

Nathan E. Smith

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EDUCATION

Arizona State University Tempe, AZ August 2013-present
Animal Behavior PhD student GPA: 4.0

Juniata College Huntingdon, Pennsylvania May 2013
Bachelor of Science
Major: Biology Minor: Anthropology GPA: 3.93
summa cum laude with honors in biology

RESEARCH EXPERIENCES

Research Fellow January-May 2014
Smithsonian Tropical Research Institute Gamboa, Panama

- Studied the relationship between nutritional regulation and spatio-temporal learning in *Ectatomma ruidum*
- Studying mechanisms used to produce, sound characteristics, and behavioral importance of stridulation in *Paraponera clavata*

Research Assistant Summer-Fall 2013
Brian Haney, Arizona State University Lake Henshaw, CA

- Assisted fellow graduate student in collecting allates and ecological data concerning colonies of *Pogonomyrmex californicus*
- Performed DNA extraction of queens and eggs from colonies founded in lab, performed microsatellite analysis with obtained DNA
- Techniques learned: preparing samples for microsatellite analysis, interpreting microsatellite results

Research Assistant Summer 2012
Dr. Peter Dedon, Massachusetts Institute of Technology Cambridge, MA

- NSF funded REU at the Massachusetts Institute of Technology
- Developed and tested a novel approach to genome-wide DNA damage mapping
- Techniques learned: preparing samples for Illumina sequencing, radioisotope labeling, phosphorimaging

Research Assistant Spring 2011-Spring 2013
Dr. Jill Keeney, Juniata College Huntingdon, PA

- Genetics research project studying the mechanism of retrotransposition of the gene *TY1* in the budding yeast *Saccharomyces cerevisiae*
- Techniques learned: transposition assays, PCR, gel electrophoresis, southern blotting, genomic DNA extraction, site-directed mutagenesis, transformation assays, fluorescence microscopy, basic bioinformatics
- Resulted in honors thesis

Research Assistant Spring 2010-Fall 2010
Dr. Norris Muth, Juniata College Huntingdon, PA

- Plant ecology project studying site restoration following mortality of the allelopathic invasive species *Ailanthus altissima*
- Helped draft and revise manuscript for publication

PUBLICATIONS

Patrick T. Harris, Gabrielle H. Cannon, Nathan E. Smith and Norris Z. Muth. 2013. **Assessment of plant community restoration following Tree-of-Heaven (*Ailanthus altissima*) control by *Verticillium albo-atrum*.** *Biological Invasions*. Published online 14 February 2013. <http://link.springer.com/article/10.1007%2Fs10530-013-0430-2>

AWARDS

School of Life Sciences Graduate Research Scholarship	Summer 2014
The Dr. Andrew B. and Maria F. Brumbaugh Science Prize, Juniata College <i>For academic achievement and promise as a future scientist</i>	Spring 2013
The William A. Schlichter Award, Juniata College <i>For academic achievement, character, and promise of future success</i>	Spring 2013
Dr. Homer & Ethel Will Endowed Scholarship Fund in Biology, Juniata College <i>For academic achievement and promise of future success</i>	Spring 2012
VonLiebig Student Research Fellowship, Juniata College	Summer 2010
Richard C. Byrd Scholarship	Summer 2009

PRESENTATIONS/POSTERS

Smith, N. (2014). *Fieldwork in Panama Spring 2014*. Presented at a meeting of Arizona State University's Social Insect Research Group, Tempe, Az

Smith, N. (2014). *Investigating the Relationships between Learning and Foraging Behaviors*. Poster presented at the Frontiers in Insect Behavior, Social Organisation, and Evolution International Symposium in Wurzburg, Germany.

Smith, N. (2013). *Research Plans for time as STRI Fellow in Panama*. Presented at a meeting of several social insect labs from Arizona State University and the University of Arizona, Tucson, AZ.

Smith, N. (2013). *Previous Research Experiences and Research Interests*. Presented at a meeting of Arizona State University's Social Insect Research Group, Tempe, Az.

Smith, N. (2012). *A Novel Approach to Genome-Wide DNA Damage Mapping*. Presented at the MIT BE REU Wrap-up meeting, Cambridge, MA, and the Alleghany Branch of the American Society of Microbiologists Annual Conference, State College, PA.

Smith, N. (2011). *The Characterization of RTT105 Orthologs in Yeast Species Closely Related to *Saccharomyces cerevisiae**. Presented at the Landmark Annual Conference, Baltimore, MD.

Smith, N. (2010). *Assessment of plant community restoration following Tree-of-Heaven (*Ailanthus altissima*) control by *Verticillium albo-atrum**. Presented at the Landmark Annual Conference, Baltimore, MD.

TEACHING EXPERIENCES

Teaching Assistant for Animal Behavior (BIO 331), Arizona State University	Fall 2013
Teaching Assistant, Juniata College	Fall 2010-Spring 2013
Discussion Group Leader, Juniata College	Spring 2011-Spring 2013
Personal Tutor, Juniata College	Fall 2010-Spring 2013

OUTREACH

Graduate Partners in Science Education Develop curriculum and lead classes in local elementary schools.	August 2013-present
Ask-a-Biologist Answer questions about ants and evolutionary biology online	August 2013-present
Bio Bonanza	Spring 2012, Spring 2013

MEMBERSHIPS

- βββ, National Biological Honor Society
- Juniata College Honors Society
- American Society of Microbiologists