

**Bloomsburg University of Pennsylvania**  
**Department of Environmental,  
Geographical, and Geological Sciences**  
**Annual Report 2019**



# Bloomsburg University of Pennsylvania

## Department of Environmental, Geographical, and Geological Sciences

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<https://giving.bloomu.edu/eggs>

## A Note from the Chair

### Departing Faculty

We were sad to say goodbye to **Dr. Danqing (Dana) Xiao**, our cartographer, and **Dr. Sandra Kehoe-Forutan**, our planner. Dr. Xiao left to be closer to family in the New York City area and pursue other opportunities. Dr. Kehoe-Forutan retired after a long and productive career here. She was a pillar of the department, and her impact on our students, the department, and the university was enormous. She and her husband, Nasser, have relocated to sunny Southern California. Both will be missed.

### New Faculty

In August, we welcomed two new faculty members: **Dr. Rebecca Bourgault** and **Dr. Alan Gishlick**. Dr. Bourgault was hired in August to be our new soil scientist. She came to us from Delaware Valley University and has specialties in soils and wetlands. She immediately took over our developing Soil Judging Team and took them to the Regional Soil Judging Competition this past fall. She has extensive experience as a soil consultant and we plan to use her expertise to develop a Soil Science Minor to complement our recent (and popular) Hydrology Minor.

Dr. Gishlick was a temporary faculty with us for five years and was converted to the tenure-track in August. He is a paleontologist and, in addition to teaching that class for the past five years, has an extensive background in museum science and curation. He has reorganized our fossil collection and taught a new course in Museum Science the past three years. We expect to be turning that expertise into a new interdisciplinary minor for interested students in EGGS, Biology, and Anthropology/Archaeology.

### Soil Judging 2019



Lto R: Nicholas Sherwood, Erin Boulger, Auston Hummel, Alexander Sriharsha, and Ian Martinez.

### Field Geology Course (*EGGS 330*)

Over a three-week period this past summer, students in our introductory *Field Geology* course (*EGGS 330*) were led by **Drs. Cindy Venn, John Hintz, and Jennifer Whisner** to a variety of landscapes in **Southern California** region, including Death Valley and Catalina Island. As usual, the landscapes were spectacular and our cover gives you a taste!

## Honors Reception

The department held our first Spring Honors reception at the new Greenly Center to honor the recipients of our scholarships and outstanding student awards. We also took this time to honor Dr. Kehoe-Forutan prior to her last graduation ceremony.



Lto R: Meg Ronan, Zach Hartman, Anna Ellis, Autumn Helfrich, Lauren Barrett, Kyle Argenziano, Tyler Ulmer, Sean Leshko, Dr. Kehoe-Forutan. Not shown: Kate Mather-Shingara and Sabrina Savidge

## Internships (EGGS 497/498)

We had another fantastic year for our Geography and Planning majors, with 25 full-time interns placed all around the region in the summer of 2019.



Please drop by if you're in the area and say hello, or keep up with us on our

Homepage ([www.bloomu.edu/eggs](http://www.bloomu.edu/eggs)),  
Facebook ([www.facebook.com/BUEGGSalumni](https://www.facebook.com/BUEGGSalumni)), or  
Foundation page ([itspersonal.bloomu.edu/eggs](https://itspersonal.bloomu.edu/eggs)).

# *EGGS Honors Reception*

*Friday, May 10, 2019, at the Greenly Center, Bloomsburg, PA*

## *Awards*

**Outstanding Senior in Environmental Geoscience**

*Lauren Barrett*

**Outstanding Senior in Professional Geology**

*Autumn Helfrich*

## *Gamma Theta Upsilon*

**New Inductees to the International Honor Society in Geography**

*Meg Ronan*

*Tyler Ulmer*

## *GIS Tutor*

**Geography and Planning Major/Spatial Analysis and GIS Minor/GIS Tutor**

*Anna Ellis*

## *Scholarships*

**Braun Geology Field Camp Scholarship**

*Katherine Mather-Shingara*

*Sabrina Savidge*

**Daniel J. Tearpock Scholarship**

*Sean Leshko*

**Joshua D. Sonntag '14 & Chelci A. Kravabloski '16 EGGS Scholarship**

*Kyle Argenziano*

**Professor Brian & Marty Johnson Geography/Planning Scholarship**

*Kyle Argenziano*

**Tearpock Geoscience Fund**

*Zachary Hartman*



## **Patricia J. Beyer**

Associate Professor of EGGS

### **Scholarly Interests**

Fluvial Geomorphology, Surface Hydrology, Student Success and Retention

### **Education**

Arizona State University, Tempe, AZ, Ph.D., Geography 1997

University of Illinois, Urbana-Champaign, IL, M.S. Geography 1992

Valparaiso University, Valparaiso, IN, B.A. Geography/English 1990

### **2019 Presentations**

None

### **2019 Teaching**

Spring 2019: EGGS 107 Natural Disasters, 3 sections (35 students each)  
EGGS 301 Water Resources Management, 1 section (26 students)

Summer 2019: EGGS 107 Natural Disasters, 1 section online (30 students)

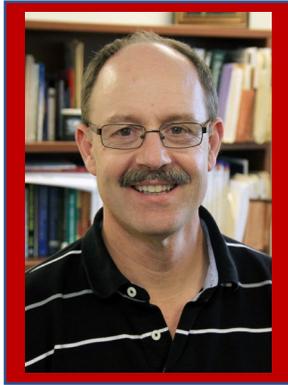
Fall 2019: EGGS 101 Introduction to Physical Geography, 3 sections (40 students each)  
EGGS 271 Fundamentals of Hydrology 1 section (26 students)

Winter 2019: EGGS 107 Natural Disasters, 1 section online (30 students)

### **2019 Service Activities**

Spring 2019: EGGS Department Committees: Observation & Evaluation

Fall 2019: COST Curriculum Committee Chairperson  
EGGS Department Committees: Observation & Evaluation  
Secretary for Middle States Division of the Association of American Geographers



**Dr. John E. Bodenman**

**Professor**

**Summer 2019 EGGS 498: Geography and Planning Seminar**



### **Scholarly Interests**

Research interests include waste management and recycling, spatial dynamics of the financial services sector, and rural economic development programs and policies. Always rewarding is my work with student majors working on a wide variety of projects in the Geography and Planning Seminar (EGGS 498)—the course that students take in conjunction with their summer internships (please see picture above of Summer 2019 interns).

### **Education**

Ph. D. (1995) Geography. The Pennsylvania State University at University Park.

M.S. (1991) Resource Economics. The Pennsylvania State University at University Park.

B.A. (1985) Economics. Willamette University in Salem, Oregon.

### **Recent Presentations and Publications**

**Bodenman, J. E.** and J. Haney. "*Waste Disposal and Recycling in Rwanda: Challenges and Opportunities*," poster presented at the 115th Annual Meeting of the American Association of Geographers, Washington, DC, April 5, 2019.

Haney, J. and **J.E. Bodenman**. 2017. "Creating Markets for Recyclable Materials: The Case of Municipal Solid Waste in Haiti." *Middle States Geographer* 50(1): 17-27.

Nomie, Darion, and **John E. Bodenman**. 2016. "An Economic Opportunity Analysis of Downtown Bloomsburg." *Middle States Geographer* 49(1): 21-31.

