

Laura E. Petes

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Education

Oregon State University, Dept. of Zoology, Corvallis, OR

Ph.D. in Zoology, 2007

Dissertation title: "Effects of environmental stress on intertidal mussel reproduction"

Advisors: Dr. Bruce Menge & Dr. Jane Lubchenco

Cornell University, College of Arts and Sciences, Ithaca, NY

B.A. Summa Cum Laude in Biology, 2002

Honors thesis title: "Size-specific rates and magnitude of inducible antifungal defense in gorgonian sea fans"

Advisor: Dr. C. Drew Harvell

Positions Held

2007-Present Postdoctoral Associate, Florida State University Coastal and Marine Laboratory (Advisor: Dr. Felicia Coleman)

2006-2007 Graduate Research Assistant, Oregon State University

2003-2006 Graduate Research Fellow, National Science Foundation, Oregon State University

2003, 2005-6 Graduate Teaching Assistant, Oregon State University

2001 Undergraduate Teaching Assistant, Shoals Marine Laboratory, Cornell University

Publications

Petes, L.E., B.A. Menge, and A.L. Harris. 2008. Intertidal mussels exhibit energetic trade-offs between reproduction and stress resistance. *Ecological Monographs* **78**(3): 387-402.

Petes, L.E., B.A. Menge, F. Chan, and M.A.H. Webb. 2008. Gonadal tissue color is not a reliable indicator of sex in rocky intertidal mussels. *Aquatic Biology* **3**: 63-70.

Petes, L.E., M.E. Mouchka, R.H. Milston-Clements, T.S. Momoda, and B.A. Menge. 2008. Effects of environmental stress on intertidal mussels and their sea star predators. *Oecologia* **156**: 671-680.

Petes, L.E., B.A. Menge, and G.D. Murphy. 2007. Environmental stress decreases survival, growth, and reproduction in New Zealand mussels. *Journal of Experimental Marine Biology and Ecology* **351**: 83-91.

K.M. Mullen, C.D. Harvell, A.P. Alker, D. Dube, E. Jordán, J.R. Ward, and **L.E. Petes.** 2006. Host range and resistance to aspergillosis in three sea fan species from the Yucatán. *Marine Biology* **149**: 1355-1364.

Petes, L.E., C.D. Harvell, E.C. Peters, M.A.H. Webb, and K.M. Mullen. 2003. Pathogens induce melanization and compromise reproduction in Caribbean sea fans. *Marine Ecology Progress Series* **264**: 167-171.

Bruno, J.F., **L.E. Petes,** C.D. Harvell, and A. Hettinger. 2003. Nutrient enrichment increases the severity of two Caribbean coral diseases. *Ecology Letters* **6**: 1056-1061.

Grants and Fellowships

Fellowships

2006	University Club of Portland, Inc. Fellowship	\$5,000
2005	OSU Zoology Research Fund	\$780
2003	National Science Foundation (NSF) Pre-Doctoral Fellowship	\$150,000
2003	Oregon Sea Grant Research Fellowship	\$2,250
2001	Howard Hughes Undergraduate Research Fellowship	\$2,500

Funded Grants

2008	USFWS Coastal Program in the Florida Panhandle Grant Title: An ecological approach to oyster reef restoration in Apalachicola Bay. Lead PI. Co-PI Felicia Coleman.	\$15,466
2008	Florida Sea Grant Newell Seminar Series Grant Title: Florida's coral reefs: threats, decline, management and signs of hope. Lead PI. Co-PI Randall Hughes.	\$900
2008	FSU Equipment and Infrastructure Enhancement Grant Title: Zeiss SteREO Discovery.V12 microscope for transmitted and reflected light applications with polarization and color digital camera for multiple users across disciplines. Co-PI. Lead PI Dean Grubbs; Co-PIs Chris Koenig, Gavin Naylor, Tom Miller, Don Levitan, David Ferrell, David Thistle, Jeff Chanton, Markus Huettel, Cheryl Ward, Kevin Craig, Felicia Coleman, Chris Stallings, Todd Engstrom.	\$20,502
2007	Florida Sea Grant Newell Seminar Series Grant Title: Ecological forecasting of intertidal ecosystems: triaging the train wreck of climate change. Lead PI. Co-PI Felicia Coleman.	\$1,088

