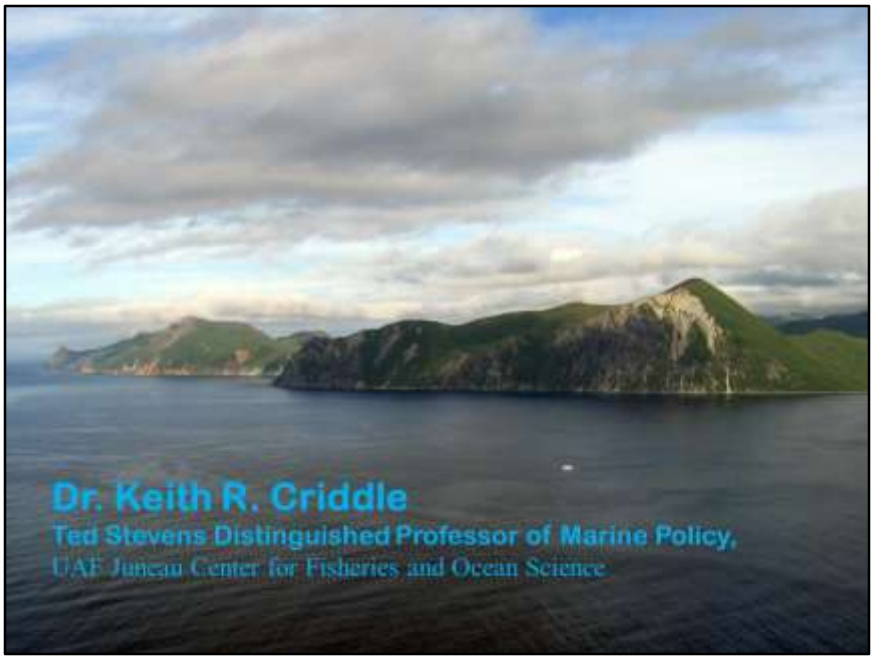
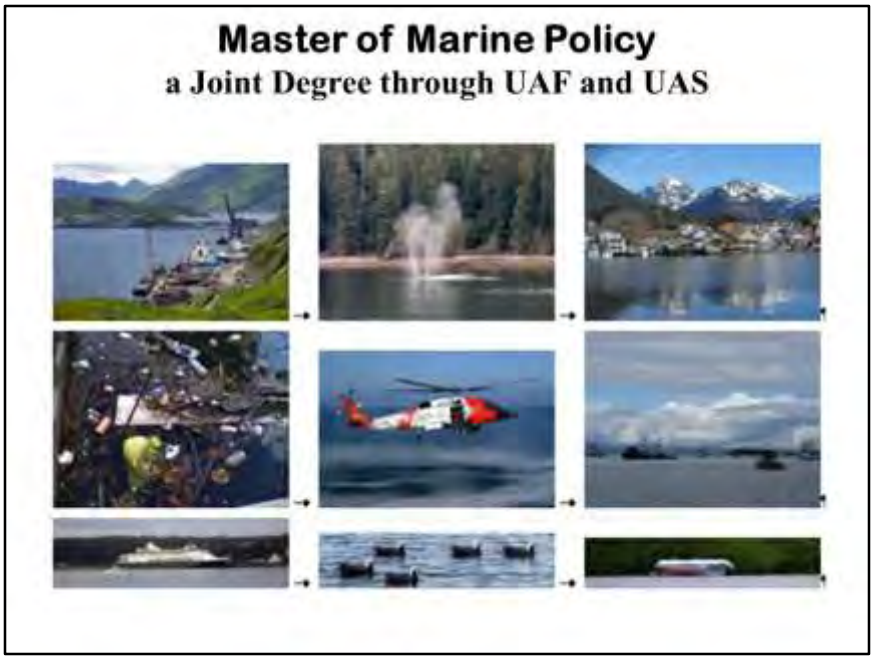


