

Curriculum Vitae

ASHLEY BOWERS-MACRANDER

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EDUCATION

- 2006 – 2009 **Masters of Science**, University of Nebraska – Lincoln
Biological Sciences. Advisor: Dr. Alexandra Basolo
Specialization: Ecology, Evolution, and Behavior
Thesis: *Intrasexual Selection, Refuge-use, and Resource Defense in the Southern Platyfish, Xiphophorus maculatus*
- 2002 - 2006 **Bachelors of Science**, University of Nebraska – Lincoln
Biological Sciences

POSITIONS HELD

- 2019 – Present Florida Southern College Lakeland, FL
Visiting Instructor of Biology
- *Teach Biological Diversity, Ecology & Evolution lecture and laboratory, Anatomy & Physiology lecture and laboratory, Conservation Biology*
 - *Curriculum centers on engaged learning, including group discussion, presentations, Think-Pair-Shares, and case studies*
- Aug. – Dec. 2018 Florida Southern College Lakeland, FL
Adjunct Instructor
- *Taught Ecology & Evolution lecture and laboratory*
 - *Taught multiple sections of Human Anatomy & Physiology laboratory*
- 2016 – 2018 University of North Carolina at Charlotte Charlotte, NC
Visiting Lecturer
- *Taught two lecture sections of Principles of Biology I, three sections of the corresponding laboratory (class size 24 – 180), and General Zoology*
 - *Developed student-centered active learning activities, including case studies, Think-Pair-Shares, facilitated group discussion, and incorporating citizen science into the curriculum*
 - *Worked with faculty to update curriculum for both the lecture and laboratory*
 - *Coordinated teaching assistants for proctoring exams for all BIOL 1110 instructors*
- 2011 – 2016 Zane State College Zanesville, OH
Instructor
- *Taught and developed lecture and lab components for a variety of courses.*
 - *Developed student-centered active learning activities, including case studies, Think-Pair-Shares, and facilitated group discussion*

- *Directed and trained adjunct instructors in BIOL 1210, 1220, 2410, 2430 (class size 24 – 72)*
- *Served on several departmental committees and co-facilitated both departmental and regional workshops*

2011 – 2011 The Ohio State University Columbus, OH

Adjunct Instructor

- *Taught multiple sections of labs for introductory biology courses.*
- *Promoted active learning through small group and class discussions.*
- *Developed online quizzes to facilitate continued involvement outside the classroom.*

2009 – 2010 Metropolitan Community College Omaha, NE

Adjunct Instructor

- *Taught lectures and labs for introductory biology courses. (class size 24 - 36)*
- *Developed lecture portion and assessments for course*

2009 – 2010 The Lincoln Children’s Zoo Lincoln, NE

Zookeeper I

- *Worked with a wide variety of mammals, birds and reptiles.*
- *Prepared diets, maintained exhibits, and provided enrichment and educational demonstrations for visitors.*

COURSES TAUGHT

Florida Southern College: Instructor of Record (**indicates for majors*)

- **BIO 1600* – Biology II: Biological Diversity** (SPRING 2020)
- **BIO 2216 – Human Anatomy & Physiology II** (SPRING 2020)
- **BIO 2500* – Biology III: Ecology & Evolution** (FALL 2019)
- **BIO 2900* – Conservation Biology** (SPRING 2020)

University of North Carolina at Charlotte: Instructor of Record (**indicates for majors*)

- **BIOL 1110 – Principles of Biology I** (FALL 2016 – Present, every semester)
- **BIOL 1110L – Principles of Biology Laboratory** (FALL 2016 – FALL 2018)
- **BIOL 3236* – General Zoology** (SPRING 2018)

Zane State College: Instructor of Record (**indicates for majors*)

- **BIOL 1010 – Principles of Biology** (FALL 2011 – SUMMER 2012)
- **BIOL 1210* – General Biology I** (FALL 2013 – SPRING 2016, every semester)
- **BIOL 1220* – General Biology II** (SPRING 2014 – SPRING 2016, every SPRING)
- **BIOL 1950 – Tropical Field Biology** (SUMMER 2015)
- **BIOL 2400* – Anatomy & Physiology I** (FALL 2011 – FALL 2015, every FALL)
- **BIOL 2410* – Anatomy & Physiology I Lab** (FALL 2011 – FALL 2014)
- **BIOL 2420* – Anatomy & Physiology II** (SPRING 2012 – SPRING 2016, every SPRING)
- **BIOL 2430* – Anatomy & Physiology II Lab** (SPRING 2012 – SPRING 2014)