### **2019 Teaching**

Spring: Environmental Issues and Choices (EGGS 105)  
Recreation, Tourism, and Sport (EGGS 315)  
Honors Environmental Issues and Choices (HONORS 105)  
Fall: Environmental Issues and Choices (EGGS 105)  
Economic Geography (EGGS 221)  
EGGS University Seminar (INTSTUDY 100)

### **2019 Service Activities**

Executive Board Vice President, BU Protestant Campus Ministries  
Advisor, Gamma Theta Upsilon (GTU) Geography Honor Society  
BU Honors Program Advisory Committee (HAC)



**Dr. Rebecca Bourgault**

**Bloomsburg University Soil Judging Team, 2019**

**Assistant Professor**

### Scholarly Interests

- I am interested in studying naturally occurring elements (trace metals and rare earths) to track water movement in the vadose zone.
- I am interested in studying legacy lead pollution in central PA – sources, forms, and bioreactivity.
- I am interested in studying legacy phosphorus pollution from eroding streambanks in central PA – sources, forms, and eutrophication potential.

### Education

2014 Ph.D., Plant and Soil Science, University of Vermont  
 2008 M.S., Natural Resource Sciences, University of Maryland, College Park  
 2005 B.S., Environmental Science and Policy, University of Maryland, College Park

### Recent Publications (2015-2019)

Bailey, S., D. Ross, N. Perdrial, M. Jercinovic, J. Webber, and R. **Bourgault**. 2019. Determination of Primary Mineral Content and Calcium Sources in Forest Soils using Electron Probe Microanalysis Mapping and Cluster Analysis. *Soil Sci. Soc. Am. J.* doi:10.2136/sssaj2019.07.0231

**Bourgault**, R., D. Ross, S. Bailey, K. McGuire, and J. Gannon. 2017. Redistribution of soil metals and organic carbon via lateral flowpaths at the catchment scale in a glaciated upland setting. *Geoderma* 307:238-252.

Gannon, J., K. McGuire, S. Bailey, R. **Bourgault**, and D. Ross. 2017. Lateral water flux in the unsaturated zone: a mechanism for the formation of spatial soil heterogeneity in a headwater catchment. *Hydrological Processes* 31:3568-3579.

Ishee, E., D. Ross, K. Garvey, R. **Bourgault**, and C. Ford. 2015. Phosphorus Characterization and Contribution from Eroding Streambank Soils of Vermont's Lake Champlain Basin. *J. Env. Qual.* 44:1745-1753.

**Bourgault**, R., D. Ross, and S. Bailey. 2015b. A Response to "Comment on 'Chemical and Morphological Distinctions between Vertical and Lateral Podzolization at Hubbard Brook' by Bourgault et al." *Soil Sci. Soc. Am. J.* 79:1818.

**Bourgault**, R., D. Ross, and S. Bailey. 2015a. Chemical and morphological distinctions between vertical and lateral podzolization at Hubbard Brook. *Soil Sci. Soc. Am. J.* 79:428-439.

### **2019 Teaching**

Fall: Introduction to Environmental Science (100) – 2 sections  
Advanced Soil Science (413) – with lab  
Soil Morphology Practicum (313)

### **2019 Scholarship Activities**

- I reviewed three manuscripts for *Catena* (an international journal of soil science).
- I am serving as co-PI with Dan McCurry (Chemistry Dept.) on a grant proposal for approximately \$450,000 to the National Science Foundation – Major Research Instrumentation program entitled "Acquisition of a Field Emission Scanning Electron Microscope." Others from EGGs, Chemistry, and Biology departments are collaborating.
- I am a co-author of a new publication in *Soil Science Society of America Journal* (see below)
- I was a fellow in the Teaching Excellence Academy at TALE, Jan 2020.
- I have developed an Independent Study for a student for Spring 2020 in Wetland Delineation.

### **2019 Service Activities**

- As coach of the BU Soil Judging Team, I took the students to Easton, Maryland, for the Northeast Regional Soil Judging Contest.
- EGGs representative to University Forum, 2019-2020.
- I participated in the Majors/Minors Fair, Oct. 2, 2019.
- Professional Member, Pennsylvania Association of Professional Soil Scientists.
- I was invited to Southern Columbia Area School District 6<sup>th</sup> grade science class to serve on an expert panel to question and judge soil erosion project presentations.
- I have my own consulting company and I am pursuing certification this year as a PA Sewage Enforcement Officer.



**Jeff Brunskill, Ph.D.**  
**Associate Professor**

### **Scholarly Interests**

My research interests focus on the public dissemination of meteorological information, spatial cognition, applications of geographic information system (GIS) technologies and geographic education. Over the last year I collaborated with students and faculty in the computer science department at Bloomsburg University to develop a web-based portal for managing tenure documentation, and an application to track the progression of the sun across the daytime sky. I am currently collaborating with a private software development company to develop a commercial application of a weather visualization software program that incorporates time-lapse videos of local weather phenomena. I also worked with BU faculty and undergraduate research assistants on several GIS projects including a viewshed analysis of natural gas towers in Lycoming County, and an analysis of how the natural gas industry uses GIS to routing natural gas pipelines. In addition, I continued the design of a new upper-level applied course on GIS (EGGS 390 – Special Topics / GIS III).

### **Education**

- University at Buffalo, Buffalo NY, Ph.D., Geography, 2005
- University at Buffalo, Buffalo NY, M.A., Geography, 2001
- North Carolina State University, Raleigh NC, B.S., Meteorology, 1999

### **Publications / Grants / Conference Presentations**

- **Conference Presentation:** Franek, B., and Brunskill J.C., *An Investigation of the Implementation of Pre-Construction Routing of Natural Gas Pipeline Stream Crossings*. Presented at the Annual Meeting of the Association of American Geographers, Washington D.C. April 5, 2019.
- **Conference Presentation:** Brunskill, J.C., and Jones C., *Bloomsburg Weather Viewer*. Presented at the Annual Meeting of the Association of American Geographers, Washington D.C. April 5, 2019.

### **Teaching**

- EGGS 160 – Geography and Information Systems
- EGGS 242 – Map Use and Analysis
- EGGS 255 – Meteorology
- EGGS 360 – Principles of GIS I
- EGGS 361 – Principles of GIS II
- EGGS 390 – Special Topics / Principles of GIS III
- Advisees: 8 majors; 23 minors

### **Recent Service Activities / Committees**

- Re-Developed EGGS 160 (Geography and Information Systems) as a General Education course for the EGGS Department, and developed EGGS 390 (Special Topics / GIS III)
- **Committees:** EGGS Search Committee; EGGS Promotion Committee; EGGS Geography Curriculum Committee; Gamma Theta Upsilon (GTU) Geography Honors Society Advisor; University-wide Sabbatical Committee (Chair)



## **Dr. Tina Delahunty**

### **Assistant Professor**

#### **Scholarly Interests**

Biogeography, Land Use Land Cover Change, Recreation Planning, GIS, Remote Sensing

#### **Education**

Ph.D. University of Florida, Geography

#### **Publications 2016-2018**

2018. Muharam, F.M., Delahunty, T. (corresponding author), and Mass, S.J. "Evaluation of nitrogen treatment effects on the reflectance of cotton at different spatial scales." *International Journal of Remote Sensing*. Published online: 02 August. <https://www.tandfonline.com/doi/abs/10.1080/01431161.2018.1488286>

2017. Pitt, A.L., Shinskie, J.L., Tavano, S.M., **Delahunty, T.**, and Spear, S.F. "Decline of giant salamander assessed with historical records, environmental DNA, and multi-scale habitat data." *Freshwater Biology*. 62(6): 967-976.