Pending Grants (Proposals in Review)

- NOAA Saltonstall-Kennedy. Title: Fishing for a solution: the process and impacts of sustainable seafood certification. Lead PI. Co-PI Felicia Coleman. Request: \$209,621.
- Curtis & Edith Munson Foundation. Title: Determining the impacts of reduced freshwater flow on oyster health. Lead PI. Co-PI Felicia Coleman. Request: \$30,000.
- NOAA Ocean Exploration. Title: Mapping and characterization of unexplored coral-sponge habitat in the northeastern Gulf of Mexico. Co-PI. Lead PI Chris Koenig; Co-PIs Felicia Coleman, Amy Baco-Taylor, Sandra Brooke, Dean Grubbs, Xiaojun Yang, Kelly Kingon. Request: \$216,486.
- Curtis & Edith Munson Foundation. Title: The threatened marbled grouper (*Dermatolepis inermis*): non-consumptive studies of reproduction, demographics, diet, and ecological role in coral reef systems of the Flower Garden Banks National Marine Sanctuary. Co-PI. Lead PI Chris Koenig; Co-PIs Felicia Coleman, Dean Grubbs, Kevin Craig, Chris Stallings, David Mann. Request: \$46,384.
- NOAA MARFIN. Title: Movements of juvenile reef fish from seagrass nurseries to nearshore live-bottom habitats in the northeastern Gulf of Mexico. Co-PI. Lead PI Dean Grubbs; Co-PIs Chris Koenig, Kelly Kingon, Felicia Coleman. Request: \$602,176.
- NOAA Cooperative Research Program. Title: Mapping, characterization, and seasonal use of

primary and secondary nursery habitats by economically-important reef fishes in the northeastern Gulf of Mexico. Co-PI. Lead PI Dean Grubbs; Co-PIs Chris Koenig, Kelly Kingon, Felicia Coleman. Request: \$330,128.

Special Training

- 2008 Invited participant in two workshops for recent Ph.D.s funded by the National Science Foundation: Ecological Dissertations in Aquatic Sciences (Eco-DAS VIII; formerly DIALOG) in Honolulu, HI and DISsertation initiative for the advancement of Climate Change ReSearch (DISCCRS IV) in Mesa, AZ.
- 2005 Oregon State University PISCO Marine Conservation Science and Policy course. Taught by Dr. Jane Lubchenco, Dr. Steve Gaines, and Mr. David Festa. Newport, OR.
- 2004 University of Washington Friday Harbor Laboratories Larval Biology course. Taught by Dr. Richard Strathmann and Dr. Danny Grünbaum. Friday Harbor, WA.
- 2003 Stanford University Hopkins Marine Station PISCO Biomechanics and Ecophysiology course. Taught by Dr. George Somero and Dr. Mark Denny. Monterey, CA.
- 2000 Cornell University Shoals Marine Laboratory Tropical Marine Science course. Taught by Dr. John Bruno. Akumal, Mexico.
- 1999 Shoals Marine Laboratory Field Marine Ecology course. Taught by Dr. Kathy Ann Miller and Dr. Megan Dethier. Appledore Island, ME.

Teaching Experience

Courses and Invited Lectures

- 2008 Florida State University. Co-Instructor, BSC 4933-1 Special Topics in Invertebrate Zoology.
- 2008 Florida State University. Invited Lecturer, BSC 4937 Seminar in Living Marine Resource Ecology: Effects of reduced freshwater input on Apalachicola oysters: disease, predation, and implications for conservation and resource management.
- 2007 Oregon State University. Invited Lecturer, BI 370 Ecology: Physiological ecology: using the rocky intertidal zone as a model system.
- 2007 Portland State University. Invited Lecturer, ESR 510 Marine Conservation: Marine diseases: indicators of global change?
- 2007 Oregon State University Hatfield Marine Science Center. Invited Lecturer, BI 450 Marine Biology: Effects of environmental stress on intertidal mussel reproduction.
- 2006 Oregon State University Hatfield Marine Science Center. Teaching Assistant, BI 450 Marine Biology (Marine Invertebrates and Independent Research Sections).
- 2005 Oregon State University Hatfield Marine Science Center. Teaching Assistant, BI 450 Marine Biology (Marine Invertebrates and Community Ecology Sections).
- 2004 Oregon State University Hatfield Marine Science Center. Invited Lecturer, BI 450 Marine Biology: Coral diseases: investigating gorgonian sea fan aspergillosis as an indicator of reef health.
- 2003 Oregon State University. Teaching Assistant, BI 212 Principles of Biology.

