to quantify untrawlable habitats and reduce bias in Gulf of Alaska stock assessments (ongoing)</p>	<p>Linda Behnken and Stephen Rhoads - Alaska Longline Fishermen's Association (ALFA)</p>
<p>ADF&G Large Mesh Survey (ongoing)</p>	<p>Alaska Dept. of Fish & Game</p>
<p>Maturity, body condition, and stock structure of Sablefish in relation to management areas in Alaska (2020)</p>	<p>F/V Aleutian Beauty- Bill Widing</p>

Tagging of Pacific Cod in the Northern Bering Sea (2019/2020)

Use of fishing industry catch and effort data for informing Gulf of Alaska rockfish stock assessments (2019/2020)

Seabed mapping to develop a habitat-based catchability function for the Bristol Bay red king crab (*Paralithodes camtschaticus*) stock assessment (ongoing)

Seabed mapping to quantify untrawlable habitats and reduce bias in Gulf of Alaska stock assessments (ongoing)

ADF&G Large Mesh Survey (ongoing)

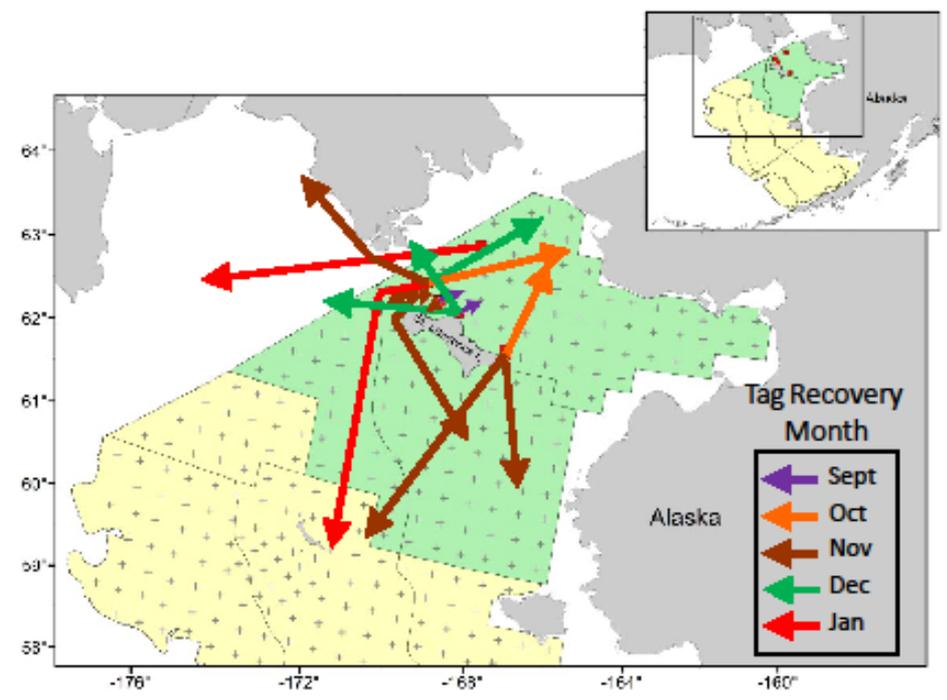
Maturity, body condition, and stock structure of Sablefish in relation to management areas in Alaska (2020)

Northern Bering Sea Satellite Tagging of Pacific Cod



38 tags were released summer of 2019

Data from 16 tags have been recovered. Remaining tags are scheduled to "pop up" in later months, with the longest-term durations set for 360 days.



Stock Assessment



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Project	Cooperative Partners
Sablefish Logbook Program (ongoing)	IFQ permit holders, IPHC
Biological sampling of incidentally-caught red king crab in the Bering Sea and Aleutian Islands yellowfin and rock sole fisheries (2019)	Alaska Pacific University, Alaska Seafood Cooperative
Tracking Seasonal Movement of Adult Male Red King Crab in Bristol Bay (2019/2020)	Bering Sea Fisheries Research Foundation
Industry-Supported Cooperative Crab Research: Addressing Data Gaps and Uncertainties to Inform Management Decisions for the Eastern Bering Sea Snow Crab Fishery (2020)	Bering Sea Fisheries Research Foundation
Estimating maturity at length and age to improve stock assessments for Greenland turbot, through the determination of functionally mature specimens (2020)	North Star Fishing
AFSC Groundfish Tag Recovery Reporting Application for Mobile Devices (2020)	Garrett Elwood, F/V Western Freedom