2016. Liu, Ying, **Delahunty, Tina**, Zhao, Naixhou, and Cao, Guofeng. "These lit areas are undeveloped: Delimiting China's urban extents from thresholded nighttime light imagery." *International Journal of Applied Earth Observation and Geoinformation*. 50 (2016): 39-50.

#### **Presentations 2016-2018**

2018. Association of American Geographers Conference. Paper presentation: "Accuracy of Remotely Sensed Data for Land Cover Location and Quantification."

2017. International Congress for Conservation Biology. Paper presentation: "Using Old and New Data to Rapidly Identify Extent and Drivers of Aquatic Species Population Decline." Cartagena, Colombia.

2016. Southeast Division of the Association of American Geographers (SEDAAG) Conference. Paper presentation: "Utility of a Land Use Land Cover Dataset for Habitat Location."

2016. The Bog Learning Network, Winter Meeting. Paper presentation: "Use and Misuse of the National Land Cover Data Set for Wetland Monitoring."

#### **Research Proposals 2016-2018**

2016: National Science Foundation. Sedimentary Geology and Paleobiology Program 16536.  
PI: "Holocene vegetation variability of southern Central Appalachia" \$236,268

#### **Teaching 2019**

Spring Principles of Geographic Information Systems  
Introduction to Physical Geography

Fall Remote Sensing of the Earth  
Principles of Geographic Information Systems  
Introduction to Physical Geography



## **Dr. Benjamin Franek**

### **Assistant Professor**

#### **Scholarly Interests**

I have several scholarly interests. One regards watershed management – I have refined and developed practices that watershed organization members can use to assess the integrity of stream systems via efficient visual techniques. This work has led to identification of degraded local stream reaches and, ultimately, to work toward their naturalization and restoration. Another interest concerns eliciting study behaviors of students that lead to success in the classroom. This work has led to development of techniques that instructors can use to help students recognize potential troubles before they happen. One more interest I have involves research at the eco-hydrological interface. I continue to work on a project which is establishing reptile usage of transformed/aged infrastructure near fluvial systems. With all of my scholarly interests, students have and will continue to be integral to success.

#### **Education**

University of Connecticut, Storrs, CT, Ph.D., Geography, 2013.

Dissertation Research: “On Stream Assessment: Human Perception and Spatiotemporal Delineation of Geomorphic Units.”

California University of Pennsylvania, California, PA, M.A., Geography and Regional Planning, 2004.

Thesis: “The incorporation of renewable energy resources at the local and regional levels: A case study of Washington County, Pennsylvania municipalities.”

Pennsylvania State University, University Park, PA, B.S., Physical & Environmental Geography, 2001.

Pennsylvania State University, Dubois, PA, A.S., Wildlife Technology, 1998.

#### **2017-2019 Academic Production**

(\*Bloomsburg University undergraduate co-author/contributor)

**Franek, B. L.** (Session Chair) & Brunskill, J. C. (2019). *An Investigation of the Implementation of GIS During Pre-construction Routing of Natural Gas Pipeline Stream Crossings*. Paper Presentation. American Association of Geographers Annual Meeting, Program with Abstracts. Washington D. C.

Johnston, B. N., & **Franek, B. L.** (2019). *Rain barrels, rain gardens, green roofs: A holistic, hydrologic approach to proactive stormwater management*. Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.

**Franek, B. L.**, & \*Ruziecki, M. R. (2018). *Glyptemys insculpta (Wood Turtle). Rail trail nesting challenges*. Herpetological Review.

**Franek, B. L.** (2018). *Researching Wood Turtles (Glyptemys insculpta) on the Pine Creek Rail Trail*. Susquehanna Heartland Coalition For Environmental Studies.

- Brunskill, J. C., **Franek, B.L.**, Wickenheiser, O., & Hess, M. (2018). *Using GIS to Evaluate the Regulatory Structure When Routing Natural Gas Pipelines Across Streams*. Paper Presentation. American Association of Geographers annual meeting, Program with Abstracts. New Orleans.
- \*Wickenheiser, O., Hess, M., Brunskill, J. C., & **Franek, B.L.** (2018). *Developing A GIS Suitability Analysis to Route Natural Gas Pipelines Using Open-Cut Trenching*. Poster Presentation. American Association of Geographers annual meeting, Program with Abstracts. New Orleans.
- \*Ruziecki, M. R., & **Franek, B. L.** (2017). *From industrial relic to wildlife corridor: establishing wood turtle nesting along Pine Creek Rail Trail*. Program with abstracts, 12<sup>th</sup> Annual Susquehanna River Symposium. Lewisburg.
- Franek, B. L.**, & Wenner, D. (2017). *A tale of two sites: The good, the bad, & the educational*. Poster Presentation. American Association of Geographers annual meeting. Boston.
- \*Ruziecki, M. R., & **Franek, B. L.** (2017). *Developing a technique to efficiently establish Wood Turtle (*Glyptemys insculpta*) usage of the Pine Creek Rail Trail*. 7<sup>th</sup> Annual Susquehanna Valley Undergraduate Research Symposium. Bloomsburg.
- \*Ruziecki, M. R., & **Franek, B. L.** (2017). *Investigating the hydrological setting function of Wood Turtles (*Glyptemys insculpta*) on the Pine Creek Rails-to-Trails*. Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.
- \*Fackler, E. L., & **Franek, B. L.** (2017). *Investigating the biological function of Wood Turtles (*Glyptemys insculpta*) on the Pine Creek Rails-to-Trails*. Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.
- Franek, B. L.** (2017). *Faculty volunteering: affording experiential learning opportunity venues*. Teaching and Learning Enhancement (TALE) Center Seminar. Bloomsburg University. Bloomsburg.

#### Peer Reviewer

Journal: Journal of the Middle States Division American Association of Geographers.

Book: Abbott, P. L. *Natural Disasters*, (11<sup>th</sup> ed.). New York, NY: McGraw-Hill.

#### Grants/Funding

- Briar Creek Association for Watershed Solutions. (2018). *Trees (container seedlings) for flood mitigation on Briar Creek Watershed*. PPL Electric Utilities, Community Roots program: \$400.
- Franek, B. L.**, & Mock, L. (2018). *EGGS 211: Regional Geography Abroad*. Department of Environmental, Geographical, and Geological Sciences – John Enman Fund: \$2,000.
- \*Ruziecki, M. R., & **Franek, B. L.** (2017). *Investigating the eco-hydromorphic setting function of the Wood Turtle (*Glyptemys insculpta*)*. Bloomsburg University Undergraduate Research Scholarship and Creative Activities (URSCA) Award: \$1,500.
- Franek, B. L.**, & Mock, L. (2017). *Course logistics, EGGS 211: Regional Geography Abroad*. College of Science and Technology, Dean's Office Faculty Support: \$1,000.
- Briar Creek Association for Watershed Solutions. (2016-2017). *Weiss/Reeder property agricultural impairment mitigation and stream naturalization project*. Northeccentral Pennsylvania Conservancy and Pennsylvania Department of Environmental Protection: \$5,246.
- Whisner, J., & **Franek, B. L.** (2016-2017). *Collecting and analyzing GIS and stream discharge data in support of developing a flood-forecasting model for the Fishing Creek watershed*. Degenstein Foundation through the Susquehanna Heartland Coalition for Environmental Studies: \$4,254.
- Franek, B. L.**, & Mock, L. (2016). *Development of a new course, EGGS 211: Regional Geography Abroad*. Department of Environmental, Geographical, and Geological Sciences: \$500.
- Franek, B. L.**, & Mock, L. (2016). *Development of a new course, EGGS 211: Regional Geography Abroad*. College of Science and Technology, Dean's Office Faculty Support: \$1,000.

