

Curriculum vitae

James J Pierson

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Education

- 2006 Ph.D., University of Washington, Seattle. Biological Oceanography
Advisor: Bruce W. Frost
- 2002 M.S., University of Washington, Seattle. Biological Oceanography
- 1996 B.S., University of New Hampshire. Biology: Marine and Freshwater

Research Interests

Biological oceanography, zooplankton ecology, specifically:

- Behavior of individual zooplankton
- Response of zooplankton life histories to environmental and climatic changes
- Combining *in situ* data with numerical model results to link individuals' behaviors to population dynamics and structure

Current and Pending Funding

Collaborative Research: Hypoxia in Marine Ecosystems: Implications for Neritic Copepods
NSF Ocean Sciences: \$1,114,711 (Pending) 03/01/10 – 02/28/13
Role: PI

*The Effects and Impacts of Hypoxia on Production Potential of Ecologically and
Commercially Important Living Resources in the Northern Gulf of Mexico*
NOAA CSCOR: \$348,381 09/01/09 – 08/31/13
Role: Co-PI

Forecasting Young-of-the-Year Production of Striped Bass in Chesapeake Bay
UMD (NASA sub-contract): \$70,000 08/15/09 – 08/14/10
Role: PI

*Collaborative Research: Life histories of species in the genus Calanus in the North Atlantic
and North Pacific Oceans and responses to climate forcing*
NSF Ocean Sciences: \$208,181 9/1/2008 – 8/31/2011
Role: PI

Research Experience

Assistant Research Scientist, 2006 – Present

*University of Maryland Center for Environmental Science, Horn Point Laboratory,
Cambridge, MD*

Advisor: Dr. Michael Roman, Professor and Director

Marine Research Specialist I-II, 1997 – 2000

University of Rhode Island, Graduate School of Oceanography, Narragansett, RI
Supervisor: Dr. Edward Durbin, Professor of Oceanography

Technical Assistant, 1996 – 1997

University of New Hampshire, Durham, NH
Woods Hole Oceanographic Institute, Woods Hole, MA
Supervisor: Dr. Peter Wiebe, Senior Scientist

Laboratory Assistant, 1995 – 1996

University of New Hampshire, Durham, NH
Supervisor: Dr. Ann Bucklin, Professor (Currently, at University of Connecticut)

Teaching Experience

Instructor, Zooplankton Ecology, MEES 698G, Spring 2010, University of Maryland
Center for Environmental Sciences

Instructor, Classic Readings in Oceanography, MEES 608A, Spring 2009, University of
Maryland Center for Environmental Sciences

TA, Oceanography Senior Thesis Series, OCEAN 443 / 444, Winter / Spring 2005,
University of Washington

TA, Introduction to Oceanography, OCEAN 200, Autumn 2002, University of Washington

Guest Lectures (University of Washington & University of Maryland)

Zooplankton Ecology, Modeling lecture, MEES 698E, Autumn 2007

Design of Oceanographic Field Experiments, OCEAN 443, Spring 2003, 2004

Honors Field Investigations in Marine Biology, OCEAN/SAFS 351, Spring 2003

Survey of Oceanography, OCEAN 101, Spring 2002

Ecology and Evolution, BIOL 203 (cf. BIOL 180), Winter 2000, 2001

Peer-Reviewed Publications

Pierson, J.J., M.R. Roman, D.G. Kimmel, W.C. Boicourt, & X. Zhang. 2009. Quantifying changes in the vertical distribution of mesozooplankton in response to hypoxic bottom waters. *Journal of Experimental Marine Biology and Ecology*

Kimmel, D.G., W.C. Boicourt, **J.J. Pierson**, M.R. Roman, & X. Zhang. 2009. A comparison of the mesozooplankton response to hypoxia in Chesapeake Bay and the northern Gulf of Mexico using the biomass size spectrum. *Journal of Experimental Marine Biology and Ecology* 381: S65-S73.

Pierson, J.J., B.W. Frost, D. Thoreson, A.W. Leising, J.R. Postel, & M. Nuwer. 2009. Trapping migrating zooplankton. *Limnology and Oceanography Methods* 7(5): 334-346.

Pierson, J.J., B.W. Frost, & A.W. Leising. 2007. The lost generation of *Calanus pacificus*: is the diatom effect responsible? *Limnology and Oceanography* 52(5): 2089-2098.

Bucklin, A., P.H. Wiebe, S.B. Smolenack, N.J. Copley, J.G. Beaudet, K.G. Bonner, J. Farber-Lorda, & **J.J. Pierson**. 2007. DNA barcodes for species identification of euphausiids (Euphausiacea, Crustacea). *Journal of Plankton Research* 29(6): 483-493.

Pierson, J.J., A.W. Leising, & C. Halsband Lenk. 2005. Reproductive success of *Calanus pacificus* during diatom blooms in Dabob Bay, WA. *Progress in Oceanography* 67(3/4): 314-331.

Pierson, J.J., A.W. Leising, C. Halsband-Lenk, & N. Ferm. 2005. Vertical distribution and abundance of *Calanus pacificus* and *Pseudocalanus newmani* in relation to chlorophyll a concentrations in Dabob Bay, WA. *Progress in Oceanography* 37(3/4): 349-365.

