SHAWN M. ARELLANO

Woods Hole Oceanographic Institution
Biology Department
Redfield 120, MS #34
Woods Hole, MA 02543

Office: 508-289-4839
Cell: 774-392-3536
Fax: 508-457-2134
sarellano@whoi.edu

EDUCATION

2008	Ph.D.	Biology, University of Oregon, Oregon Institute of Marine Biology (OIMB) Dissertation: *Embryology, larval ecology, and recruitment of the cold-seep mussel* "Bathymodiolus" childressi. PhD Advisor: Prof. Craig Young
2000	B.S.	Biology, University of Kansas (KU)
2002/3	Courses	Friday Harbor Laboratory (FHL), University of Washington (Comparative Embryology & Larval Biology and Ecology)

GENERAL RESEARCH INTERESTS

- Larval biology and ecology—especially the effects of biology & behavior on dispersal
- Larval settlement and metamorphosis
- Pre- and post-settlement effects on recruitment
- Biology and physiological ecology of larvae and juvenile invertebrates
- Deep-sea biology and ecology—especially chemosynthetic environments

Research and PROFESSIONAL EXPERIENCE

Present	*Postdoctoral Scholar,* Woods Hole Oceanographic Institution. Supervisor: Dr. Lauren S. Mullineaux, Sr. Scientist
2009-10	*Postdoctoral Fellow*, Hong Kong University of Science and Technology (HKUST). Projects focused on 1) using proteomics to study metamorphosis and 2) 454 sequencing of microbial communities associated with cold-seep brine pools, sediments, and biofilms. Supervisor: Prof. Pei-Yuan Qian
2007-8	*Program Co-coordinator* for the Ecosystem Research Program (ERP), National Oceanic and Atmospheric Administration (NOAA). Supervisor: Dr. Leon Cammen, Director of ERP and National Sea Grant
2002-8	*Graduate student researcher* (NSF Graduate Research Fellow & Ford Foundation Predoctoral Fellow), University of Oregon (UO)
2001	*Undergraduate trainee,* developing techniques to use trace elements as tags for tracking larval dispersal, WHOI. Supervisor: Dr. Lauren S. Mullineaux, Sr. Scientist
2000	*Undergraduate researcher*, ultraviolet effects on development of the ascidian *Styela gibsii*. Shannon Point Marine Center (SPMC), WA. Supervisor: Dr. Brian Bingham
2000	*Undergraduate researcher,* sea anemone taxonomy. University of Kansas. Supervisor: Prof. Daphne G. Fautin

Fellowships, Traineeships, and Awards

2010-12	Woods Hole Oceanographic Institution Postdoctoral Scholarship
2010	Research Travel Grant, Hong Kong University of Science and Technology
2007	Dean John A. Knauss Marine Policy Fellowship
2002–8	Ford Foundation Predoctoral Fellowship for Minorities
2002–7	National Science Foundation Graduate Research Fellowship
2006	Monterey Bay Aquarium Research Institute Summer Internship
2002/3	American Society for Cell Biology Summer Awards for classes at FHL
2002	International Women's Fishing Association Scholarship
2002	University of Oregon General Scholarship
2001	Minority Summer Traineeship, Woods Hole Oceanographic Institution, MA
2000/1	American Society of Limnology & Oceanography Minority Program
2000	Multicultural Initiatives in Marine Science Undergraduate Program, SPMC, WA
2000	McNair Scholar Summer Research Grant, University of Kansas

Peer-Reviewed Publications

Zhang, H, YH Wong, H Wang, Z Chen, SM Arellano, T Ravasi, P-Y Qian. *In press.* Quantitative proteomics identify molecular targets that are crucial in larval settlement and metamorphosis of *Bugula neritina*. *Journal of Proteome Research.*

Arellano, SM and CM Young. 2010. Pre- and post-settlement effects on the fine-scale spatial distribution of a cold-seep mussel. *Marine Ecology Progress Series* 414: 131-144.

Zhang, Y, J Sun, K Xiao, SM Arellano, V Thiyagarajan, P-Y Qian. 2010. 2D gel-based multiplexed proteomic analysis during larval development and metamorphosis of the biofouling polychaete tubeworm *Hydroides elegans*. *Journal of Proteome Research* 9: 4851-4860.

Wong, YH, SM Arellano, H Zhang, T Ravasi, and P-Y Qian. 2010. Dependency on de novo protein synthesis and proteomic changes during metamorphosis of the marine bryozoan *Bugula neritina*. *BMC Proteome Science* 8: 25.

Zhang, Y, Y Xing, SM Arellano, K Xiao, and P-Y Qian. 2010. Comparative proteome and phosphoproteome analyses during cyprid development of the barnacle *Balanus (=Amphibalanus) amphitrite*. *Journal of Proteome Research* 9 (6): 3146–3157.