### **Teaching (2019)**

Spring: Independent Study in EGGS (EGGS 475)  
Surface Hydrology (EGGS 370)  
Introduction to Environmental Science (EGGS 100)  
Summer: Internship in Planning (EGGS 497)  
Internship in EGGS (EGGS 496)  
Regional Geography Abroad: Norway (EGGS 211)  
Fall: Independent Study in EGGS (EGGS 475)  
Environmental Conservation (EGGS 358)  
Water Resources Management (EGGS 301)  
Introduction to Environmental Science (EGGS 100)

### **Selected Service Activities**

2019: Bloomsburg University 2nd Annual Conference of the Academy (**Invited Speaker**).  
2017-2018: Virtual Ambassador Program with the Royal Norwegian Embassy, Washington D.C. (**Co-Host**).  
2018-2020: Bloomsburg University, General Education Committee (GEC) (**Committee Member**).  
2018-2020: Bloomsburg University Environmental Sciences Learning Community (**Co-Director**).  
2018 “Good Water” at Sullivan County, PA: Good Water Good Coffee Event (**Invited Presenter**).  
2018 “Native Plants for Stream Naturalization,” with Mary Jo R. Gibson (Penn State Extension Master Gardener), Berwick Public Library, Berwick, PA (**Presenter**).  
2018: Bloomsburg University Majors, Minors & Career Pathway Options Fair (**Attendee**).  
2017 Climate and Weather: to Bloomsburg, PA Girl Scout Troop 30202 (**Invited Presenter**).  
2017: Bloomsburg University Majors, Minors & Career Pathway Options Fair (**Participant**).  
2009-Present: Briar Creek Association for Watershed Solutions (**President [past Secretary]**).  
2015-2018: An exploration of EGGS materials for student interpreters, for Suzi Glowaski, Students with Disabilities Center. (**Invited presenter**).  
2016-Present: Columbia County Water Education Day (**Volunteer**).  
2013-Present: Bloomsburg University: Science Iditarod for regional high schools (**Quiz Master**).  
2011-Present: Regional watershed groups annual meeting (**Organizer/presenter**).



## **Alan D. Gishlick**

### **Assistant Professor**

Curatorial Affiliate, Yale Peabody Museum of Natural History

### **Scholarly Interests**

My interests surround the evolution of biological form, function and behavior as elucidated by the fossil record of life. This has involved research on both vertebrate and invertebrate organisms in both the paleontological and neontological. I am also interested in the evolution of fossil ecosystems in the Triassic Chinle formation, southwestern United States.

### **Education**

2002 Ph.D., Geology and Geophysics (Paleontology), Yale University, New Haven, CT

1995 BA, Geology, Augustana College, Rock Island, IL

### **2019 Teaching**

Spring: Dinosaurs (EGGS 103)

Historical Geology (EGGS 130)

Introduction to Paleontology (EGGS 365)

Fall: Dinosaurs (EGGS 103)

Natural Disasters (EGGS 107)

Special Topics: Museum Science (EGGS 390)

### **Graduate Student**

Keara Y. Drummer 2018-2020. Thesis topic: Using Photogrammetry to study morphological variation in the trilobite genus *Walliserops* for the purpose of testing theories of sexual selection and polyphenism. Anticipated completion - May 2020.

### **2019 Service Activities**

Continued to organize and manage the department's geological and paleontological collections, directed a student worker on the curation and cataloging of the specimens in the collection. Oversaw the setup of a new laboratory for the preparation of fossils. Developed a minor for museum science that will be anchored by two new courses on museum collection conservation.

Led the Yale Peabody Museum of Natural History annual field program in the Petrified Forest National Park.



**Dr. Jennifer J. Haney**  
**Assistant Professor**



**Spring 2019 EGGs 311 Field Trip to 9/11 Memorial and Museum**

#### **Scholarly Interests**

Environmental Hazards and Vulnerability  
Societal Responses to Environmental Hazards  
Hazard perception  
Geographies and Drivers of Terrorism

#### **Education**

Ph.D. (2010) Geography (Hazard Vulnerability). University of South Carolina, Columbia, SC.  
M.A. (2006) Geography (Hazard Vulnerability). Binghamton University, Binghamton, NY.  
B.A. (2003) Geography with Environmental Planning Option. Bloomsburg University, Bloomsburg, PA.

#### **Recent Presentations and Publications**

**Haney, J.J.**, C. Havice, and J.T. Mitchell. 2019. "Science or Fiction?: The Persistence of Disaster Myths in Hollywood Films." *International Journal of Mass Emergencies and Disasters* 37(3): 286-305.

**Haney, J. J.** 2019. Waste Management in Port-au-Prince, Haiti. In J. Luo (Ed.), *Cities around the World: Struggles and Solutions to Urban Life* (pp. 281-287). Santa Barbara, CA: ABC-CLIO.

**Haney, J. J.** 2019. Air Pollution in New Delhi, India. In J. Luo (Ed.), *Cities around the World: Struggles and Solutions to Urban Life* (pp. 33-38). Santa Barbara, CA: ABC-CLIO.

**J.J. Haney** and C. Havice. "Factors Influencing Evacuation Behavior in the Kīlauea Eruptions: An Examination of Residents in the Puna District, Hawai'i", paper presented at the Annual Meeting of the American Association of Geographers, Washington, D.C., April 5, 2019.

Bodenman, J. and **J.J. Haney**. "Waste Disposal and Recycling in Rwanda: Challenges and Opportunities", poster presented at the Annual Meeting of the American Association of Geographers, Washington, D.C., April 5, 2019.

#### **Grants**

**Haney, J.J.** (PI). December 2019). "An Examination of Recycling Programs in Rural Pennsylvania, 2010-2018." The Center for Rural Pennsylvania. Amount: \$49,356.

