

Amberle McKee

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EDUCATION

Fall 2014 to Present PhD Student, Biology, McHenry Lab, University of California, Irvine (UCI)
Relevant Coursework: Ecology, Evolution, Physiology, Scientific Writing, Statistics, Animal Sensation and Locomotion

Summer 2014 Friday Harbor Laboratories, University of Washington
Coursework: Functional Morphology and Ecology of Fishes

Fall 2009 to Spring 2014 B.S, Biology, California State University, Long Beach (CSULB)
GPA: 3.584; GRE Percentiles: Verbal: 91; Quantitative: 78; Biology: 91
Relevant coursework: Evolutionary Biology, Advanced Evolutionary Biology, General Ecology, Comparative Animal Physiology, Biostatistics, Molecular Cell Biology, General Genetics, General Chemistry (2 semesters), Organic Chemistry (2 semesters), Invertebrate Zoology, Vertebrate Zoology, Conservation Biology, Biological Modeling, Plant Morphology.

PEER REVIEWED PUBLICATIONS

3. McKee, A., MacDonald, I. Farina, S., and Summers, A. 2015. Undulation frequency affects burial performance in living and model flatfishes. *Zoology*. 119(2):75-80
2. McKee, A. A., Newton, S. M., Carter, A. J. R. 2014. Influence of inbreeding on female mate choice in two species of *Drosophila*. *Journal of Insect Behavior*. 27:613-625
1. McKee, A., Voltzow, J., and Pernet, B. 2013. Substrate attributes determine gait in a terrestrial gastropod. *Biological Bulletin*. 224:53-61

ABSTRACTS, PRESENTATIONS, & POSTERS

8. McKee, A., McHenry, M. J. 2017. Growth changes the escape response to visual looming stimuli in zebrafish. 15-minute oral presentation. Conference for the Society for Integrative and Comparative Biology, New Orleans, LA.
7. McKee, A., McHenry, M. J. 2016. Growth changes the escape response to visual looming stimuli in zebrafish. 5-minute oral presentation. Southwestern Organismal Biology SICB Southwest Regional Meeting, Fullerton, CA.
6. McKee, A., McHenry, M. J. 2016. A high-throughput method for identifying responses to visual stimuli. Poster. Conference for the Society for Integrative and Comparative Biology, Portland, OR.
5. McKee, A., MacDonald, I. Farina, S., and Summers, A. 2015. Body undulation frequency affects burial performance in living and model flatfishes. 15-minute oral presentation. Conference for the Society for Integrative and Comparative Biology, West Palm Beach, FL.
4. McKee, A. A., Newton, S. M., Carter, A. J. R. 2014. Influence of inbreeding on female mate choice in two species of *Drosophila*. Poster. Conference for the Society for Integrative and Comparative Biology, Austin, TX.
3. McKee, A., Voltzow, J., and Pernet, B. 2013. Substrate attributes determine gait in a terrestrial gastropod. 5-minute oral presentation. Southwest regional conference for the Society for Integrative and Comparative Biology. UC Riverside.

2. McKee, A., Voltzow, J., and Pernet, B. 2013. Substrate attributes determine gait in a terrestrial gastropod. 10-minute oral presentation. Statewide Student Research Competition. CSU Long Beach & CSU Pomona.
1. McKee, A., Voltzow, J., and Pernet, B. 2013. Substrate attributes determine gait in a terrestrial gastropod. Poster. Conference for the Society for Integrative and Comparative Biology, San Francisco, CA.

STUDENT MENTORING

- Summer 2017 Bridges to Baccalaureate student Naomi Carrillo at the University of California, Irvine
Project: Naomi conducted experiments with zebrafish and a cichlid predator to determine how zebrafish evade predation, and compared this to previous experiments using simulated predators.
- Fall 2013 to Undergraduate Research Opportunities Program at California State University, Long Beach
Spring 2014 I was a peer advisor to fifteen students of different disciplines, offering mentorship regarding their research goals.

GRANTS, HONORS, & AWARDS

11. Ecology and Evolutionary Biology Departmental Travel Award 2017. Reimbursement of \$439.20 for travel costs to the January 2017 annual meeting for the Society for Integrative and Comparative Biology
10. Ecology and Evolutionary Biology Departmental Travel Award 2016. Reimbursement of \$500 for travel costs to the January 2016 annual meeting for the Society for Integrative and Comparative Biology
9. Ecology and Evolutionary Biology Departmental Travel Award 2015. Reimbursement of \$500 for travel costs to the January 2015 annual meeting for the Society for Integrative and Comparative Biology
8. National Science Foundation Graduate Research Fellowship Program 2014: \$102,000 over three years. Fellowship awarded to outstanding, new graduate students to fund their research in graduate school. Includes a stipend and cost of education allowance.
7. Robert D. Rhodes Award for the Outstanding Baccalaureate in the Department of Biological Sciences 2014: \$100. Award given to the student nominated for outstanding research experience in the biology department at Cal State Long Beach. This is the highest award given to a single student in the department each year.
6. CSULB Undergraduate Student Outstanding Research, Scholarly and Creative Activity Award 2014. Awarded to a single undergraduate student in recognition of outstanding research, scholarly, or creative activity in the university.
5. Best Undergraduate Student Talk 2013. Award for best talk given by an undergraduate at the southwest regional conference for the Society for Integrative and Comparative Biology.
4. Best Student Poster Award 2013: Award for best poster presentation at the Annual Meeting of the Society for Integrative and Comparative Biology in the Division for Invertebrate Zoology.
3. Wenner Strong Inference Award Runner-Up (2013): Runner-up for the award honoring posters presenting research that used a strong inference approach at the Annual Meeting of the Society for Integrative and Comparative Biology.
2. Student Research Competition 2013: Won 1st place in the campus and statewide CSU Student Research Competitions in the category for Biological and Agricultural Sciences.
1. California State University Long Beach Associated Student Inc. Student Travel Fund 2012: \$182.52 Awarded to offset travel expenses and registration fees for the January 2013 Annual Meeting of the Society for Integrative and Comparative Biology.