2001 Cornell University. Teaching Assistant, Tropical Marine Science, Shoals Marine Laboratory course in Akumal, Mexico.

Undergraduate Mentoring

- 2008 Florida State University, Dept. of Biological Science. Primary mentor for one Biology major (Ryan Corley), one student (Carley Knight) enrolled in Marine Biology Certificate Program, and one student (Alicia Brown) in FSU Honors in the Major Program.
- 2007 Florida State University, Dept. of Biological Science. Primary mentor for student (Alicia Brown) enrolled in Marine Biology Certificate Program.
- 2004-2007 Oregon State University. Primary mentor and research supervisor for a total of eight undergraduate Biology and Zoology majors.

Teacher Mentoring

- 2008 Florida State University Coastal and Marine Laboratory. Science mentor for two primary school teachers (Margy Callaghan and Russell Herron) from Panhandle Area Educational Consortium *Science Collaboration: Immersion, Inquiry, Innovation Project*.

Conference Presentations

- Mar. 2008 Southeastern Ecology and Evolution Conference, Tallahassee, FL
Petes, L.E. and A.J. Brown. Effects of salinity on Apalachicola oyster disease.
- Dec. 2007 Partnership for Interdisciplinary Studies of Coastal Oceans Meeting, Corvallis, OR
Petes, L.E. Intertidal mussels exhibit energetic trade-offs between reproduction and stress resistance.
- Jan. 2007 Society for Integrative and Comparative Biology Meeting, Phoenix, AZ
Petes, L.E. and B.A. Menge. Carotenoids accumulated in intertidal mussels as a potential response to oxidative stress.
- Nov. 2006 Western Society of Naturalists Meeting, Redmond, WA
Petes, L.E., M.E. Packard, R.H. Milston-Clements, T.S. Momoda, and B.A. Menge. Effects of environmental stress on intertidal mussels and their sea star predators.
- Jun. 2006 International Temperate Reefs Symposium, Santa Barbara, CA
Petes, L.E. and B.A. Menge. Patterns of mussel reproduction in Oregon and New Zealand rocky intertidal ecosystems.
- Jun. 2006 American Society of Limnology and Oceanography Meeting, Victoria, BC
Petes, L.E., M.A.H. Webb, and B.A. Menge. Differential accumulation of carotenoids in mussel gonadal tissue across an intertidal stress gradient: a potential response to oxidative stress.
- Jan. 2006 Society for Integrative and Comparative Biology Meeting, Orlando, FL
Petes, L.E., M.A.H. Webb, and B.A. Menge. Differential accumulation of carotenoids in mussel gonadal tissue across an intertidal stress gradient: a potential response to oxidative stress.
- Aug. 2005 Ecological Society of America Meeting, Montreal, Quebec
Petes, L.E., G.D. Murphy, and B.A. Menge. Effects of thermal stress on parasite loading and reproduction in New Zealand mussels.

- Nov. 2004 Western Society of Naturalists Meeting, Rohnert Park, CA
Petes, L.E., M.A.H. Webb, and B.A. Menge. Patterns of carotenoid content in *Mytilus californianus* gonads in the Oregon intertidal.
- Nov. 2003 Western Society of Naturalists Meeting, Long Beach, CA
Petes, L.E., M.A.H. Webb, and B.A. Menge. Zonation patterns of *Mytilus californianus* sex ratios in the Oregon intertidal.
- Nov. 2002 Western Society of Naturalists Meeting, Monterey, CA
Petes, L.E., C.D. Harvell, and E.C. Peters. Effects of a pathogen on inducible defenses and reproduction in a gorgonian.
- Mar. 2002 Benthic Ecology Meetings, Orlando, FL
Petes, L.E. and C.D. Harvell. Size-specific rates and magnitude of inducible antifungal defense in gorgonian sea fans.