#### **2019 Teaching**

Introduction to Environmental Science (EGGS 100); Environmental Issues and Choices (EGGS 105); Geography and Information Systems (EGGS 160) Environmental Risks and Hazards (EGGS 305); Geography of Terrorism (EGGS 311)

**Service Activities**

University Wide Sabbatical Committee

Columbia County Emergency Management Agency – Volunteer

Curriculum/Assessment Committee – Geography Pod

Outstanding Student in Geography and Planning Award Committee – Chair

Temporary Faculty Search Committee – Planning (2019, member)

Joshua D. Sonntag '14 & Chelci A. Kravabloski '16 EGGGS Scholarship Selection Committee

Manuscript Reviewer: *Disasters, International Journal of Mass Emergencies and Disasters,*  
*Journal of Geography in Higher Education*

**Certifications**

Certified Emergency Manager (CEM) Designation by International Association of Emergency Managers (IAEM)



**John G. Hintz**  
**Professor**



### **Scholarly Interests**

My research interest center broadly on sustainable management of land resources. My two foci are publicly owned (especially federally owned and managed) lands and the politics and ideologies that guide their management. I am particularly interested in debates over the presence and role of vertebrate predators, including reestablishing their presence and roles in places where predators have been eradicated (i.e., rewilding). A second, related, research thread centers on sustainable agriculture, specifically land use methods by those farmers that self-identify as sustainable food producers. Ideally, I would like to bridge these two research foci, assessing the potential for planned integration of publicly owned and sustainably farmed lands into ecologically sustainable and trophically rich integrated landscapes.

### **Education**

**2005** University of Kentucky, Ph.D., Geography,

**1998** University of Idaho, M.S., Geography,

**1988** Florida State University, B.S., Geography

### **2019 Teaching**

Spring: Land Resources Management (EGGS 302, 1 section)

Environmental Issues and Choices (EGGS 105, 3 sections)

Fall: U.S. Public Lands (EGGS 386, 1 section)

Environmental Issues and Choices (EGGS 105, 2 sections)

Summer: Special Topics in Field Geology (EGGS 330, 1 section)

### **2018-19 Service Activities**

APSCUF Meet and Discuss: faculty co-chair

EGGS Departmental Committees: Budget Committee (Chairperson); Sabbatical Committee;

Curriculum/Assessment Committee; Observation and Evaluation Committee; Temporary Pool Search Committee

Other University Service Work: BU Green Campus Initiative (founding member); Bloomsburg University Outdoor Classroom (supervisor)

### **Professional Conference Presentations**

“Simple Classroom Tools for Sophisticated Ideas: Sustainable Agricultural Soils as Renewable Resources,” Poster presented at the Association of American Geographers Annual Meeting. Washington, DC.



## **Dr. Brett T. McLaurin, P.G.**

### **Professor**

#### **Scholarly Interests**

I am a classically trained stratigrapher-sedimentologist who has worked in a variety of geologic settings in the United States and Mexico. Much of my research and geologic mapping has focused on fluvial successions in the Devonian – Pennsylvanian of Pennsylvania, the Cretaceous of Utah, Miocene-Pliocene fluvio-lacustrine deposits in Nevada, and fluvial systems in the Cretaceous of Sonora, Mexico. My industry background is largely in the aggregate mining industry (construction materials) and oil and gas exploration. Other research interests include geoarchaeology in northern Arizona and Mexico and medical geology studies in the Mojave Desert of southern Nevada, addressing the occurrences of naturally occurring asbestos and arsenic. I utilize an integrative approach to research and lean heavily on GIS and remote sensing technology.

#### **Education**

- 2000 Ph.D., Geology (Stratigraphy and Sedimentology), University of Wyoming  
Dissertation: Alluvial and Sequential Architecture of the Castlegate Formation, East-Central Utah.  
Advisor: Dr. Ronald J. Steel
- 1995 M. S., Geology (Stratigraphy and Sedimentology), UNC-Wilmington  
Thesis: Stratigraphic and Sedimentologic Analysis of the Paleocene Beaufort Group, Lenoir and Craven Counties, North Carolina. Advisor: Dr. William B. Harris
- 1993 B. S., Geology, UNC-Wilmington.

#### **2017 – 2019 Publications**

- Whisner, S.C., Whisner, J. and **McLaurin, B.**, 2019, Stop 2 - Folding in the Catskill Formation along U.S. 220: *in* Anthony, R., ed., The case of the missing Catskill – Clues from Wayne, Sullivan and Susquehanna counties, Guidebook for the 84<sup>th</sup> Annual Field Conference of Pennsylvania Geologists, p. 31-33.
- McLaurin, B.**, Whisner, S.C. and Adams, J., 2019, Stop 5 – Steep dipping Catskill Formation, Little Loyalsock Creek: *in* Anthony, R., ed., The case of the missing Catskill – Clues from Wayne, Sullivan and Susquehanna counties, Guidebook for the 84<sup>th</sup> Annual Field Conference of Pennsylvania Geologists, p. 43-48.
- McLaurin, B.**, Barebo, Himmelberger, T., Topping, L. and Whisner, S.C., 2019, Stop 6 – “Haystacks” interval at Dutchman Falls, Loyalsock Creek: *in* Anthony, R., ed., The case of the missing Catskill – Clues from Wayne, Sullivan and Susquehanna counties, Guidebook for the 84<sup>th</sup> Annual Field Conference of Pennsylvania Geologists, p. 49-53.
- McLaurin, B.**, Barebo, Himmelberger, T., Topping, L. and Whisner, S.C., 2019, Preconference Field Trip: Haystack Rapids, Loyalsock Creek: *in* Anthony, R., ed., The case of the missing Catskill – Clues from Wayne, Sullivan and Susquehanna counties, Guidebook for the 84<sup>th</sup> Annual Field Conference of Pennsylvania Geologists, p. 83-90.
- Carter, M.W., and **McLaurin, B.T.**, 2019, Paleoliquefaction field reconnaissance in eastern North Carolina—Is there evidence for large magnitude earthquakes between the Central Virginia Seismic Zone and Charleston Seismic Zone?: U.S. Geological Survey Scientific Investigations Report 2019–5057, 54 p., <https://doi.org/10.3133/sir20195057>.
- Keil, D.E., Buck, B., Goossens, D., **McLaurin, B.**, Murphy, L., Leetham-Spencer, M., Teng, Y., Pollard, J., Gerads, R., DeWitt, J.C., 2018, Nevada desert dust with heavy metals suppresses IgM antibody production: Toxicology Reports, Volume 5, p. 258-269.
- Jamie C. DeWitt, Brenda J. Buck, Dirk Goossens, Yuanxin Teng, James Pollard, **Brett T. McLaurin**, Russell Gerads, Deborah E. Keil, 2017, Health effects following subacute exposure to geogenic dust collected from

active drainage surfaces (Nellis Dunes Recreation Area, Las Vegas, NV), Toxicology Reports, Volume 4, p. 19-31, <https://doi.org/10.1016/j.toxrep.2016.12.002>.

