

Jamie E. Becker

Curriculum Vitae

455B Life Sciences • Department of Biological Sciences
Bowling Green State University • Bowling Green, OH 43403
(931) 787-2846 • jambeck@bgsu.edu

EDUCATION

- Ph.D. Student Bowling Green State University, Bowling Green, OH; GPA: 4.0
Expected 2018 **Dissertation:** Urbanization and water limitation alters foraging patterns in terrestrial arthropods
Advisor: Kevin E. McCluney, Ph.D.
- M.S.
2013 Tennessee Technological University, Cookeville, TN; GPA: 3.88
Thesis: Factors influencing retreat site selection in the scorpions *Vaejovis cashi* and *V. electrum*
Advisor: Christopher A. Brown, Ph.D.
- B.S.
2011 Tennessee Technological University, Cookeville, TN; GPA: 3.67
- A.S.
2009 Roane State Community College, Crossville, TN; GPA: 3.68

PUBLICATIONS

- Becker, J.E.,** Ingram, H., Mirochnitchenko, N., and McCluney, K.E. (*In Prep*). Urbanization in mesic environments increases terrestrial invertebrate water demand.
- Becker, J. E.,** & Brown, C. A. (2016). Reliable Refuge: Two Sky Island Scorpion Species Select Larger, Thermally Stable Retreat Sites. *PloS one*, 11(12), e0168105.

PRESENTATIONS

- September
2016 Jamie E. Becker, Kevin E. McCluney. Water limitation alters arthropod protein and lipid intake targets. **International Congress of Entomology**, Orlando, FL.
- November
2015 Jamie E. Becker, Haley Ingram, Nadejda Mirochnitchenko, and Kevin E. McCluney. Urbanization in mesic environments increases the frequency of terrestrial invertebrate water stress. **Entomological Society of America**, Minneapolis, MN.
- August
2015 Jamie E. Becker, Haley Ingram, Nadejda Mirochnitchenko, and Kevin E. McCluney. Frequency of arthropod water stress across urban, suburban, and undeveloped habitats in a cool, mesic climate. **Ecological Society of America**, Baltimore, MD.
- April
2015 Jamie E. Becker, Nadejda Mirochnitchenko, Haley Ingram, and Kevin E. McCluney. Water limitation alters terrestrial arthropod communities in mesic, urban environments. **Belle Isle Aquarium Conservation Day Symposium**, Detroit, MI.
- March
2015 Jamie E. Becker, Haley Ingram, Nadejda Mirochnitchenko, and Kevin E. McCluney. Frequency of arthropod water stress across urban, suburban, and undeveloped habitats in a cool, mesic climate. **Midwest Ecology and Evolution Conference**, Bloomington, IN.

RESEARCH EXPERIENCE

- June 2016 – present **Field Researcher**, Bowling Green State University
Determined Toledo invertebrate community's Protein: Lipid consumption within high and low impervious surface areas
- August 2014 - present **Lab Researcher**, Bowling Green State University
Determined Protein: Lipid intake targets of house crickets (*Acheta domesticus*) while water limited
- August 2014 **Volunteer**, Bowling Green State University
Assisted in a news-worthy endeavor to determine the effects of arthropod water stress as a result of urbanization (<http://www.toledoblade.com/Education/2014/06/18/BGSU-research-team-studies-insect-damage-to-tree-leaves.html>)
- March-April 2014 **Volunteer**, Tennessee Technological University
Examined rodent population in hemlock and non-hemlock forests in Tennessee; baited and collected animals found in pitfall and Sherman traps; determined rodent characteristics (e.g., species, size, sex, etc.) before tagging and releasing them
- August 2011-2013 **Field Researcher**, Tennessee Technological University
Conducted field studies on Arizona scorpions *Vaejovis cashi* and *V. electrum* to investigate abiotic factors that may influence retreat site selection; devised and implemented novel laboratory techniques to understand thermal selection before and after parturition
- June-July 2010 and 2013 **Volunteer**, Tennessee Technological University
Captured, sexed, and banded/collared Canada geese, examining social biology; implemented methods for a population survey
- April 2011 **Volunteer**, Tennessee Aquarium Conservation Institute
Used Visible Implant Elastomer, a silicon-based tag that is injected under the skin, on the state endangered Barrens Topminnow; established preliminary techniques for specimen tagging; use of clove oil as a fish anesthetic

TEACHING EXPERIENCE

- November 2015 - 2016 **Mentor**, Bowling Green State University
Mentoring an undergraduate until he completes his honor's thesis. Responsibilities include aiding in project development, data analysis, poster/presentation development, and editing grant proposals, the honors proposal, and the final draft
- August 2014 - present **Graduate Teaching Associate**, Bowling Green State University
Anatomy and Physiology II Lab (4 semesters): responsible for designing and teaching weekly lab activities for ~60 students per semester; designing and grading quizzes and practical exams
- 2011-2013 **Graduate Teaching Assistant**, Tennessee Technological University
General Ecology Lab (2 semesters): responsible for teaching and managing field and laboratory experiments for ~60 students per semester; grading weekly lab reports
General Biology I and II Lab (3 semesters): responsible for teaching and managing laboratory experiments for ~100 students per semester; grading weekly quizzes and written assignments
General Microbiology Lab (1 semester): assisted ~35 students with daily lab assignments; graded weekly tests
- 2007-2009 **Tutor**, Roane State Community College
Assisted undergraduates with English composition and mathematical concepts and methods

OUTREACH

- February 2017 **Volunteer**, Bowling Green State University
Imagination Station, Toledo, Ohio: Girl Power! event supporting women in science. Represented the McCluney lab with a small demonstration of urban heat islands
- September 2015 **Volunteer**, Bowling Green State University
STEM in the Park: instructed the public about human anatomy and the use of microscopes
- February 2015 **Volunteer**, Bowling Green State University
Science Olympiad, Division B: Bio-Process Lab. Responsible for monitoring and grading 6-9th graders' tests.
- December 2014 **Volunteer**, Longfellow Elementary School, Toledo, Ohio
Guided ~50 4th grade students in learning the scientific method; working in small groups, students were encouraged to develop their own hypotheses before conducting their experiments and forming biologically-relevant conclusions
- August 2010 **Volunteer**, Baxter Street Fair
Managed the "Touch a Snake" booth; instructed the public about reptile and amphibian ecology

OTHER SKILLS

Experience with ArcGIS, SPSS, R, and MixSIAR

Familiarity with ecology and behavior of herpetofauna, aquatic invertebrates, and terrestrial mammals in the Eastern U.S.; proficient at capturing and identifying such species using various trapping techniques

Tennessee Technological University Herpetology Lab: 2 years' experience with daily animal care

AWARDS

Bowling Green State University Graduate Teaching Assistantship, 2014 – 2017 (**\$16000**/year + tuition waiver)

Tennessee Tech University Graduate Teaching Assistantship, 2011 – 2013 (**\$9375**/year + tuition waiver)

ESTARL Educational Scholarship, 2010 – 2011 (**\$1000**/year)

Tennessee HOPE Aspire Scholarship 2007 – 2011 (**\$1500**/year)

Tennessee HOPE Scholarship 2007 – 2011 (**\$4000**/year)

University Academic Service Scholarship 2007 – 2011 (**\$2500**/year)

Federal Pell Grant 2007 – 2011 (**\$4700**/year)

SMART Grant 2007 – 2011 (**\$4000**/year)

AFFILIATIONS

Entomological Society of America

Southwestern Research Station, in association with the American Museum of Natural History

Great Outdoors University – Tennessee Wildlife Federation

TriBeta National Biological Honor Society (former Secretary/Treasurer)