RESEARCH EXPERIENCE (* indicates research was published)

- Summer 2014 to present Topic: Escape strategies and sensory capabilities of zebrafish
Advisor: Dr. Matthew J. McHenry at University of California, Irvine
Project description: I am using high speed videography, custom programming, and an automated setup to investigate how zebrafish react to different looming stimuli.
- Summer 2014 Topic: Body undulation frequency affects burial performance in living and model flatfishes*
Advisors: Dr. Adam Summers & Dr. Misty Paig-Tran at Friday Harbor Laboratories, University of Washington
Project description: I investigated the role of undulation in burial in five species of flatfish in the Pacific Northwest using high speed video of live individuals as well as a physical model.
- Fall 2012 to Spring 2014 Topic: Comparative study of feeding performance of marine invertebrate larvae
Advisor: Dr. Bruno Pernet at California State University, Long Beach
Project description: I assessed feeding performance in marine larvae through studies of the clearance rates of food particles at different larval stages as well as measurements of the feeding appendages. I also created a mathematical model to compare different feeding modes in different environments.
- Fall 2011 Topic: Influence of inbreeding on female mate choice in two species of *Drosophila**
Advisor: Dr. Ashley Carter at California State University, Long Beach
Project description: I created inbred and outbred lines of *Drosophila* and assessed preference for inbred or outbred mates within these lines.
- Spring 2011 to Spring 2013 Topic: Substrate attributes determine gait in a terrestrial gastropod*
Advisor: Dr. Bruno Pernet at California State University, Long Beach
Project description: I observed loping behavior in *Cornu aspersa* and several other terrestrial gastropods. I videotaped their locomotion and conducted experiments to determine the extent and reason for this gait choice.
- Fall 2009 to 2011 California State University, Long Beach Assistant Field Volunteer: I assisted two graduate students in collecting marine animals in the field for their research projects.

RELEVANT WORK AND TEACHING EXPERIENCE

- Fall 2017 Teaching Assistant Bio E188 (Introduction to Insect Physiology), University of California, Irvine
I coordinated administrative tasks for the class such as tests, and grading.
- Winter 2017 Teaching Assistant Bio 112 (Human Physiology Lecture), University of California, Irvine
I coordinated administrative tasks for the class such as tests, iClickers, and grading.
- Winter to Spring 2014 Teaching Assistant/Lab Leader for Bio 112L (Human Physiology Lab), University of California, Irvine
I created activities and led laboratory activities to teach senior undergraduate students human physiology.
- Fall 2014 Teaching Assistant/Discussion Leader for Bio 93 (Introductory Developmental and Cell Biology), University of California, Irvine
I created and used new activities to teach first-year freshman students the fundamentals of cell biology.
- Fall 2013 to Spring 2014 Undergraduate Research Opportunities Program California State University, Long Beach
Peer Advisor: I assisted new students in achieving their research goals.
- Fall 2012 to Spring 2014 Lab Assistant in Dr. Bruno Pernet's Lab, California State University, Long Beach
I performed various functions in maintaining a functional lab, including maintaining lab organisms, maintaining a clean workspace, and performing experiments.

PROFESSIONAL AFFILIATIONS

Society for Integrative and Comparative Biology

OUTREACH

Summers 2011 and 2012 Volunteer Deckhand and Educator, American Pride, Children's Maritime Fund, Long Beach
I assisted in the sailing of the ship (including weighing/dropping anchor, raising/dropping sail, launching ship, securing dock lines, and performing night watch); led science lessons, kayak tours, snorkeling, and hikes; performed boat maintenance.

Fall 2009 to Spring 2014 Volunteer, Marine Lab, California State University, Long Beach
I assisted in animal husbandry (cleaning tanks, feeding animals), collecting marine animals in the field, preparing brine shrimp eggs to hatch, and was the primary caretaker of immature Aurelia jellyfish.

RELEVANT SKILLS AND CERTIFICATIONS

Field Skills: Fishing; beach seining; fish measurements; trawling; fish identification

Lab Skills: Dissections of a multitude of animals; experience culturing algae and various marine invertebrate larvae; making *Drosophila* food media; and sorting *Drosophila* sexes; experience maintaining live fish; basic microscope skills; basic electronic skills; knowledge of Arduino and simple engineering, experience with high speed cameras

Equipment Skills: Flow cytometer; centrifuge; WINGMACHINE imaging system; laser cutter; extrusion style 3D printer, mill, CNC machine, drill press, chop saw, band saw

Biostatistical and computer programs: R, Matlab, Minitab, 123D Design, AutoDesk Inventor, Photron Viewer, Google Sketchup

Other Relevant Skills: Building aquariums, snorkeling, rowing, sailing.

Certifications: First Aid/CPR, NAUI Open Water SCUBA, NAUI Advanced SCUBA, CSULB lab certifications (basic lab safety, compressed gas handling, autoclave operation), CSULB scientific certifications (human subjects ethics, animal studies ethics, conflict of interest, research misconduct), UCI fire extinguisher training, UCI chemical safety training, UCI ergonomics training, UCI electrical safety training.