**2017 – 2019 Conference Presentations** (\*Bloomsburg University undergraduate co-author)

- Topping, L.\* and **McLaurin, B.T.**, 2019, Use of UAV technology in reconstructing the alluvial architecture of channel-belts in the Cedar Mountain Formation (Early Cretaceous), Green River, Utah: Geological Society of America Abstracts with Programs. Vol. 51, No. 5, doi: 10.1130/abs/2019AM-339284.
- Buck, B.J., Metcalf, R.V., **McLaurin, B.T.**, 2019, Naturally-occurring asbestos and increased urbanization in Clark County, Nevada: Geological Society of America Abstracts with Programs. Vol. 51, No. 5, doi: 10.1130/abs/2019AM-335233.
- Metcalf, R.V., Buck, B.J., and **McLaurin, B.T.**, 2018, Naturally occurring asbestos in southern Nevada: interpretations for distribution and human exposure: European Geosciences Union General Assembly Conference Abstracts, v. 20, p. 10380.
- Metcalf, R.V., Buck, B.J., and **McLaurin, B.T.**, 2018, The life cycle of asbestos: understanding the distinctions between commercial and naturally-occurring asbestos: European Geosciences Union General Assembly Conference Abstracts, v. 20, p. 10720.
- Helfrich, A.L.\* and **McLaurin, B.T.**, 2017, Lacustrine carbonate deposition and facies distribution within the Muddy Creek Formation (Miocene-Pliocene), Nellis basin, southern Nevada: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-304710.
- Adams, J.M.\*, **McLaurin, B.T.** and Whisner, S.C., 2017, Variability in deformational style of Appalachian Plateau folds, Sullivan County, Pennsylvania: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-304737.
- Metcalf, R.J., Buck, B.J. and **McLaurin, B.T.**, 2017, In defense of the term “naturally-occurring asbestos”: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-307158
- Carter, M., **McLaurin, B.**, Glasbrenner, J., 2017, Paleoliquefaction reconnaissance in eastern North Carolina: is there evidence for large magnitude earthquakes between the Central Virginia Seismic Zone and Charleston Seismic Zone?: Geological Society of America Abstracts with Programs. Vol. 49, No. 3 doi: 10.1130/abs/2017SE-289779.

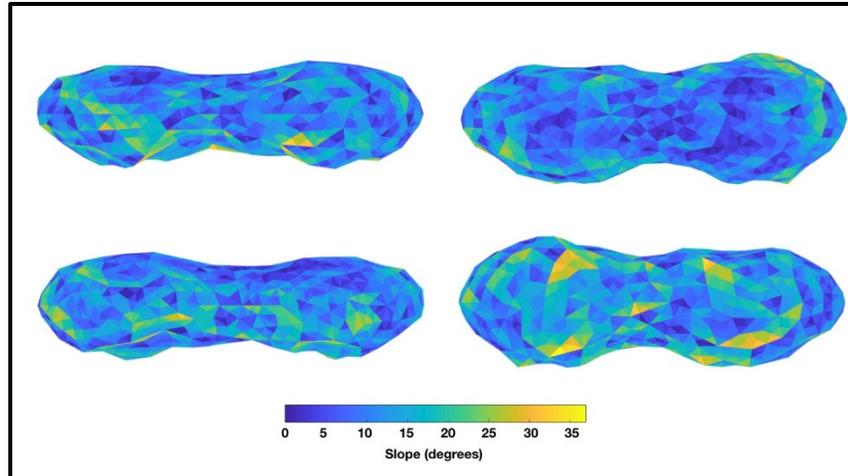
**2019 Teaching**

**Spring:** Natural Disasters (EGGS 107), Earth Materials (EGGS 260)

**Fall:** Physical Geology (EGGS 120), Stratigraphy and Sedimentology (EGGS 368)



**Dr. Michael Shepard**  
**Professor & Chair**



### Scholarly Interests

My major field of research is in the study of asteroids, and I published a general book on the field in 2015. Last year, I used data from the Arecibo radar to generate a new 3D shape model for one of the largest metallic asteroids – 216 Kleopatra. The model is shown above, and this image was used as the cover of the journal issue when we published it. We have never visited a metallic asteroid and this object may be a future mission target for the European Space Agency. A year ago, I completed similar work for the largest metallic asteroid, 16 Psyche. My work on that asteroid is being used by NASA planners for a new mission, called Psyche, which will launch in 2022. We anticipate making new observations of Psyche later this year to refine our shape model and aid the mission.

### Recent Publications

- **Shepard, M.K.** et al. A Revised Shape Model of Asteroid (216) Kleopatra. *Icarus* 311, 2018.
- **Shepard, M.K.** *Introduction to Planetary Photometry*. Cambridge University Press. 2017.
- **Shepard, M.K.** et al. Radar Observations and Shape Model of Asteroid (16) Psyche. *Icarus*, 281, 2017.
- Sanchez, J., Reddy, V., **Shepard, M.K.** et al. Detection of Rotational Spectral Variation on the M-type asteroid (16) Psyche. *Astronomical Journal*, 153, Issue 1, article id. 29, 2017.
- Takir, D., Reddy, V., Sanchez, J. **Shepard, M.K.**, Emery, J. Detection of Water and/or Hydroxyl on Asteroid (16) Psyche. *Astronomical Journal*, 153, Issue 1, article id. 31, 2017.
- **Shepard, M.K.** *Asteroids: Relics of Ancient Time*. Cambridge University Press. 2015.

### 2019 Courses

The Planets (EGGS 106), Map Use and Analysis (EGGS 242), Quantitative Methods (EGGS 150)

### 2019 Service Activities

Friends of the Bloomsburg Town Public Library, President.

Central Columbia High School, Agricultural Science Advisory Council.



**Ms. Cheryl L. Smith**  
**Department Secretary**

### Education

B.S. in Communications (1984) from Clarion University of Pennsylvania

### Interests

Assistant for Environmental Science Learning Community (Fall 2018)  
Mentor for students and new staff employees  
Web designer

### Organizations

Kiwanis Club of Milton/Warrior Run (July 2015-December 2017)  
Bloomsburg University Chapter PASSHE Women's Consortium (May 2014-December 2016)  
Bloomsburg University Secretarial Roundtable (August 2012-January 2015)  
Bloomsburg University Clerical Organization (January 2011-December 2016)

### Professional Conferences, Certificates, and Service

**Search Committee for Clerk Typist 2:** Zeigler College of Business at Bloomsburg University of Pennsylvania (May 2017)

**EDU: Protect Children (Pennsylvania):** Certificate of Completion from the Pennsylvania State System of Higher Education (March 18, 2016)

**Emergency Food Bag Program:** Bloomsburg University of Pennsylvania (June 2015-September 2016)

**PASSHE Women's Consortium Leadership Institute for Professional & Staff Employees:** State College, PA (June 10-12, 2015)

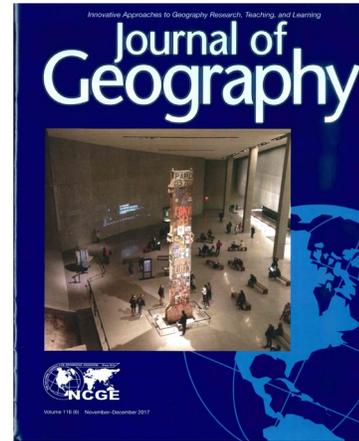
**Bloomsburg University's Student Employee of the Year:** Selection process (Spring 2015)

**Unlawful Harassment Prevention for Higher Education Staff Supervisors:** Certificate of Completion (February 9, 2015)

**PASSHE Women's Consortium Conference:** Bloomsburg University of Pennsylvania (September 25-26, 2014)

**Certificate of Appreciation for Outstanding Dedication to the PRAXIS Testing Program:** Bloomsburg University of Pennsylvania (2014)

**EMPOWHER: Women's Leadership Symposium:** Lewisburg, PA (October 3, 2013)



Dr. Jennifer Haney published "A Geographic Approach for Teaching about Terrorism" in the *Journal of Geography*. The article was based on her experiences in teaching Geography of Terrorism. As part of the course, students traveled to the 9/11 Memorial & Museum in New York City. **(Photo credit: Cheryl Smith)**



## **Adrian Van Rythoven**

### **Assistant Professor**

### **Mineralogy & Economic Geology**

#### **Scholarly Interests**

My research interests are mostly in the realm of economic geology and resource development. These interests encompass resources such as diamond/kimberlite, epithermal silver/base metals, carbonatites/rare earth metals, and industrial minerals.