Arellano, SM and CM Young. 2009. Spawning, development, and the duration of larval life in a deep-sea cold-seep mussel. *Biological Bulletin* 216: 149-162.

Van Gaest, AL, CM Young, JJ Young, AR Helms, and SM Arellano. 2007. Physiological and behavioral responses of *Bathynerita naticoidea* (Gastropoda: Neritidae) and *Methanoaricia dendrobranchiata* (Polychaeta: Orbiniidae) to hypersaline conditions at a brine pool cold seep. *Marine Ecology* 28: 199-207.

Tyler, PA, CM Young, E Dolan, SM Arellano, S Brooke, and M Baker. 2007. Gametogenic periodicity in the chemosynthetic cold-seep mussel *Bathymodiolus childressi*. *Marine Biology* 150 (5): 829-840.

Reitzel, A, J Webb, and SM Arellano. 2004. Growth, development and condition of *Dendraster excentricus* (Eschscholtz) larvae reared on natural and laboratory diets. *Journal of Plankton Research* 26 (8): 901-908.

Arellano SM and DG Fautin. 2001. Redescription and range extension of the sea anemone *Exocoelactis actinostoloides* (Wassilief, 1908) with revision of genus *Exocoelactis* (Cnidaria, Anthozoa, Actiniaria). *Zoosystema* 23 (4): 645-657.

Manuscripts In Preparation

Diederich, CM, JN Jarrett, OR Chaparro, CJ Segura, SM Arellano, and JA Pechenik. *In review*. The effects of short-term salinity stress on pre- and post-metamorphic growth, survival, and development in three calyptraeid gastropods. *J. of Experimental Marine Biology and Ecology.*

Arellano, SM and CM Young. In prep. Temperature and salinity tolerances of larvae of the deep-sea mytilid *"Bathymodiolus" childressi* and the shallow-water mytilid *Mytilus trossulus*.

Arellano, SM, Y Zhang, and PY Qian. In prep. Proteomic shifts correlated with competency and metamorphosis in the marine gastropod *Crepidula onyx*.

Arellano, SM, AL Van Gaest, SB Johnson, RC Vrijenhoek, and CM Young. In prep. Long-distance dispersal potential of two deep-sea mollusks.

Research Cruises and Submersible Dives

-Co-Chief Scientist (Craig Young, P.I.) 2 cruises (2 ships, 2 different Co-chief scientists).
-Scientist on 14 cruises from 2001 through 2006 (8 ships, 4 P.I.s, in 3 habitats)
-21 dives in 3 submersibles: 14 dives as chief observer & 7 dives as observer
-Scientist on 2 research cruises using the ROV Tiburon (MBARI)

Invited Seminars and Symposium Presentations:

2010 Oral presentation, 9th Larval Biology Symposium, Wellington, New Zealand
2009 Keynote Presenter, 4th Intl. Chemosynthetic Based Ecosystems Symposium, Okinawa, Jap.
2008 Invited Seminar, Shannon Point Marine Center, Western Washington University
2008 Oral presentation, 8th Larval Biology Symposium, Lisbon, Portugal
2007 Invited Seminar, Penn State Biology Department Graduate Students Association Seminar
2007 Oral presentation, Society for Integrative and Comparative Biology, Phoenix, AZ
2006 Oral and Poster presentation, 7th Larval Biology Symposium, Charleston, OR
2006 Oral presentation, Summer Intern Symposium, MBARI
2005 Invited seminar, Oregon Institute of Marine Biology Spring Seminar Series
2005 Oral presentation, 3rd Intl. Hydrothermal Vent and Seep Biology Symposium, La Jolla, CA
2005 Oral presentation, 34th Benthic Ecology Meeting, Williamsburg, VA
2004 Poster presentation, Society for Comparative and Integrative Biology, New Orleans, LA
2003 Poster presentations, 10th Deep-Sea Biology Symposium, Coos Bay, OR
2001 Oral presentation, ASLO conference, Albuquerque, NM
2000 Oral presentation, ASLO conference, Copenhagen, Denmark

Teaching Experience

2009/10 Guest Lecturer, Introduction to Marine Biology, 9 lectures (HKUST)
2004 Teaching Assistant, Comparative Embryology and Larval Biology (OIMB)
2003 Teaching Assistant, Deep Sea Biology (OIMB)
2002 Lab Instructor, General Biology II: Organisms (UO)
1999–2000 Lab Instructor, Introductory Biology for non-majors (KU)

Professional Activities

Journal Reviewer: PLoS One, Journal of Experimental Marine Biology and Ecology
Reviewer: National Science Foundation Division of Biological Oceanography (2008)
Reviewer: NOAA Holling's Scholarship (2007)