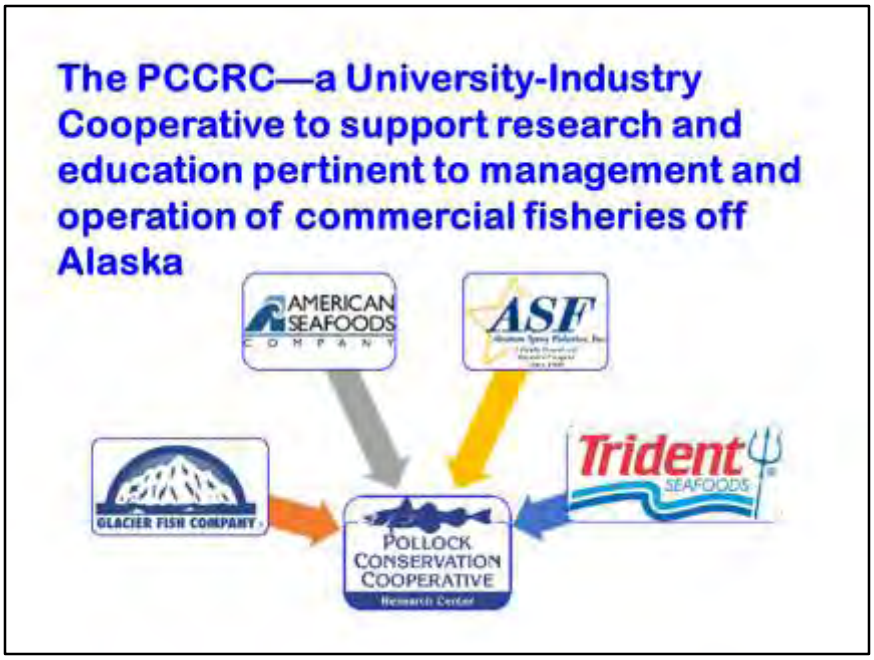

My connection to Alaskan fisheries began in 1986 when I was a Knauss Marine Policy Fellowship at the Alaska Fisheries Science Center in Seattle. During my fellowship year, I worked to integrate economic dimensions into a first generation biomass-based model of the Bering Sea ecosystem. The model was intended to provide advice to the NPFMC on optimizing catch value and minimizing bycatch across Bering Sea groundfish fisheries. Over the ensuing 36 years, I have continued to work on assessing the efficacy of alternative management strategies for commercial and non-commercial fisheries including fisheries for pollock, halibut, salmon, sablefish, herring, and crab.

I am now beginning my 26th year with UAF: 9 years with the Economics Department in Fairbanks, and 16 going on 17 years with the Fisheries Department in Juneau. My position is supported from the earning of an endowment established at the UA Foundation with funding from members of the At-Sea Processor Association. My research straddles the intersection between the natural sciences, economics, and public policy and is driven by an interest in the sustainable management of living marine resources of the North Pacific. I direct graduate projects in bioeconomics, statistical inference, and policy analysis and teach courses in resource and environmental economics, statistical inference, operations research, decision theory, fisheries and maritime law, policy analysis, and economic development for fisheries-

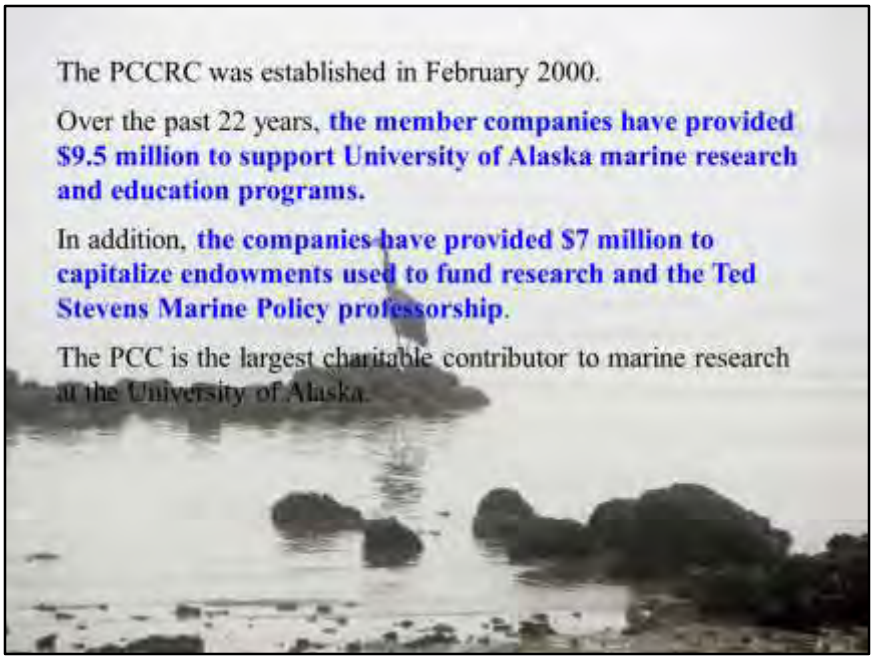
dependent communities.
Over the years, data has become evermore detailed and accessible. Models have become evermore intricate and sophisticated. But the challenge of optimizing catch value while minimizing incidental catch of prohibited and non-target species remains elusive. The path forward requires many lines of pursuit. Pursuit of a better understanding of the ocean ecosystem and factors that lead to the spatial and temporal overlap of species as well as factors that affect the productivity and survival of fish. Pursuit of technological innovations to increase the specificity of fishing gear. And, pursuit of innovative management strategies that support novel cooperative strategies to sustain value while reducing incidental catch.