#### **Education**

University of Toronto, Toronto, Doctor of Philosophy, diamond geology, 2012

University of Toronto, Toronto, Masters of Science, geochemistry, 2006

University of Toronto, Toronto, Honours Bachelors of Science, geology, 2005

#### **2019 Funding**

Faculty Professional Development Grant (PASSHE-wide) - \$6,438. To develop the Black Hills area as a destination for the EGGS 330 introductory field course. Also, to collect rock and mineral samples for related teaching and research.

Professional Experience Grant - \$1,689 (BU-internal). To fund Professional Geology major Alison Evans over the summer for sample curation and powder X-ray diffractometry.

Teaching Excellence Academy - \$500 (BU-internal). Used to purchase a modern 2-wavelength ultraviolet lamp for mineral fluorescence demonstrations.

#### **2019 Teaching**

Spring: Mineral Resources (EGGS 461), Petrology (EGGS 262), Natural Disasters (EGGS 107)

Fall: Mineralogy (EGGS 261), Natural Disasters (EGGS 107) (2 sections)

#### **2019 Scholarship**

Bennick, M.I., Venn, C., Van Rythoven, A., 2019. Determining the Origin of Intracamerale Deposits In the Orthocerid Genus Arionoceras. Geol. Soc. Am. Abstr. with Programs 51

#### **2019 Service Activities**

- department ambassador to TALE
- assistant coach with Exploring Club 42.
- representative at Open House events for prospective high school juniors and seniors
- Volunteer water-sampler with the ALLARM Stream Team.
- Anchor Program: Tour Guide for Centralia region
- FPDC campus-wide committee member
- Search committee member for tenure-track soils scientist



**Cynthia Venn**  
**Professor**

### **Scholarly Interests**

1. Distribution and growth rates of gooseneck barnacles across the tropical Pacific Ocean in relation to environmental parameters and ENSO cycles.
2. Small scale distribution of salt marsh plant species in the mid-Atlantic region with respect to elevation and hydrology changes associated with sea level rise.
3. Research conducted with students largely involves water chemistry of both unimpaired streams and those impacted by acid mine drainage, and evaluating the effectiveness of various AMD treatment systems.

### **Education**

University of Pittsburgh, Pittsburgh, Pennsylvania, Ph.D. Geology, 1996  
Texas A&M University, College Station, Texas, M.S. Oceanography, 1980  
Vanderbilt University, Nashville, Tennessee, B.A. General Biology, 1974

### **2019 Teaching**

Spring: Wetlands Ecology (MARSCI 250)  
Oceanography (EGGS 259)  
Physical Geology Laboratory (EGGS 120-C)  
Internship (1 student) (EGGS 496)  
Summer: Special Topics in Field Geology: N. Arizona and S. Utah (EGGS 330)  
Fall: Oceanography (EGGS 259)  
Earth Materials (EGGS 260)

### **Presentations (2017-Present) (\* denotes undergraduate researcher)**

- \*Bennick, Martina; Venn, Cynthia and Van Rythoven, Adrian. 2019. Determining the Origin of Intracameral Deposits in the Orthocerid Genus *Arionoceras*. Geological Society of America Abstracts with Programs. Vol. 51, No. 5, ISSN 0016-7592; doi: 10.1130/abs/2019AM-338024. Tied for Best Student Poster in the Geobiology and Geomicrobiology Division of GSA.
- \*Dalbo, Brian; \*Helfrich, Autumn L. **Venn, Cynthia** and Hallen, Christopher P. 2019. Revisiting Geochemistry of Water in Pine Forest Treatment System in St. Clair (Schuylkill County), PA. Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328637.
- \*Gray, Connor; \*Boulger, Erin; **Venn, Cynthia** and Hallen, Christopher P. 2019. Revisiting Water Quality within the Briar Creek Watershed (Columbia County, PA). Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328645.
- \*Helfrich, Autumn L.; \*Dalbo, Brian; **Venn, Cynthia** and Hallen, Christopher P. 2019. Assessment of Sediments within the Pine Forest Mine Anoxic Limestone Drain Treatment System in St. Clair

- (Schuylkill County), PA. Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328649.
- \*Boulger, Erin; \*Gray, Connor; **Venn, Cynthia** and Hallen, Christopher P. 2019. Geochemical Analysis of Briar Creek Lake in Columbia County, Pennsylvania. Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328628.
- \*Barrett, Lauren; \*Grimm, Lucas; **Venn, Cynthia** and Hallen, Christopher P. 2019. Initial Geochemical Assessment of Shanerburg Run, Worlds End State Park, Sullivan County, PA. Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328612.
- \*Grimm, Lucas; \*Barrett, Lauren; **Venn, Cynthia** and Hallen, Christopher P. 2019. Water Quality Analysis of Double Run Drainage, including Mineral Spring, at Worlds End State Park (Sullivan County, PA). Presented at NEGSA Meeting in Portland, Maine, 17-19 March, 2019. Geological Society of America Abstracts with Programs. Vol. 51, No. 1, ISSN 0016-7592; doi: 10.1130/abs/2019NE-328648.
- Venn, Cynthia** and Hallen, Christopher P. 2019. Evolution of an Undergraduate Course in Aqueous Geochemistry: Successes and Challenges. Presented at the ASLO 2019 Aquatic Sciences Meeting, San Juan, Puerto Rico, 23 February – 2 March 2019.
- \*Steinhauser, D.J.; **Venn, Cynthia** and Rier, Steven. 2018. Diatoms as water quality indicators in the headwaters of Fishing Creek (Columbia and Sullivan Counties), Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592  
doi: 10.1130/abs/2018NE-311276
- \*Barrett, Lauren; Hallen, Christopher; and **Venn, Cynthia**. 2018. Assessment of passive AMD treatment systems in Schuylkill County, Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592; doi: 10.1130/abs/2018NE-311289
- \*Lenker, Mitchell R.; **Venn, Cynthia**; and Hallen, Christopher P. 2018. Biogeochemical assessment of abandoned mine discharges on Wiconisco Creek, Schuylkill and Dauphin Counties, Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592; doi: 10.1130/abs/2018NE-31128
- Venn, Cynthia**. 2018. Use of a portable scanning electron microscope with energy dispersive x-ray spectrometer to enhance the undergraduate experience in Marine Science and in Geoscience. Presented at the AGU-ASLO-TOS 2018 Ocean Sciences Meeting, Portland, OR, 11-16 February, 2018.
- Whisner, Jennifer and **Venn, Cynthia**. 2017. Hydrologic restrictions limit resilience of salt marsh in Greenbackville, VA. Presented at the Coastal and Estuarine Research Federation Biennial Conference, November 5-9, 2017, Providence, RI
- Venn, Cynthia**. 2017. Growth Rates for Tropical Pacific *Lepas anatifera* (Cirripedia: Lepadidae) Using Shell Oxygen Isotope Ratios. Presented at the Mid-Year Meeting of The Crustacean Society, Barcelona, Spain, June 19-22, 2017.
- Venn, Cynthia**. 2017. Correlation between Oxygen Isotopes and Temperature in shells of *Lepas anatifera* (Cirripedia: Lepadidae) from the Tropical Pacific in order to determine Growth Rate. Presented at the ASLO Aquatic Sciences Meeting, Honolulu, Hawaii, February 26-March 3, 2017.