Project

Sablefish Logbook Program (ongoing)

Biological sampling of incidentally-caught red king crab in the Bering Sea and Aleutian Islands yellowfin and rock sole fisheries (2019)

Tracking Seasonal Movement of Adult Male Red King Crab in Bristol Bay (2019/2020)

Addressing Data Gaps and Uncertainties to Inform Management Decisions for the Eastern Bering Sea Snow Crab Fishery (2020)

Estimating maturity at length and age to improve stock assessments for Greenland turbot, through the determination of functionally mature specimens (2020)

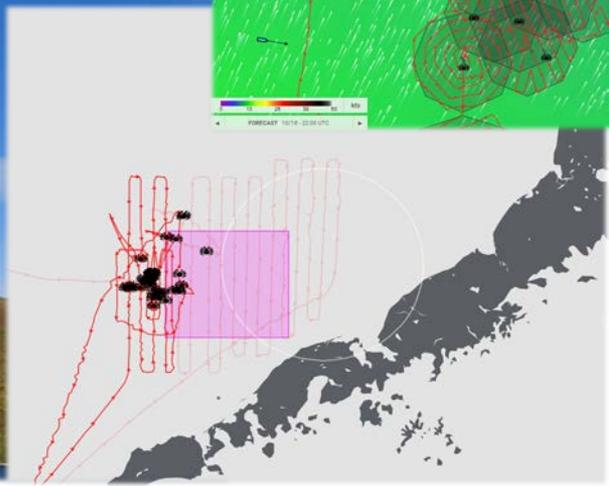
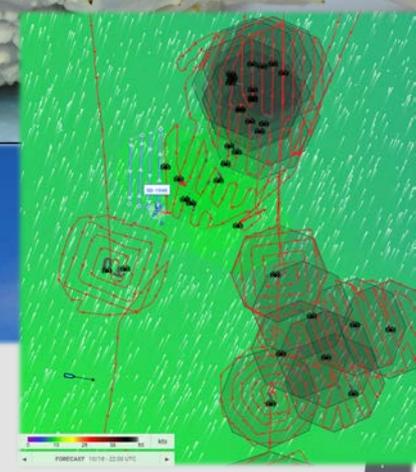
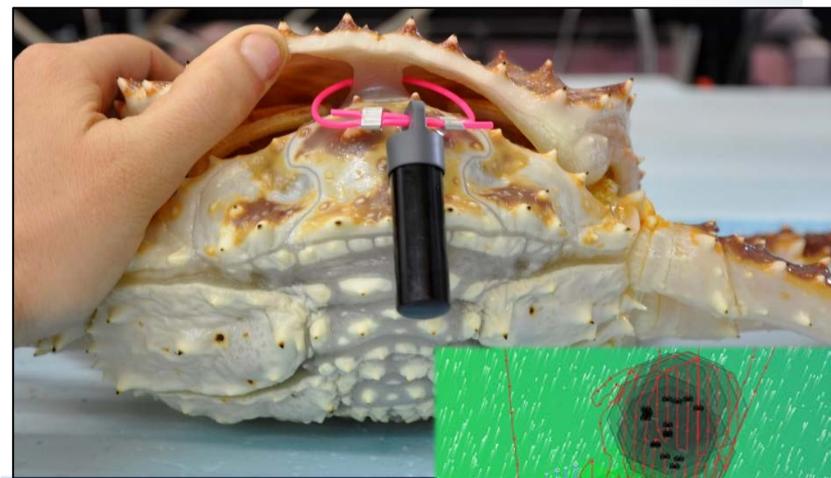
AFSC Groundfish Tag Recovery Reporting Application for Mobile Devices (2020)

Tracking Seasonal Movement of Adult Male Red King Crab in Bristol Bay

June 2019:
148 Crabs Tagged (June)