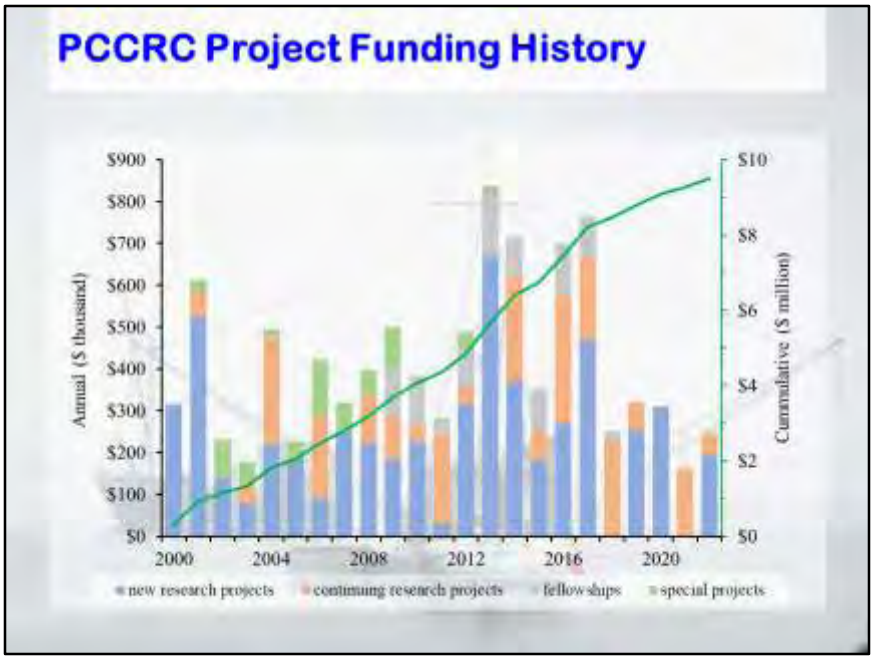

I also head the newly approved MMP degree program. Launching the MMP program is the successful conclusion of an effort that the PCC began in 2000 with the creation of the Ted Stevens Marine Policy professorship. Scoping consultations that have shaped the curriculum and program requirements began in Fall 2006.



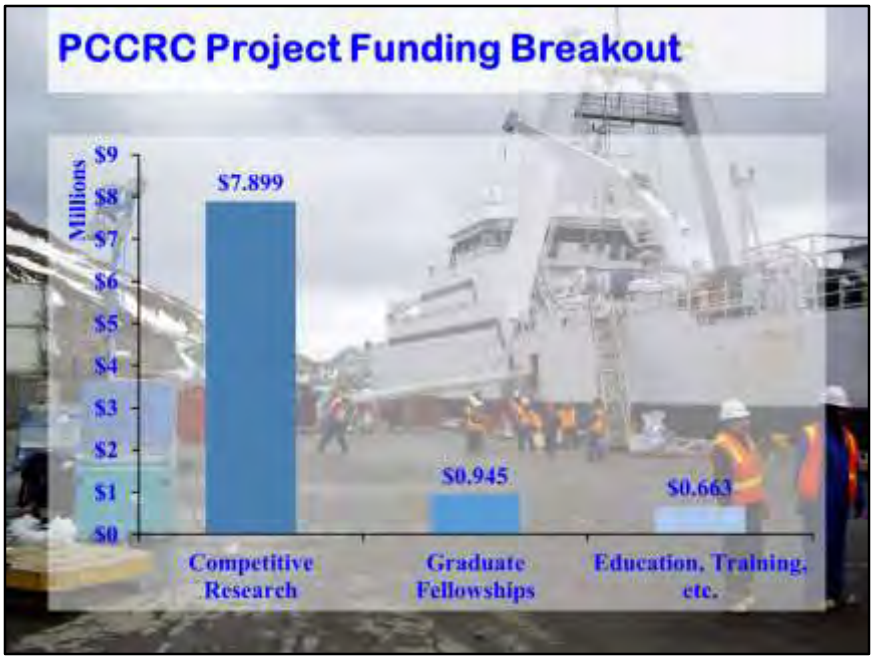

Today I want to tell the story of an innovative research cooperative, the PCCRC.




