

# EMILY BROCATO

emilyrbrocato@gmail.com  
636.699.2401

## **EDUCATION**

University of Missouri—Columbia

*August '11 – May '14*

- Bachelor's of Science in Natural Resource Science
- Emphasis in Fisheries and Wildlife Sciences
- Minor in Biology
- Graduated Magna Cum Laude
- GPA: 3.75

## **PROFESSIONAL EXPERIENCE**

*Research Specialist*

*July '14 - Present*

- University of Missouri DNA Core Facility
- Manages and runs Sanger sequencing services on a 3730xl 96-capillary DNA Analyzer
- Analyzes sequencing data and uses knowledge of molecular techniques to troubleshoot sequencing issues
- Communicates directly with researchers about protocols, suggestions for sequencing improvement, and billing issues.
- Assists with maintenance and reagent ordering and inventory for MiSeq and HiSeq high-throughput instruments

*Research Assistant*

*February '12 – May '14*

- Advisor: Dr. Lori Eggert
- Studied population and landscape genetics in three species of salamander
- Performed DNA extraction, PCR, gel electrophoresis, genetic and statistical analysis using software programs (Multiplex Manager, Genemarker, Genepop, R, HP Rare, Structure, COLONY, GenAlex)
- Poster presentation: Reducing bias in population genetic inferences and effective population size estimation: The effects of sampling different life stages
- Poster presentation: Population genetic structure in the marbled salamander (*Ambystoma opacum*)

*Research Assistant*

*February '14 – April '14, August '11 – August '12*

- Advisor: Dr. Ricardo Holdo
- Studied savannah plant biology, ecology, and competition
- Collected vegetation data including plant stress, water content, and stomatal conductance

*GK-12 Intern*

*August '13 – May '14*

- Advisor: Dr. Candace Galen
- Collaborated with university professors, graduate students, and elementary school teachers to aid elementary school students in conducting a long-term research project monitoring wildlife
- Students were taught conservation, sustainability, and the scientific process through an interpretive approach

## **HONORS & AWARDS**

Life Science Undergraduate Research Opportunity Program  
Dean's List  
Wilbur Allen Memorial Scholarship, \$6,000  
Joe G. and Hazel A. Cannon Memorial Scholarship, \$1,200  
CAFNR study abroad scholarship, \$800

*May '13 to May '14*  
*Fall '10 to Spring '14*  
*April '13*  
*April '13*  
*December '12*

## **ADDITIONAL SKILLS**

Experience in manuscript writing  
Basic ArcGIS Training  
Songbird netting and banding experience  
Pond amphibian fieldwork experience  
Ability to identify Midwest birds, insects, and vegetation  
SCUBA certified

## **PUBLICATIONS**

- W.E. Peterman, Brocato, E.R., R.D. Semlitsch, and L.S. Eggert. *In Review*. Reducing bias in population and landscape genetic inferences: The effects of sampling related individuals and multiple life stages. PeerJ.
- Holdo, R., E. Brocato. 2015. Tree–grass competition varies across select savanna tree species: a potential role for rooting depth. *Plant Ecology* 216: 577-588.
- Peterman, W., E.R. Brocato, L.R. Pauley, E.C. Stuart, R.D. Semlitsch, and L.S. Eggert 2012. Development and characterization of eighteen microsatellite loci for the spotted salamander (*Ambystoma maculatum*) using paired-end Illumina shotgun sequencing. *Conservation Genetics Resources* 5: 989-991.
- Peterman, W., L.R. Pauley, E.R. Brocato, E.C. Stuart, R.D. Semlitsch, and L.S. Eggert 2012. Development and characterization of twenty-two microsatellite loci for the ringed salamander (*Ambystoma annulatum*) using paired-end Illumina shotgun sequencing. *Conservation Genetics Resources* 5: 993-995.

## **REFERENCES**

- Nathan Bivens* bivensn@missouri.edu  
DNA Core Facility Associate Director, University of Missouri  
(573) 882-0428
- Ellen Kesler* keslere@missouri.edu  
DNA Core Facility Senior Research Specialist, University of Missouri  
(573) 884-8973
- Dr. Lori Eggert* eggertl@missouri.edu  
Division of Biological Sciences, University of Missouri  
(573) 884-3685
- Dr. Ricardo Holdo* holdor@missouri.edu  
Division of Biological Sciences, University of Missouri  
(573) 882-4885