

Emily L. Romano

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Research Interests

Using field and laboratory methods to study the impact of permafrost thaw on carbon dynamics in the Arctic. The implications of this research are to improve our understanding of how tundra ecosystems will affect and respond to climate change.

Education

Northern Arizona University, Flagstaff, AZ | August 2015- Present
PhD Student, Earth Sciences and Environmental Sustainability
Adviser: Dr. Edward Schuur, Center for Ecosystem Science and Society

West Virginia University, Morgantown, WV
Master of Science, Soil Science | December 2014 | Overall GPA: 3.8 / 4.0
Adviser: Dr. Eugenia M. Pena-Yewtukhiw

Syracuse University, Syracuse, NY
Bachelor of Science, Earth Science | May 2011 | Overall GPA: 3.3 / 4.0
Concentration in Environmental Sciences

Bachelor of Arts, Geography
Specialization in "Nature, Society and Sustainability"

Experience

Graduate Field Research Assistant | July 2015 – August 2015
NAU/Schuur Lab CiPEHR Field Site, Healy AK

- Researched effect of permafrost thaw on an arctic tundra ecosystem using the Carbon in Permafrost Experimental Heating Research (CiPEHR) project
- Assisted with daily operation and maintenance of an automated CO₂ chamber system
- Gathered various measurements to quantify tundra warming (depth to permafrost, water table depth, plant species identification, berry counts, etc.)

Graduate Research Assistant | August 2012 – January 2015

Division of Plant and Soil Sciences, West Virginia University, Morgantown WV

- Researched effect of grass component on agricultural soils on the WVU Organic Farm
- Collected, processed and analyzed soil physical property changes in a transitional cropping system (bulk density, dry and wet aggregate stability, infiltration, nutrient stratification, pH, SOC, biomass, and yield)
- Supervised and helped to train undergraduate workers in lab and field methods

Student Technical Help | June 2012 – August 2012

Division of Plant and Soil Sciences, West Virginia University, Morgantown WV

- Supported field soil sampling in grasslands and organic farm systems
- Worked on a 5-person team to measure specific in-situ soil water movement (conductivity)
- Worked in maintenance of *Miscanthus sinensis* experiment

Geology Field Camp | *May 2010 - June 2010*

Ball State University, Muncie, IN

- Five weeks of intensive geologic mapping using standard field techniques
- Collected, reported and mapped field data in Iowa, South Dakota and Wyoming
- Worked in all weather conditions in teams or pairs

Honors and Awards

2014 WVU Smith Fund Scholarship Travel Award

2014 2nd Place in WVU Blue and Gold Graduate Student Poster Competition, out of 16

2014 Gamma Sigma Delta Inductee, National Honor Society of Agriculture

2013 WVU Smith Fund Scholarship Travel Award

2011 Estwing Award, Syracuse University Geology Department

Professional Affiliations

Member, Soil Science Society of America since 2012

Member, United States Permafrost Association since 2013

Member, Permafrost Young Researchers Network since 2014

Member, American Geophysical Union since 2015

Work History

Americorps/Student Conservation Association Intern | *June 2011 – August 2011*

Hungry Horse Ranger District, Flathead National Forest, Hungry Horse, Montana

- Patrolled river corridor, maintained river access sites; primarily field work
- Worked on a 3-person team to complete day-long assignments
- Trained to make safety a priority in a high risk environment, with training in river rescue, First Aid, CPR, bear safety, defensive driving, and river navigation

Presentations and Published Abstracts

Romano, E. L. and E.M. Pena-Yewtukhiw. 2013. Grass component effect on soil physical properties in an organic rotation. Annual Meeting of the Soil Science Society of America, 3-6 November, Tampa, FL. (on CD-ROM)

Romano, E. L. and E.M. Pena-Yewtukhiw. 2014. Use of a Temporary Grass Component and Compost to Improve Soil Quality in an Organic Rotation. Annual Meeting of the Soil Science Society of America, 2-5 November, Long Beach, CA.

Romano, E. L. and E.M. Pena-Yewtukhiw. 2014. Organic Crop Rotations: Effect of Temporary Grass Component on Corn Productivity. Annual Meeting of the Soil Science Society of America, 2-5 November, Long Beach, CA.

Romano, E. L. and E.M. Pena-Yewtukhiw. 2015. The effect of a rotational grass component on soil physical quality in an organic system. **(In preparation)**

E.M. Pena-Yewtukhiw and *E. L. Romano*. 2015. Changes in carbon content and soil aggregation on an early transition from crops to grassland. **(In preparation)**