Invited Seminars

- Oct. 2008 Florida A&M University Environmental Sciences Institute, Tallahassee, FL
Effects of reduced freshwater input on Apalachicola oysters: disease, predation, and implications for conservation and resource management.
- Sep. 2007 Florida State University Ecology & Evolution, Tallahassee, FL
Intertidal mussels exhibit energetic trade-offs between reproduction and stress resistance.
- Sep. 2007 Mote Marine Laboratory, Sarasota, FL
Intertidal mussels exhibit energetic trade-offs between reproduction and stress resistance.
- Aug. 2007 Florida State University Coastal and Marine Laboratory, St. Teresa, FL
Bivalves under fire: effects of stress on shellfish.
- Jan. 2007 Florida State University Dept. of Biological Science, Tallahassee, FL
Effects of environmental stress on intertidal mussel reproduction.

Professional Society Memberships

American Association for the Advancement of Science
American Society of Limnology and Oceanography
Ecological Society of America
Society for Conservation Biology
Society of Integrative and Comparative Biology
Western Society of Naturalists

Service

2007-Current

- Advisor for Franklin County Oyster & Seafood Task Force (Current)
- Florida State University Coastal and Marine Laboratory: Coordinate stays of visiting lecturers (Current)
- Florida State University Dept. of Biological Science: Served on activities committee for William R. and Lenore Mote International Symposium in Fisheries Ecology *Putting Fish and Fishers in Place – The Spatial Dimensions of Fisheries: a tribute to the legacy of Bob Johannes, who sensitized us to the concept of marine tenure* (2008)

- Florida State University Coastal and Marine Laboratory: Assisted with intertidal field trip for Wakulla County middle school students (2008)
- Carr Middle School, Clarksville, FL: Guest speaker on climate change and biotic interactions (2008)
- WFSU Dragonfly TV SciGirls Summer Camp, Tallahassee, FL: Panelist for discussion on women in science (2007)
- University Club, Inc. Foundation, Portland, OR: Selection committee for Foundation Fellowship (2007)
- Western Association of Graduate Schools Annual Conference, Portland, OR: Invited student panelist (2007)
- Grant High School, Portland, OR: Intertidal field trip leader (2007)
- National Ocean Sciences Bowl Oregon Salmon Bowl, Corvallis, OR: Timekeeper (2007)

2001-2006

- Oregon State University Dept. of Zoology: Graduate student representative to faculty meetings (2006-2007)
- Oregon State University vs. University of Oregon football game Presidential Brunch, Corvallis, OR: Student invited speaker (2006)
- Lewis & Clark College, Portland, OR: Invertebrate expert for field trip (2006)
- Oregon State University Dept. of Zoology: Member of the Graduate Student Invited Speaker Committee (2003-2006)
- Communication Partnership for Science and the Sea (COMPASS) Marine Ecosystem-Based Management Meeting, Monterey, CA: Note-taker (2005)
- Newport SeaFest, Newport, OR: Manned Partnership for the Interdisciplinary Studies of Coastal Oceans (PISCO) information booth (2005)
- Oregon State University Dept. of Zoology: Member of the Biology Graduate Student Symposium Committee (2003-2004)
- COMPASS Science of Marine Reserves Meeting, Corvallis, OR: Note-taker (2003)
- AWIS Middle School Girls Science & Engineering Workshop: Tour leader (2003)
- Cornell University Dept. of Biological Sciences: Biology student advisor (2001-2002)

Reviewing Services

Journals:

Acta Oecologia, Ecology, Journal of Experimental Marine Biology and Ecology, Limnology and Oceanography, Marine Biology, Marine Biology Research, Marine Ecology Progress Series, Oecologia, Oikos, Transactions of the American Fisheries Society

Proposals:

NOAA National Undersea Research Program, NOAA National Estuarine Research Reserve Graduate Research Fellowship