Since 2000, PCC member companies have given the UA $9.5 million for marine research and education and $7 million to capitalize endowments for research and the Ted Stevens Marine Policy professorship



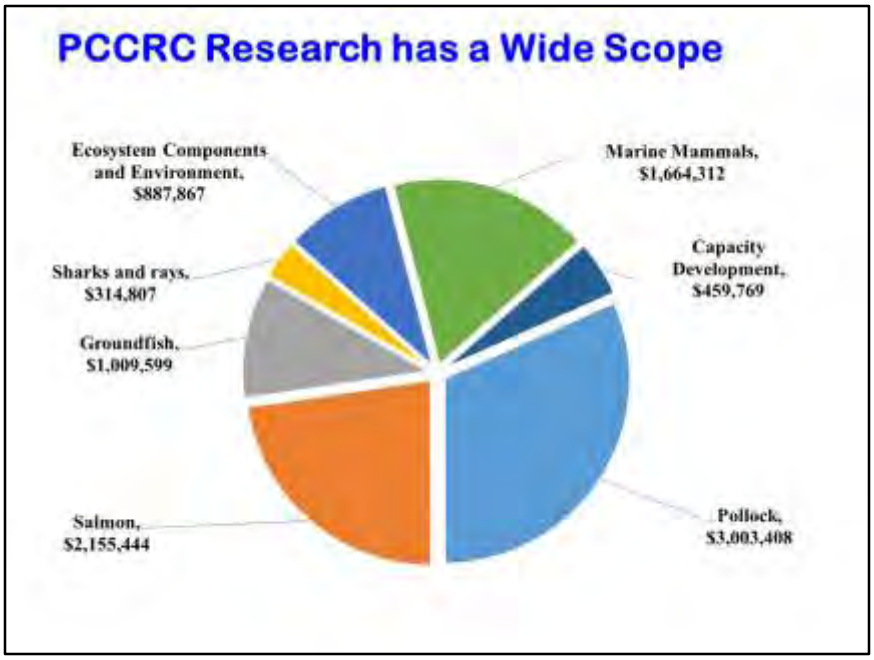

Annual project funding goes to new projects selected under a competitive peer-reviewed research grant program, continuing funds for multi-year projects, graduate research fellowships, and education/capacity development projects.




As our name indicates, we are a Research Center. Consequently, our funding history is weighted towards competitive research grants. However, not only to those projects address priority research questions, most PCCRC-funded projects serve as a platform for training students.


To date, the PCCRC has provided financial support to 56 graduate students and post-doctoral fellows. Sometimes our support has filled a short-term bridge function; usually, our support has provided a stipend and covered tuition for a substantial portion of the student's graduate program.


We are pleased to note that most of the students we've supported have pursued careers in Alaska, with state and federal agencies, education and research organizations and businesses.




The PCCRC research program is guided by a wide range of research priorities that evolve through time as issues and research capacity change.

## PCCRC 2022 Research Priorities

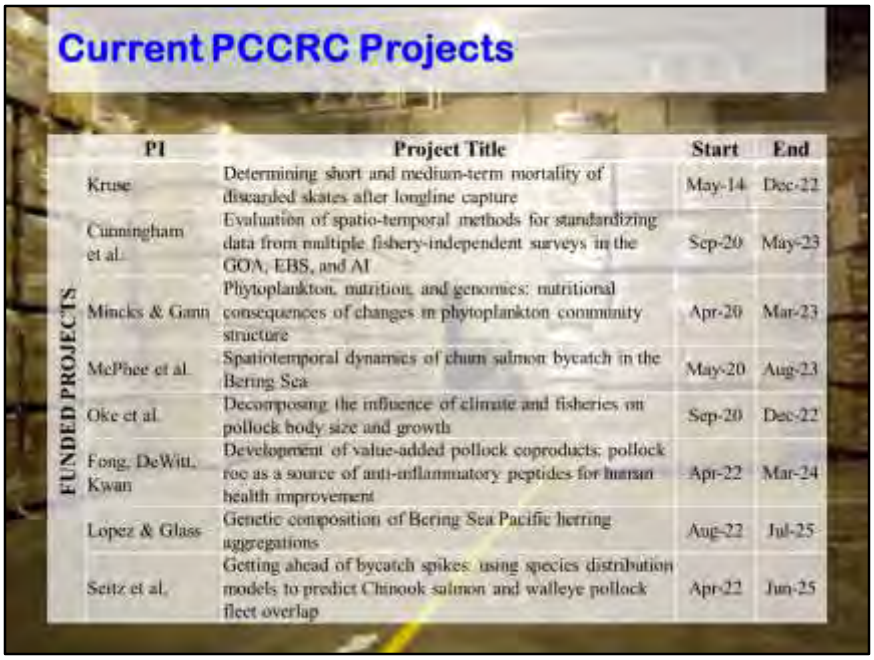
I. Pollock Biology and Resource Utilization

