

MEGAN POULETTE
University of Kentucky Department of Forestry
214 T.P. Cooper Building Lexington, KY 40546-0073
(859) 230-0296
email: mpoulette@gmail.com

EDUCATION

- 2005-Present University of Kentucky, Lexington, K.Y.
Ph.D. Biology
- 2008-Present University of Kentucky, Lexington, KY
Graduate Certificate in College Teaching and Learning
- 2008 University of Kentucky, Lexington, KY
M.S. Plant and Soil Science
- 2002 Grove City College, Grove City, PA
B.S. Molecular Biology

TEACHING

- 2005-Present **Teaching Assistant**
University of Kentucky Department of Biology
Courses: Biology 151 and 153: Principles of Biology I and II and Biology 325: Introductory Ecology
Focused on implementing active learning strategies in the classroom.
- 2006-2008 **Teaching Assistant Mentor**
University of Kentucky Department of Biology
Courses: Biology 151 and 153
Supported, facilitated, and evaluated graduate student teaching assistants in an effort to improve TA's pedagogical abilities and better serve enrolled undergraduates.

EXPERIENCE

- 2005-Present **Ph.D. Research**
University of Kentucky Department of Forestry and Biology
Advisors: Mary Arthur, Ph.D. and Phil Crowley, Ph.D.
Conducting research to examine patterns of nutrient cycling, decomposition processes, and decomposer community structure that develop as a result of the arrangement of trees and invasive species in a savanna ecosystem in central Kentucky.
Projects involved considerable collaboration to develop spatial analysis, microbial methodology, and arthropod collection and identification techniques.
- 2003-2005 **Research Assistant**
University of Kentucky Department of Soil Science, Advisor: Tom Mueller, Ph.D.
Conducted research in central Kentucky to determine the adaptability of site specific nitrogen (N) management and precision agriculture in corn production. Developed a protocol using geographic information systems (GIS) and 3D modeling to analyze the impact of terrain attributes, electrical conductivity (EC), soil type, and spectral measurements on predicting and detecting crop response to N treatments.
- 2002-2003 **Assistant Grower, Sectional Grower**
Rocky Mountain Growers/Centennial Growers, Peyton, CO
Ensured the growth of quality greenhouse plants in all stages of development. Maintained, calibrated and modified specialized equipment and automated systems, and instructed other workers in proper and efficient equipment operation.

- 2002 **Summer Course Student**
Rocky Mountain Biological Laboratories, Gothic, CO
Field tested monitoring programs and improved management of the Snowmass-Maroon Bells Wilderness in collaboration with the Aldo Leopold Wilderness Research Institute. Surveyed wilderness areas and developed a monitoring proposal for an invasive exotic weed, *Linaria vulgaris*, and its potential biological controls.
- 2001-2002 **Lab Assistant**
Grove City College, Grove City, PA
Mentored and trained new independent student researchers in PCR, electrophoresis, and DNA sequencing techniques.
- 2001 **Intensive Study Undergraduate Researcher**
Brooks Army Medical Center, San Antonio, TX
Assisted an ongoing research project examining the correlation between breast cancer disease and tumor mitochondrial DNA utilizing cytosensors, confocal and fluorescent microscopy, and flow cytometry.
- 2001-2002 **Independent Undergraduate Researcher**
Grove City College, Grove City, PA
Examined the correlation between increased abundance of breast tumor mitochondrial DNA molecules and the stage of human breast cancer.
- 1999 **University of Colorado Health Sciences Center Student Cancer Fellow**
Pathology Department, Penrose St. Francis Hospital, Colorado Springs, CO
Researched tissue fixative and extraction method inhibition of heavy chain immunoglobulin gene rearrangement detection by PCR.

RESEARCH FUNDING

- 2006-2009 University of Kentucky administered USDA-CSREES Special Grants – Precision Resource Management, co-principle investigator, \$71,134, 2006-2009 (co-PI: Mary Arthur, University of Kentucky)
- 2007 Sigma Xi Grant in Aid of Research, \$1000
- 2007-2008 University of Kentucky Biology Department Ribble Travel Funds for professional meetings, \$650
- 2006-2008 University of Kentucky student support for travel to professional meetings/conferences, \$1200
- 2006 Karri Casner Environmental Sciences Fellowship (TFCE), \$1,600
- 2005-2007 University of Kentucky Biology Department Ribble Funds, \$1,280
- 2005 Kentucky State Nature Preserves Commission Small Grants Program, \$3,000
- 2005 Tracy Farmer Center for the Environment (TFCE) Graduate Student Research Grant, \$5,000
- 2005 University of Kentucky External Fellowship Application award, \$100

PUBLICATIONS AND PRESENTATIONS

Pike, A.C., T.G. Mueller, B. Mijatovic, B.K. Koostra, **M.M. Poulette**, and R.M. Prewitt. 2006. Topographic Indices: Impact of data source. *Soil Science* 171(10): 800-809.

