

Silke Bachhuber

Department of Ecology, Evolution, and Marine Biology
University of California, Santa Barbara

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Education

2012-2015 **B.A. Biological Sciences**
University of California, Santa Barbara
Advisor: Dr. Claudia Tyler

Professional Experience

2013-present **Laboratory Technician**, Department of Ecology, Evolution, and Marine Biology
University of California, Santa Barbara
Advisor: Professor Gretchen Hofmann

Activities Biometric analyses of larval marine invertebrates, including corals and mussels
Maintenance, design, and setup of experimental CO₂ systems for larval culture
Water sampling and testing for salinity, pH, and total alkalinity
Research project: assessing development and physiological performance of Red Abalone (*Haliotis rufescens*) larvae in high CO₂ conditions
Protein and lipid extractions and analysis
Research project: assessing impacts of thermal stress on heat shock protein expression in New Zealand Flat Oysters (*Tiostrea chiensis*)
Field deployment of pH sensors
Monitoring of intertidal field sites after Refugio Oil Spill, May 2015
Research project: examining transgenerational effects of ocean acidification on larval purple sea urchins (*Strongylocentrotus purpuratus*)

Winter 2015 **Research Assistant**, Department of Biology
Oregon Institute of Marine Biology, Charleston, OR
Advisors: Dr. Richard Emlet, Professor Alan Shanks

Activities Investigated impacts of winter storm events on spawning and dispersal of marine invertebrate larvae
Identification and culture of marine larvae of several taxa
Spawning adult chitons (*Mopalia hindsii*) and maintaining larval cultures to document development
DNA extractions and barcoding of adult animals and larvae
Confocal microscopy of *M. hindsii* larvae

Summer 2014 **Research Assistant**, Department of Integrative Biology
Oregon State University, Corvallis, OR
Advisor: Professor Bruce Menge

Activities Performed site maintenance and field sampling at rocky intertidal sites throughout Oregon and Northern California
Surveyed juvenile and adult sea stars during the onset of sea star wasting syndrome in Oregon

Photo analysis of community composition and diversity for ongoing recruitment experiments
Assisted with setup of CO₂ mesocosm experiments at Hatfield Marine Science Center, Newport, OR
Took water samples in field, analyzed chlorophyll concentration of samples in the laboratory

Posters and Presentations

Bachhuber, S.*, Sugano, C.S., Kelly, M.W., Rivest, E.B., Hofmann, G.E. Effects of elevated pCO₂ conditions on larval development of Red Abalone, *Haliotis rufescens*. Western Society of Naturalists Conference, 2013.

Bachhuber, S.*, Sullivan, J., Emlet, R., Grunbaum, D. Impacts of Sea Star Wasting Syndrome on larval *Pisaster ochraceus*: a pilot study on pathogen exposure. Western Society of Naturalists Conference, 2014.

Bachhuber, S. and J. Sullivan. (2014). Swimming behavior of larval *Pisaster ochraceus*. Friday Harbor Laboratories Student Research Papers Archive. URI: <http://hdl.handle.net/1773/27296>

Leadership Experience and Outreach

2013-2014 **Intern**, Research, Experience, and Education Foundation (R.E.E.F)
University of California, Santa Barbara, Santa Barbara, CA

Activities Interpreted aquarium exhibits to guests of all ages
Researched, planned, and conducted scheduled programming for tour groups based on California state educational standards
As lead intern, performed maintenance and husbandry tasks for tropical and temperate exhibits
Responsible for training new interns on husbandry, identification of local species, and educational programming

2010- 2012 **Volunteer**, Seattle Aquarium
Supervisor: Dave Glenn

Activities Interpreted aquarium exhibits to guests
Founding member of youth conservation group Puget Sound, We Love You
High School Volunteer of the Year, 2012

Skills and Certifications

2015 **Hazardous Waste Operations and Emergency Response**
Occupational Health and Safety Administration, Santa Barbara, CA

2014-Present **American Academy of Underwater Sciences Scientific Diver**
University of California, Santa Barbara, Santa Barbara, CA
Certifying DSO: Eric Hessell

DAN CPR, AED, and First Aid as well as NAUI Rescue Diver certifications
Bradley Paul Nuremburg Memorial Award recipient

Other skills include: RNA and DNA extractions, PCR, thin layer lipid gas chromatography, BCA protein assays and Western Blotting, protein and lipid extractions, compound and confocal microscopy, statistical analysis in JMP and R, image capture and analysis in ImageJ, InfinityCapture, and AstroIIDC software packages.

Additional Field Experience

Research Cruise. *R/V Shearwater*, University of California, Santa Barbara. Santa Barbara, CA. June 2015.

Specimen Collection Trip. Oregon Institute of Marine Biology. Charleston, OR. January 2015.

Research Cruise. *R/V Pleuteus*, Oregon Institute of Marine Biology. Charleston, OR. January 2015.

Field Course. *Larval Biology*, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA. August 2014.

Specimen Collection Trip. Friday Harbor Laboratories, University of Washington. San Juan Island, WA. August 2014.

Research Cruise. *R/V Elakah*, Oregon State University, Newport, OR. July 2014.