II. Fisheries Management and Incidental Catch (of FMP or PSC) Species

III. Habitat, Ecosystems, Protected Species

The PCCRC annual research priorities take into account the findings and expected outcomes of recent and ongoing research projects as well as the research priorities established by the NPFMC and by the NPRB, we develop a crosswalk table that maps the intersection of PCCRC, NPFMC, and NPRB research priorities. We look for gaps in information needed to improve fisheries management and increase fisheries value and try to attract project proposals to fill those gaps. In addition, we have an MOU with the NPRB to cooperate in funding projects of mutual interest.


For example, for the 2022 funding cycle, we identified three priority topics that address important bycatch issues not being addressed by ongoing projects: gear modification, herring genetics and stock structure, and an assessment of the strengths and weaknesses of alternative indices of "low abundance" in western Alaska Chinook stocks.



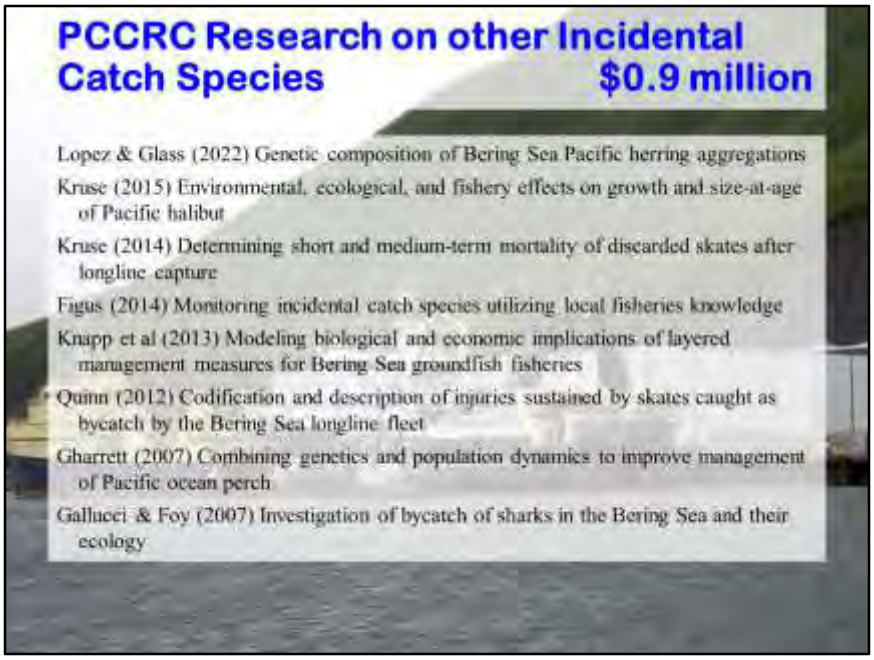

Our current research portfolio is diverse. It includes four projects that address various aspects of bycatch of skates, chum salmon, herring, and Chinook salmon.


Out salmon research program aims to address uncertainties about stock identification, the spatial and temporal overlap of salmon and pollock in the Bering Sea, and uncertainty about what limits growth and survival of salmon in freshwater, estuaries, and at sea.


PCCRC funding for salmon genetics contributed to some of the earliest analyses of chum (2001) and Chinook (2004) stock composition, contributions to next-generation approaches to resolving stock composition, and the exploration of methods that may lead to the development of real-time stock identification. The results of this line of research offer the possibility of focusing bycatch avoidance efforts on avoidance of wild Alaskan stocks.


Our spatial dynamics work seeks to understand what leads to overlap between salmon and pollock distribution across space and over time. Information that may serve to underpin predictive models that will facilitate bycatch avoidance.


Our work on salmon survival, growth, and food web dynamics explores factors that are driving changes in the productivity of salmon stocks. The entire new-project budget for 2010 and 2011 went to support a $475,000 multi-investigator project on freshwater growth and survival of AYK Chinook salmon. Understanding the root causes of reduced productivity is crucial for the design of effective management responses to sustain fish and fisheries.




Added together, PCCRC funding for salmon and bycatch research totals over $3 million.