



Joel Anthony Markis  
M.S., Marine Biology. *B.S., Montana State University, 2002*

Cassie Mellon\*\*  
M.S., Fisheries. *B.S., Oregon State University, 2000*

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M.S., Fisheries. *B.A., University of Colorado-Boulder, 2000.*

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M.S., Marine Biology. *B.S., Oregon State University, 1994*

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M.S., Fisheries. *B.A., Western Washington University, 1998; B.S., University of Washington, 2005*

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M.S., Fisheries. *B.S., Murray State University (Kentucky), 1999*

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M.S., Fisheries. *B.S., University of Wisconsin - Stevens Point, 1998*

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M.S., Fisheries. *B.A., Hosei University (Japan), 1995; B.S., Kansas State University, 2000*

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M.S., Fisheries. *B.S., Brigham Young University (Utah), 2001*

## DOCTORAL DEGREES

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Pieter deHart\*  
Ph.D. Marine Biology  
*B.S., University of Rhode Island, 2000; M.A., Boston University (Massachusetts), 2002*

Thesis: A Multiple Stable Isotope Study of Steller Sea Lions and Bowhead Whales: Signals of a Changing Northern Environment  
Stable oxygen and hydrogen (bowhead whale baleen) and carbon and nitrogen (Steller sea lion bone and teeth) isotope analyses were conducted to examine the influence of dramatic environmental changes on migration and foraging of marine mammals. This work confirmed the vast behavioral responses of species to global climate change.  
Major Professor: Dr. Matthew J. Wooller

Hector D. Douglas III\*  
Ph.D. Marine Biology  
*B.S., Evergreen State College (Washington), 1990; B.A., Evergreen State College (Washington), 1990; M.S., Wake Forest University (North Carolina), 1996; M.F.A., University of North Carolina, 1999*

Thesis: Odors and Ornaments in Crested Auklets (*Aethia cristatella*): Signals of Mate Quality?  
Crested auklets anoint their mates during courtship with aldehydes that deter ectoparasites. Males that emit more scent have higher levels of circulating progesterone and larger ornamental feather crests. Males with larger crests also have better physiological condition. This suggests a link between mate quality, condition and resistance to parasites.  
Major Professor: Dr. Alan M. Springer

Juan J. Horrillo\*  
Ph.D. Oceanography: Physical  
*B.S., University of Cartagena (Colombia), 1984; M.S., University of Rhode Island, 1997*

Thesis: Numerical Method for Tsunami Calculation Using Full Navier-Stokes Equations and the Volume of Fluid Method

A two-dimensional numerical model was developed to study tsunami wave generation, propagation and runup. The prediction capability of tsunami generation, propagation and runup is improved by including more accurately the effects of vertical velocity/acceleration, dispersion and wave breaking. Reasonable agreements were observed based on the spatial and temporal distributions of the free surface and velocity.

Major Professor: Dr. Zygmunt Kowalik

Hui Liu\*\*

Ph.D. Oceanography

*B.S., Ocean University of Qingdao (China), 1989; M.S., Ocean University of Qingdao (China), 1992*

Thesis: Growth Rates of Calanoid Copepods in the Northern Gulf of Alaska, and Their Relationships to Temperature, Chlorophyll and Body Size

Juvenile growth and development of calanoid copepods in the northern Gulf of Alaska were investigated using the artificial-cohort method. The resulting functional responses of growth rates to temperature, chlorophyll and body size will contribute to modeling this ecosystem, and refining global patterns of copepod growth rates.

Major Professor: Dr. Russell R. Hopcroft

Wongyu Park

Ph.D. Fisheries

*B.S., National Fisheries University (South Korea), 1990; M.S., National Fisheries (South Korea), 1995*

Thesis: Advection and Retention of Larval Dungeness Crab (*Cancer magister*) in Glacier Bay and Adjacent Areas

I found the patterns of development and spatial distribution of Dungeness crab larvae for the inland waters in Southeastern Alaska differed from the patterns from southern parts of the species range. Also, I report evidence of the mixing of larvae with different origin and incubation temperature in Southeastern Alaska.

Major Professor: Dr. Thomas Shirley

Alexei Pinchuk\*\*

Ph.D. Oceanography

*B.S., St. Petersburg State University (Russia), 1986; M.S., University of Alaska Fairbanks, 1997*

Thesis: Distribution and Growth of Euphausiids in the Northern Gulf of Alaska

Seasonal and interannual variability in the distribution, growth, reproduction and development of major euphausiids from the Gulf of Alaska were studied in relation to environmental fluctuations. Progressive cooling in the North Pacific enhances reproductive success and survival of early spawning species on the shelf, while warm years benefit late spawners.

Major Professor: Dr. Russell R. Hopcroft

Andrew C. Seitz\*\*

Ph.D. Oceanography

*B.S., Cornell University (New York), 1997*

Thesis: Population Structure and Behavior of Pacific Halibut

Seasonal dispersal and spawning locations of Pacific halibut were examined using satellite tags. Movement of fish was limited, indicating potential populations of Pacific halibut in the Gulf of Alaska, Bering Sea and Aleutian Islands. This population structure may be reinforced by regional behavioral variation in response to the environment.

Major Professor: Dr. Brenda L. Norcross