Poulette, M.M. and M.A. Arthur. 2008. Single tree effects of savanna trees and the influence of an invasive species on soil nitrogen cycling and decomposition. *ESA Annual Meeting*. Milwaukee, WI. Oral presentation.

May 2008 Spring Research Symposium, University of Kentucky Center for Ecology, Evolution, and Behavior. ‘Single-tree and bush honeysuckle effects on ecosystem processes in a savanna.’ Oral presentation.

M.M. Poulette and M.A. Arthur. 2008. The influence of an invasive species on soil nitrogen cycling and decomposition dynamics. University of Kentucky Graduate Student Interdisciplinary Conference. Lexington, KY. Poster presentation.

Poulette, M.M. and M.A. Arthur. 2007. Spatial patterning of the effects of savanna trees and exotic species on soil nutrient cycling. *ASA-CSSA-SSSA Annual Meeting*. New Orleans, LA. Poster presentation.

Poulette, M.M. and M.A. Arthur. 2007. Single-tree effects of savanna trees and invasive species on soil nitrogen cycling. *ESA Annual Meeting*. San Jose, CA. Poster presentation.

June 2007 University of Kentucky MS Exit Seminar. ‘Evaluating site specific crop response to nitrogen in central Kentucky fields using precision agriculture technology.’ Oral presentation.

Weand, M.P., H.D. Alexander, and **M.M. Poulette**. 2007. A graduate student model for community outreach: Building the Forestry GSA. University of Kentucky Graduate Student Interdisciplinary Conference. Lexington, KY. Poster presentation.

Poulette, M.M. and M.A. Arthur. 2007. Single-tree effects of savanna trees and invasive species on soil nutrient cycling. University of Kentucky Biology Department Graduate Student Poster Session. Lexington, KY. Poster presentation.

Poulette, M.M., T.G. Mueller, S.A. Shearer, P.L. Cornelius, and A.C. Pike. 2006. Optimal Nitrogen Fertilizer Rate for Corn as a Function of Terrain Attributes and Ground Based Sensor Variability. ASA-CSSA-SSSA Annual Meeting. Indianapolis, IN. Poster presentation

May 2006 Spring Research Symposium, University of Kentucky Center for Ecology, Evolution, and Behavior. 'Single-tree effects of savanna trees and influence of invasive species on soil nutrient cycling and soil biota.' Oral presentation.

February 2006 University of Kentucky Forestry Department Seminar. 'Single-tree effects of savanna trees and influence of invasive species on soil nutrient cycling and soil biota.' Oral presentation.

April 2005 University of Kentucky Soil Science Department Seminar. 'Predicting spatial response to N with precision agriculture technologies. Oral presentation.

Poulette, M.M., T.G. Mueller, S.A. Shearer, T.S. Stombaugh, J.P. Fulton, R. Prewitt, and H. Cetin. Predicting Spatial Response to Nitrogen with Precision Agriculture Technologies. 2004. ASA-CSSA-SSSA Annual Meeting. Seattle, WA. Poster presentation.

HONORARIES AND AWARDS

University of Kentucky Underrepresented Women in Science Fellowship recipient (declined)

Gamma Sigma Delta Agricultural Honorary

Beta Beta Beta Biological Society, Eta Zeta Chapter, Associate Member

Grove City College Janicki Award for excellence in independent student research, second place

SOCIETY MEMBERSHIP

Ecological Society of America

Soil Science Society of America

Sigma Xi Scientific Research Society, Associate Member

SERVICE

2006-Present **Undergraduate Research**

Worked with Biology 395 students to develop and conduct independent undergraduate research.

2006-Present **UK Forestry Department Graduate Student Association**

GSA Secretary (Spring/Fall 2006)

Reforest the Bluegrass Crew Leader, Spring 2006

GSA Public Relations Officer (Spring/Fall 2007)

Graduate Student Congress Representative (Spring/Fall 2007)

Contributing author, bi-annual newsletter

2006-Present **UK Biology Department Graduate Student Association**

GSA Secretary (Spring/Fall 2007)

Helped develop and organize the first UK Biology Department Graduate Student Poster Session.

2006-Present **Agronomy Society of America-Crop Science Society of America-Soil Science Society of America**

Student Intern (2006) and participant in the graduate student listening session (2006 and 2007) at the annual meetings.

Participated in the development of ASA-CSSA-SSSA graduate student activities for the 2007 and 2008 conferences.

1995-2001 **The Carousel, A Therapeutic Riding Facility**

Served as a student coordinator to schedule lessons, confirm attendance, set up new students, design lesson plans, and determine the most beneficial horse-volunteer team for each student's class.

Instructed riding lessons for the handicapped and evaluated student progress and ability.

Lead volunteer orientations, assisted at fundraising and publicity events, and performed daily barn and ranch maintenance tasks in order to advance and promote the organization.