Adjunct Instructor/Teaching Assistant (* indicates for majors)

- BIO 2500 *(FSC) – **Biology III: Ecology & Evolution** (FALL 2018)
- BIO 2216 (FSC) – **Human Anatomy & Physiology II Laboratory** (FALL 2018)
- BIOL 101 (OSU) – **Introductory Biology** (FALL 2011 – SPRING 2011)
- BIOL 101 (MCC) – **Introduction to Biology** (SUMMER 2009 – SPRING 2010)
- BIOL 101 (UNL) – **Introduction to Biology: Lab** (FALL 2006 – SPRING 2009)

CURRICULUM AND PROFESSIONAL DEVELOPMENT

Course Design:

- General Zoology Laboratory (UNC Charlotte)
 - Developed BIOL 3236L as an additional elective laboratory for biology majors
 - Designed the objectives for the course, all laboratory components and assessments to reflect the course description and sync with the General Zoology lecture (offered separately)
- General Biology I and II (Zane State College; See Sample Syllabus in Appendix I)
 - Established BIOL 1210 and BIOL 1220 as the only keystone transferrable biology courses at Zane State College adhering to Ohio TAG (Transferable Assurance Guidelines).
 - Developed lecture and laboratory components and assessments to fulfill state mandated teaching objectives for both a Face-to-Face and hybrid version of the course.
 - Coordinated adjunct faculty and high school instructors teaching the course to ensure consistency in teaching and verify all objectives are being met.

Workshops & Training

- Active Learning Academy at UNCC (2016 – present) **Team facilitator** for a faculty learning community to discuss active learning techniques, learn from peers, and promote the adoption of active learning in all courses
- Mini-Institute on Inclusive Learning and Teaching Practices at UNCC (2017) Training on how to create inclusive classrooms through active learning and high-impact pedagogies
- Assessment Day at Zane State College (2015) **Co-facilitator** for grade norming session training faculty on the use of a critical thinking grading rubric resulting in uniform grade distributions.
- Using Case Studies to Increase Student Success in Science Courses (2014) Zanesville, OH **Co-facilitator** for workshop targeting local science faculty and adjuncts on using case studies to keep students engaged and improve student success and retention.
- Blackboard Training at Zane State College (2011 – 2014) Training in how to use Blackboard to improve student experience (Blackboard Collaborate, Atomic Learning) and for early interventions (Blackboard Retention Center) in order to increase student success and retention.
- WEAVE Training at Zane State College (2011 – 2014) Training on the use of WEAVE to report data for the five general education rubrics and curricular mapping.

Conferences Attended

- National Center for Case Study Teaching in Science Annual Conference (2017) Buffalo, NY Best practices in use of “flipped” cases, team-based learning, case studies across multiple classes
- 48th Annual Ohio Association of Two Year Colleges Conference (2015) Zanesville, OH Best practices to facilitate active learning, student engagement, and student success.
- National Center for Case Study Teaching in Science Annual Conference (2013) Buffalo, NY How to use case studies to facilitate active learning and student engagement.
- Human Anatomy & Physiology Annual Conference (2012) Tulsa, OK Innovative instruction for human anatomy and physiology and workshops of best practices for teaching difficult concepts.

RESEARCH EXPERIENCE

Graduate Research

- Ultraviolet Radiation and Reproductive Success: potential benefits of the poeciliid brood patch on reproductive success.
- Male-Male Competition: male-male competition and the role of body size and promiscuity in the southern platyfish, *Xiphophorus maculatus*.

Undergraduate Research

- Female Mate Choice: female mate preference influenced by predation in the green swordtail, *Xiphophorus helleri*.
- Host-Parasite Interactions: the relationship between hermit crabs of the genus Paguridae and a castrating Rhizocephalan parasite.
- Predator-Prey Interactions: predatory preferences of the cichlid *Cichlasoma octafasciatum* relative to body size of the southern platyfish (*X. maculatus*) and their anti-predator responses.

PRESENTATIONS

Bowers-Macrander, A., E. Delmelle, S. Juengst. 2018. Taking Knowledge Out into the Real World: Using Physical Activities for Active Learning. Active Learning Academy Expo – UNCC.

