School of Fisheries and Ocean Sciences

Degree Candidates

Vera Alexander, Dean

Baccalaureate Degrees

Nissa R. Bates	B.S.	Fisheries
Allison RenÏe Luettel	B.S.	Fisheries
Jessica Joyce Mitchell	B.S.	Fisheries
Lisa Mostella	B.S.	Fisheries

Master's Degrees

Tara A. Borland	M.S.	Oceanography: Chemical
	B.S., Richard Stockton College of New Jersey, 1998	
Reid Sinclair Brewer	M.S.	Marine Biology
	B.S., United States Military Academy (New York), 1995	
Ryan Jordan Briscoe	M.S.	Fisheries
	B.A., University of Hawaii, 2001	
HÿloÇse A.C. Chenelot	M.S.	Oceanography: Biological
	B.A., Truman State University (Missouri), 1997	
Barbi J. Failor-Rounds	M.S.	Fisheries
	B.S., Sheldon Jackson College (Alaska), 1999	
Heather Finkle	M.S.	Fisheries
	B.A., University of New Hampshire, 1992	
Blair Gerald Flannery	M.S.	Fisheries
	B.S., Humboldt State University (California), 1994	

Matthew Birch Foster	M.S. *B.S., Pacific University (Oregon), 1994*	Fisheries
Christine Ann Frazier	M.S. *B.A., Indiana University, 1999*	Marine Biology
Catherine Lee Hegwer	M.S. *B.S. University of Alaska, 1999*	Marine Biology
Zac Hoyt	M.S. *B.S., University of Alaska, 2000*	Fisheries
Judith Lynn Lum	M.S. *B.S., Linfield College (Oregon), 1989*	Fisheries
Lynnette Mattes	M.S. *B.S., University of Alaska, 1994*	Fisheries
Julie M. Meka	M.S. *B.S., Northern Arizona University, 1995*	Fisheries
Sookmi Moon	M.S. *B.S., M.S., University of Seoul (South Korea), 1994*	Oceanography: Physical
John R. Moran, Jr.	M.S. *B.A., University of New Hampshire, 1989*	Fisheries
Michael C. Palmer	M.S. *B.S., University of Maine, 1999*	Oceanography: Fisheries
Cara J. Rodgveller	M.S. *B.S., University of Arizona, 2001*	Fisheries
Karen Ann Scheding	M.S. *B.S., Monash University (Australia), 1995*	Fisheries
Sarah Jane Thornton	M.S.	Oceanography: Biological

	B.S., University of British Columbia (Canada), 1994	
Deli Wang	M.A.	Marine Environmental Science: Interdisciplinary Program
	B.S., Nankai University (China), 1995 *M.S., First Institute of Oceanography Qingdao (China), 1998*	
Maria Elena Lang Wessel	M.S.	Fisheries
	B.S., Penn State (Pennsylvania), 1989	
Benjamin C. Williams	M.S.	Fisheries
	B.S., Ohio State University, 1996	
Briana Harmony Witteveen	M.S.	Fisheries
	B.S., University of Washington, 2000	
Jamie Neil Womble	M.S.	Fisheries
	B.S., Appalachian State University (North Carolina), 1992 *B.S., University of Alaska, 1998*	
Sarah Lukens Zimmermann	M.S.	Oceanography: Physical
	B.A., Mount Holyoke College (Massachusetts), 1989	

Doctor of Philosophy Degrees

Evelyn D. Brown	Ph.D.	Fisheries
	B.S., University of Utah, 1977 *M.S., Oregon State University, 1980*	
Thesis:	**Stock Structure and Environmental Effects on Year Class Formation and Population Trends of Pacific Herring (*Clupea pallasi*) in Prince William Sound, Alaska**	
	The stock structure, population-level climate effects and recruitment were modeled for Pacific herring (*Clupea pallasi*) in Prince William Sound, Alaska. Metapopulation theory best represented stock structure, herring abundance correlated with	

long-term climate trends and environmental recruitment models reflecting stock structure provided best fits. A new theory concerning recruitment was presented.

Major Professor: Dr. Brenda L. Norcross

Sherri Christine Dressel	Ph.D.	Oceanography: Fisheries

B.S., Valparaiso University (Indiana), 1993
M.S., University of Alaska Fairbanks, 2003

Thesis: **Alternative Sampling and Estimation Methods for Multispecies Trawl Surveys**

Multispecies trawl surveys are used to estimate fish species° abundance, but their effectiveness is often limited by large coefficients of variation (CVs). In this study, stratification and poststratification by habitat and fish density decreased CVs, as did incorporating abundance trends over years with mixed model, empirical Bayes or hierarchical Bayes methods.

Major Professor: Dr. Brenda L. Norcross

Dmitry Dukhovskoy	Ph.D.	Oceanography: Physical

B.S., St. Petersburg State University (Russia), 1994
M.S., St. Petersburg State University (Russia), 1996

Thesis: **Decadel Variability in the Arctic Ocean-Greenland-Iceland-Norwegian Seas Ice-Ocean-Atmosphere Climate System**

A mechanism of decadal variability in the Arctic Ocean-Greenland-Iceland-Norwegian seas ice-ocean-atmosphere system was investigated. It is hypothesized that the observed arctic variability is regulated by heat and freshwater exchange between the basins. The conceptual mechanism of the arctic decadal variability has been reproduced in a model experiment.

Major Professor: Dr. Mark Johnson

Dana H. Hanselman	Ph.D.	Fisheries

University of Michigan, 1997
M.S., University of Alaska Fairbanks, 2000

Thesis: **Gulf of Alaska Pacific Ocean Perch: Stock Assessment, Survey Design and Sampling**

The Pacific Ocean perch is an important commercial rockfish species in Alaska. Estimates of their abundance are highly imprecise because of their patchy distribution. This thesis explores the current stock assessment of the species and develops methods of improving their assessment, including survey and sampling design enhancement.

Major Professor: Dr. Terrance J. Quinn II

Tamara Lynn Mau	Ph.D.	Marine Biology

B.S., University of California, 1995

Thesis: **Investigations of the Role of Lipids in Marine Mammal Diets, Health and Ecology**

The amount, type and flux of blubber and blood lipids in marine mammals under natural and controlled dietary conditions were investigated. Factors that influence the quantity and quality of blubber in bowhead whales were examined to establish health indices. Fatty acid profiles were used to chemically trace diet in harbor seals.

Major Professor: Dr. Michael A. Castellini

Taekeun Rho	Ph.D.	Oceanography: Chemical

B.S., Pusan National University (Korea), 1994
M.S., Pusan National University (Korea), 1996
M.S., University of Alaska Fairbanks, 2000

Thesis: **Primary Production and Nutrient Dynamics of the Southeastern Bering Sea Shelf**

This research is the first to describe the inhibition of phytoplankton utilization of nitrate by high ammonium concentrations that are prevalent over large areas of the Bering Sea shelf. Comparison with previous data indicates that total primary production over the middle shelf has not changed markedly over the past 20 years. Low concentrations of iron may slightly suppress the primary productivity rates in the open Bering Sea.

Major Professor: Dr. Terry Whitledge

Stacey Anne Kaleinauialoha Shotwell	Ph.D.	Fisheries

B.S., University of Oregon, 1998

Thesis: **Utilizing Multi-Source Abundance Estimation and Climate Variability to Forecast Pacific Salmon Populations**

A modeling framework for combining many different sources of information to estimate total spawners and recruits for Pacific salmon in data-limited situations was developed. These results allowed an exploration of the influence of environmental change to understand current trends in salmon returns and improve the reliability of forecasts.

Major Professor: Dr. Milo D. Adkison