- Leising, A.W., **J.J. Pierson**, S. Cary, & B.W. Frost. 2005. Copepod foraging and predation risk within the surface layer during night-time feeding forays. *Journal of Plankton Research* 27(10): 987-1001.
- Halsband-Lenk, C., **J.J. Pierson**, & A.W. Leising. 2005. Reproduction of *Pseudocalanus newmani* (Copepoda: Calanoida) is deleteriously affected by diatom blooms - a field study. *Progress in Oceanography* 67(3/4): 332-348.
- Horner, R.A., J.R. Postel, C. Halsband-Lenk, **J. J. Pierson**, G. Pohnert, & T. Wichard. 2005. Winter-spring phytoplankton blooms in Dabob Bay, Washington. *Progress in Oceanography* 67(3/4): 286-313.
- Leising, A.W., R.A. Horner, **J.J. Pierson**, J.R. Postel, & C. Halsband-Lenk. 2005. The balance between microzooplankton grazing and phytoplankton growth in a highly productive estuarine fjord. *Progress in Oceanography* 67(3/4): 366-683.
- Leising, A.W., **J.J. Pierson**, C. Halsband-Lenk, R.A. Horner, & J.R. Postel. 2005. Copepod grazing during spring blooms: Can *Pseudocalanus newmani* induce trophic cascades? *Progress in Oceanography* 67(3/4): 406-421.
- Leising, A.W., **J.J. Pierson**, C. Halsband-Lenk, R.A. Horner, & J.R. Postel. 2005. Copepod grazing during spring blooms: Does *Calanus pacificus* avoid harmful diatoms? *Progress in Oceanography* 67(3/4): 384-405.

Contributed Presentations and Posters

- Pierson, J.J.**, Roman, M.R., Kimmel, D.G., Hood, R.R., Crump, B.C., Keller, D., Dong-Yoon Lee, D., Malpezzi, M. 2009. Estimates of Winter Zooplankton Production in the Chesapeake Bay Estuarine Turbidity Maximum. Oral presentation at Coastal and Estuarine Research Federation 2009 Meeting, Portland, OR
- Pierson, J.J.**, Frost, B.W., Leising, A.W. 2009. Foray foraging behavior of copepods: An empirical and numerical study. Poster presentation at ASLO Aquatic Sciences Meeting, Nice, France.
- Pierson, J.J.**, Roman, M., Kimmel, D., Zhang, X., Loveland, B., Boicourt, B. Quantitative relationships between zooplankton vertical distribution and oxycline depth: Comparisons between regions, size classes, and time of day. Oral presentation at Ocean Sciences 2008 Meeting, Orlando, FL
- Pierson, J.J.**, Roman, M.R., Kimmel, D.G., Hood, R.R., Keller, D., Crump, B.C., Malpezzi, M. 2007. First observations of winter zooplankton abundance, distribution, and vital rates in the Chesapeake Bay estuarine turbidity maximum. Oral presentation at Estuarine Research Federation 2007 Meeting, Providence, RI
- Pierson, J.J.**, Frost, B.W., Leising, A.W. 2007. Foray foraging behavior in marine copepods. Oral presentation at PICES/ICES Early Career Scientists Conference, Baltimore, MD.
- Pierson, J.J.**, Leising, A.W., Halsband-Lenk, C., Horner, R.A., Postel, J.R., & Frost, B.W. 2005. Prey type effects on zooplankton production: A different view of food limitation. Oral presentation at Estuarine Research Federation 2005 Meeting, Norfolk, VA.
- Pierson, J.J.**, Leising, A.W., Frost, B.W., Horner, R.A., Postel, J.R., & Halsband-Lenk, C. 2004. Species-specific grazing by *Calanus pacificus* and *Pseudocalanus newmani* during phytoplankton blooms in Dabob Bay, Puget Sound (WA). Oral presentation at ASLO/TOS Ocean Sciences Meeting, Honolulu, HI.

- Pierson, J.J.**, & Frost, B.W. 2003. In situ reproduction of *Calanus pacificus* before, during, and after phytoplankton blooms. Oral presentation at 3rd International Zooplankton Production Symposium, Gijon, Spain.
- Pierson, J.J.**, & B.W. Frost. 2002. Fecundity and egg hatching success of *Calanus pacificus* and *Pseudocalanus newmani* during the spring bloom in Dabob Bay, WA. Oral presentation for ASLO Summer Meeting, Victoria, B.C.
- Pierson, J.J.**, Durbin, E.G. & Sullivan, B.K. 2000. Suspended planktonic hydroids: Abundance, distribution, and impact of a rapacious predator. Poster for ASLO/AGU Ocean Sciences, San Antonio, TX

Invited Seminars

- Ocean Sciences 2010, Portland, OR
February 2010, invited by Enrique Curchister
Smithsonian Environmental Research Center, Edgewater, MD
February 2010, invited by Kevin Sellner
Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA
October 2009, invited by Eileen Hoffman
Workshop on advancements in modelling physical-biological interactions in fish early-life history: recommended practices and future directions (WKAMF), Sete, France
March 2007, invited by Elizabeth North
University of South Florida, College of Marine Science, St. Petersburg, FL
September 2007, invited by Brady Olson
University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD
March 2007, invited by Ed Houde
Oregon State University, College of Oceanic and Atmospheric Science, Corvallis, OR
May 2006, invited by Charlie Miller

Outreach Activities

- Science display, *The Plankton Zoo!* 2006-2008 Horn Point Laboratory Open House
Coordinator, 2005 Student Discussion Group on the US Commission on Ocean Policy
Science Judge, 2004-2005 Orca Bowl: Washington State Ocean Science Bowl
Coordinator, 2001 and 2003 UW School of Oceanography Open House

Awards and Honors

- Special Award for Assistance with Oceanography Senior Thesis Projects, December 2004
Travel Award to the *3rd International Zooplankton Production Symposium* in Gijon, Spain, May 2003
Received votes in UW Alumni association online poll of senior undergraduates to nominate their favorite teacher, June 2006