October 2019
50 located with drone

- 48 presumed alive
- 2 presumed dead



Bycatch Reduction



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Project	Cooperative Partners
Evaluating the role of bycatch reduce device design and fish behavior on Pacific salmon (<i>Oncorhynchus</i> spp.) escapement rates from a pelagic trawl (2020)	Mike Stone- Fury Group, Inc., Karsten Breddermann- University of Rostock Barry Berejikian- NOAA Northwest Fisheries Science Center, John Gauvin- North Pacific Fisheries Research Foundation, David J. Irvine- C/P Starbound
Exempted fishing permit (EFP) to continue work with the Bering Sea pollock fishery to increase Chinook salmon escapement rates with improved salmon excluders (2018-20)	Mr. John Gruver, United Catcher Boats Association, Ed Richardson, At-Sea Processors Association
Testing Methods to minimize bycatch of Pacific Ocean Perch in the Aleutian Islands Pollock fishery (2020)	The Aleut Corporation and Adak Community Development Corporation
Using Towed Array Hydrophones for Sperm Whale Detection (2019)	ALFA, Southeast Alaska Sperm Whale Avoidance Project (SEASWAP) University of St. Andrews
Halibut Deck Sorting Exempted Fishing Permit (2019)	John Gauvin, Alaska Seafood Cooperative and participating AM80 vessels
Field test of electronic measuring board (2019)	John Gauvin, Alaska Seafood Cooperative
Demersal longline vessel-specific seabird bycatch reduction (2020)	Elements of the Alaskan demersal longline fisheries, with specific focus on sablefish fishery

Project

Evaluating the role of bycatch reduce device design and fish behavior on Pacific salmon escapement rates from a pelagic trawl (2020)

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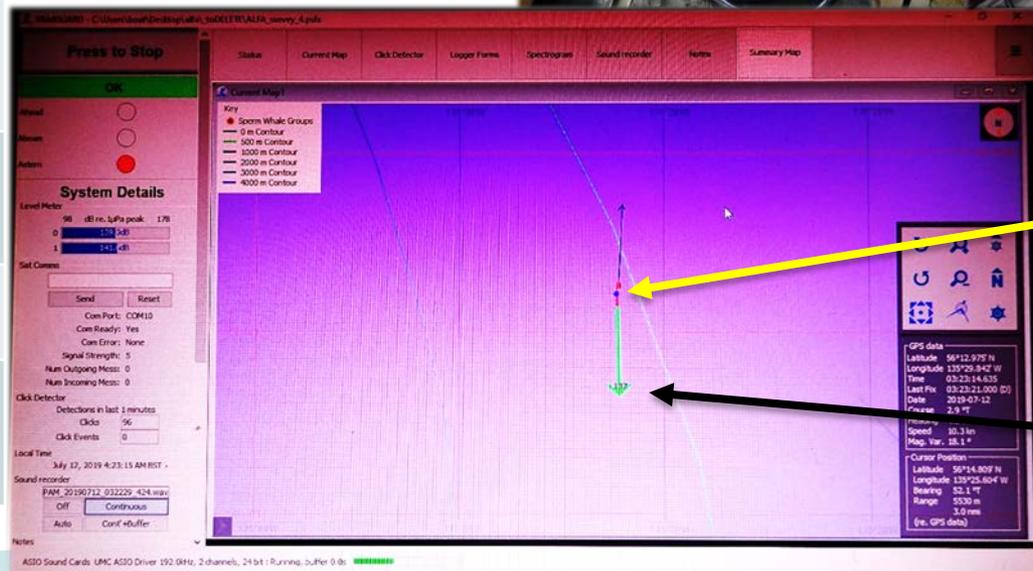
Halibut Deck Sorting Exempted Fishing Permit (2019)

Field test of electronic measuring board (2019)

Demersal longline vessel-specific seabird bycatch reduction (2020)

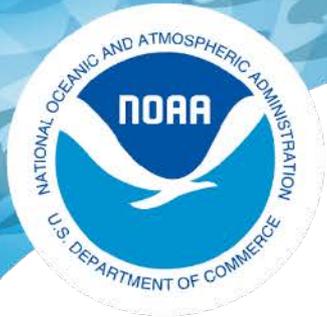
Towed Array Hydrophones for Sperm Whale Detection

ALFA and University of St. Andrews
Real-time locations
Leg 3 Ocean Prowler
Portable system



Vessel

Whale Location



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Electronic Monitoring (EM)