Mohsen, D., E. Weber, A. Bowers-Macrander, M. McCaslan, S. Stewart, D. Fillmore, M. Redmond, C. Smith-Orr. 2017 Practical Active Learning Instructional Methods for College Courses. Active Learning Academy Expo – UNCC.

Bowers-Macrander, A. 2015. Beware the Eight-Week Course. Zane State College Assessment Day Poster Session.

Bowers, A. 2012 Being a Zookeeper. Wickliffe Elementary Roots & Shoots.

Bowers, A. 2009 Intrasexual Selection, Refuge-Use and Resource Defense in the Southern Platyfish, *Xiphophorus maculatus*. Departmental Seminar – UNL.

Bowers, A. 2009 Size, Male Competition and Refuge-Use in the Southern Platyfish, *Xiphophorus maculatus*. Biology Graduate Student Symposium – UNL.

Bowers, A. 2007 Effects of Ultraviolet-B Radiation on Female *Xiphophorus maculatus* Fitness. Departmental Seminar – UNL.

Bowers, A. and A. Basolo. 2006 Intra- and Interspecific Differences in the Inhabitants of a Marine microcosm. Undergraduate Research Conference – UNL.

Bowers, A. and A. Basolo. 2005 Knock, Knock – Whose There? Multiple Inhabitants of Hermit Crab Shells. Undergraduate Research Conference – UNL.

GRANTS AND AWARDS

2017	Spring 2018 Preceptor Program Grant	\$2,000
2017	Professor Appreciation Night (nominated by Molly Shaw and honored at the Sept. 22 nd game)	
2017	Fall 2017 Preceptor Program Grant	\$2,000
2015	Phi Theta Kappa Honor Society Teaching Award	

2014	Ohio Association of Community Colleges Student Success Center Professional Development	\$500
2007	University of Nebraska Biological Sciences Special Funds	\$1,000
2007	Sigma Xi Grants-In-Aid	\$400

MEMBERSHIPS

- National Center for Case Study Teaching in Science
- National Science Teachers Association
- American Association for the Advancement of Science
- Human Anatomy & Physiology Society
- Sigma Xi
- Animal Behavior Society

SERVICE AND OUTREACH

Lunch with a STEM Professional (*Cox Mill High School, Concord, NC*)

- Discuss possible career paths for high school students interested in STEM

North Carolina Science Festival (**Presenter**)

- Presenter for the *Sea Anemone Touch Table* as part of the UNCC Science Expo

Undergraduate Research Conference (*University of North Carolina at Charlotte*)

- Judge for posters submitted by biology department students

eCYBERMISSION (*United States Army, National Science Teachers Association*)

- Virtual judge for the web-based STEM competition for grades 6 – 9

District 9 Science Day (**Core council member and co-organizer**)

- Organize event, direct judges, determine which students move on the Ohio State Science Day, report results to the Ohio Academy of Sciences
- Served as science judge for early entries or students that do not have access to a local science fair

Cold Case in the Corridor (**Co-facilitator**)

- A science camp for 7th grade girls that emphasizes women in science
- Introduce students to techniques in forensic science

Roots & Shoots (**Group Leader for Zane State College**)

- Complete projects that benefited the environment, animals, and people, including: food drive for the MidOhio Food Bank, make/donate dog toys to local animal shelters, growing and selling flower seedlings, discussing with the public the importance of composting and pollinators
- Participated in the Earth Day Fair

Ohio State Science Day (*Ohio Academy of Sciences*)

- Science fair judge for state levels event, including 5th – 12th graders

Museum Open House (*Museum of Biological Diversity, The Ohio State University*)

- Discuss museum specimens and collections with public
- Assist in the children's room with activities and talking about invasive species

Academic Committees (*Zane State College*)

- General Education Advisory Committee (2011 – 2016)
 - *Chair* (2012 – 2014)
- General Education Committee (2011 – 2016)
- Academic Affairs (2013 – 2016)
- Academic Affairs Policies Subcommittee (2013 – 2016)
- Community of Practice: Technology Infused Pedagogy (2013 – 2014)
- Purdue Blackboard Analytics Pilot Group (2012 – 2014)
- Communication Project Team (2013)
- Faculty Search Committees:
 - Development Math (2011)
 - Radiologic Technology (2013)