Project	Cooperative Partners
Pollock Catcher vessel EM-EFP (2020)	United Catcher Boats, AGDB, Aleutians East Borough, Pacific States Marine Fisheries Commission (PSMFC)
Stereo camera rail collections (ongoing)	IPHC, ALFA longline vessels, PSMFC
Halibut measuring camera chute (ongoing)	Amendment 80 vessels, Kodiak Trawlers, PSMFC
Species of interest (Salmon) detector on conveyor belts (ongoing)	AGDB, Kodiak shore side catchers and plants, West Coast trawl EFP, IPHC, PSMFC
Man on deck (ongoing)	ALFA longline vessels, West Coast trawl EFP, PSMFC, NWFSC, IPHC

Project

Pollock Catcher vessel EM-EFP (2020)

Stereo camera rail collections (ongoing)

Halibut measuring camera chute (ongoing)

Species of interest (Salmon) detector on conveyor belts (ongoing)

Man on deck (ongoing)

Man on Deck

Human Presence Detector

Use Existing Cameras

Reliability

Time

Money

Prediction

Ground Truth





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Marine Mammal

Project	Cooperative Partners
Harbor Seal Unmanned Aerial Surveys (UAS) – Pribilof Islands (2018/2019)	Aleut Community of St. Paul Island Tribal Government

Gear Modification

Project	Cooperative Partners
The potential to use light to reduce bait requirements in the snow crab fishery (2020)	Edward Poulsen Alaska Bering Sea Crabbers

Mariculture

Project	Cooperative Partners
Alaska King Crab Research, Rehabilitation, and Biology Program (ongoing)	Alutiiq Pride Shellfish Hatchery, ADF&G, UAF, UW, St. Paul Tribal Government. Alaska Sea Grant

Bycatch Management

Project	Cooperative Partners
Genetic Stock Composition of chinook bycatch in the GOA trawl rockfish fishery (ongoing)	Julie Bonney, Katy McGauley of Alaska Groundfish Data Bank

AFSC Science: Opportunities to Engage



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**Maintain
current assessment
tier of fish, crab, and
marine mammal stocks**

**Support NOAA Fisheries and NPFMC
analyses and international obligations**

Next generation fish, crab, and marine
mammal stock assessments and biological and
socioeconomic data collections

Conduct bycatch analyses and support conservation engineering
advances

Understand and forecast effects of climate change on marine ecosystems

Achieve organizational excellence in our administrative activities through innovation
and
the use of best practices



2019 F.I.S.H. Workshop *Fisheries Innovation for Sustainable Harvest*

Summary, Pictures, and Presentation Slides

Thank you to everyone who participated in and made possible the third Fisheries Innovation for Sustainable Harvest (F.I.S.H.) Workshop!

On Tuesday, December 17th, 100 people participated in the 3rd F.I.S.H. Workshop from three NOAA Alaska Fisheries Science Center (AFSC) locations (Newport, OR; Seattle, WA; and Kodiak, AK), connected through video conference. The overall goal of the workshop was to provide an opportunity for invited participants, including fishermen and those working on conservation engineering research or related technology development, to learn about and discuss current research related to innovation in North Pacific trawl fishing and tools that support that innovation. There were two workshop sessions, in addition to the presentations, one on prioritization of knowledge needs related to trawl gear performance and another evaluating excluders used in trawl gear.



The workshop was organized by:

- Noëlle Yochum Alaska Fisheries Science Center
- Julie Bonney & Katy McGauley Alaska Groundfish Data Bank
- Brad Harris FAST Lab, Alaska Pacific University
- John Gauvin Alaska Seafood Cooperative/ North Pacific Fisheries Research Foundation
- Austin Estabrooks At-Sea Processors Association
- Sara Skamser Foulweather Trawl/ Newport Fishermen's Wives
- Taunette Dixon Newport Fishermen's Wives
- Katherine Hellen Schneider Pacific States Marine Fisheries Commission
- John Gruver United Catcher Boats Association

How can we:

- improve communication?
- create new opportunities to share ideas and identify mutual interests?
- continue to improve uptake of new data in assessments and management?
- move from cooperative research projects to developing research plans with partners?

Thank you!

Questions & ideas welcomed and needed!

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