- \*Steinhauser, D.J.; \*Franz, Eric; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Are there effects of hydraulic fracturing on Crystal Lake in Lycoming County, Pennsylvania? Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291477.
- \*Lenker, Mitchell R.; \*Hooker, David; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Inorganic geochemical analysis of the water quality of Catfish Bog at Crystal Lake Camps, Lycoming County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291470.
- \*Adams, James M.; \*Shapiro, Nathan S.; Venn, Cynthia; and Hallen, Christopher P. 2017. An ongoing assessment of Scarlift 15 abandoned mine drainage remediation system, Ranshaw (Northumberland County) PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291449.
- \*Brauckmann, Matthew A.; \*Ciecierski, Derek T.; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Geochemical Analysis of Fishing Creek in Columbia County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291465.
- \*Sullivan, R.J.; \*Wessner, Lucas J.; **Venn, Cynthia**; and Hallen, Christopher P. 2017. A geochemical analysis of residential water wells in Columbia County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291490.

### 2019 Service Activities

Trained EGGS student on preparing specimens for and examining and photographing specimens on the optical microscopes and preparing and examining specimens on the scanning electron microscope  
 Graduate Committee for Caitlin Collins, Biology and Allied Health Sciences student  
 Organized fundraising plant sales to support field experiences for EGGS 330 Field Courses (donated to the BU Foundation EGGS field fund). Raised \$2750.00  
 Moderator for the documentary “Albatross” for the Green Campus Initiative Film Series  
 Participated in a pre-meeting service workshop painting houses of victims of Hurricane Maria, Ocean Sciences Meeting in San Juan, PR  
 Interview on Ocean Pollution and Pacific Garbage Patch for WKOK Radio  
 Participated in Academic Advisory Council meetings of the Chincoteague Bay Research Station  
 Member of Susquehanna River Heartland Coalition for Environmental Studies  
 COST Academic Grievance Board Pool  
 COST Pathways in Science and Technology Committee EGGS Representative  
 Represented EGGS in the Majors and Minors Fair  
 EGGS Search Committee for Tenure-track Soils Position  
 EGGS Search Committee for Temporary Faculty  
 EGGS Facilities Committee  
 EGGS Hyperwall Committee  
 EGGS Budget Committee  
 EGGS Observation and Evaluation Committee



**Dr. Jennifer Whisner**  
**Associate Professor**



**Columbia County Water Education Day**

### **Scholarly Interests**

My research involves collecting, analyzing, and interpreting field-based data such as the orientation of layered rocks and water levels and water chemistry in streams and water wells. The results of my work can be used to explore for and exploit our natural resources, but also to identify and characterize the impacts of humans on our environment. My scholarly activities focus on three areas: 1) structural geology and the development of curvature in mountain chains, 2) the effects of human modifications on streams, specifically on sediment transport and channel changes, and 3) water (including groundwater) quality.

### **Education**

2010 Ph.D., Geology, University of Tennessee, Knoxville  
1994 M.S., Geology, Western Michigan University  
1991 B. S., Chemistry, University of Michigan, Ann Arbor

### **Editor-Reviewed publications (2016-2019)**

Schmidt, C.J., Whisner, S.C., and **Whisner**, J.B., 2018. Road log to the structural geology of the Lewis and Clark State Park and surrounding area, southwestern Montana: Some new ideas and more questions, *Northwest Geology*, v. 47, p. 41-68.

**Whisner**, J., 2018, Teaching Tip: Field Trip Best Practices. Prepared for the *Ad Hoc* Teaching Committee of BU APSCUF

### **Conference Presentations (2016-19)**

\*indicates Bloomsburg University student presenter

\* Savidge, S., and **Whisner**, J., 2019, Remote Sensing of Japanese Knotweed (*Fallopia japonica*). Presented at the *Bloomsburg University COST Research Day*, April 26, 2019.

\*Joseph, M., Savidge, S., **Whisner**, J., and Ricker, M., 2019, Impacts of Japanese Knotweed (*Fallopia japonica*) at Kochoer Park, Columbia County, PA, Presented at the *Bloomsburg University COST Research Day*, April 26, 2019.

**Whisner**, J., Almer, H., Stephens, M., Corbin, N., Hartzell, Brittany, and Whisner, S., 2019, Columbia County Water Education Day: Earth science education and outreach, 500 students at a time, Presented at the *Northeastern Section Meeting of the Geological Society of America*, Portland, ME, March 17, 2019.

- \*Joseph, M., Savidge, S., **Whisner, J.**, and Ricker, M., 2019, Impacts of Japanese Knotweed (*Fallopia japonica*) at Kocher Park, Columbia County, PA, *Presented at the Northeastern Section Meeting of the Geological Society of America, Portland, ME, March 17, 2019.*
- Whisner J.**, 2018, Columbia County Water Education Day 2015-2018. *Invited presentation at the Annual Amalgamated Source Water Protection Coalition Meeting, Williamsport, PA, October 3, 2018.*
- Whisner, J.** and Venn, C., 2017, Hydrologic restrictions limit the resilience of salt marsh in Greenbackville, VA., *Presented at the Coastal and Estuarine Federation 24<sup>th</sup> Biennial Conference, Providence, RI, November 08, 2017.*
- Whisner, J.**, 2017, Undergraduate Research: The Good, the Bad, and the Ugly. **Keynote Presentation - Bloomsburg University College of Science and Technology Research Day, April 10, 2017.**
- \*Sullivan, R., and **Whisner, J.**, 2017, Analyzing Local and Regional Groundwater Flow Using ArcGIS in Columbia County, PA. *Presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2017 **\*\*Winner - third place\*\****
- \*Ciecirski, D. \*Shapiro, N., **Whisner, J.**, and Franek, B., 2016, In Search of Data – Fishing Creek Hydro Watch Summer 2016, *Presented at the Susquehanna River Symposium 2016 - A Tale of Two Rivers: The Delaware and Susquehanna, Bucknell University, Lewisburg, PA, November 11, 2016.*
- Whisner, J. K.**, Franek, B., and Beyer, P., 2016, Structured encounters with real data: sneaking up on doing science, *Geological Society of America Abstracts with Programs, v. 48, no. 7. doi: 10.1130/abs/2016AM-284741, invited presentation at the Annual Meeting of the Geological Society of America, Sept. 25-28, in Denver, CO.*
- \*Shapiro, N., and **Whisner, J.**, 2016, Developing a Hydrologic Atlas for the Fishing Creek Watershed, *presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2016*
- \*Ciercierski, D., and **Whisner, J.**, 2016, Fishing Creek: Preliminary Ratings curves, *presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2016*

## 2016-2019 Funding

- 2017 **Funded: \$11,500 Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Water quality and quantity along Fishing Creek and turtle population study along Pine Creek  
Co-PI with. B. Franek
- 2016 **Funded: \$4254 Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Collecting and analyzing GIS and stream discharge data in support of developing a flood forecasting model for the Fishing Creek Watershed.  
Co-PI with. B. Franek
- Funded: \$5746 Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Water Quality and Soil Geochemistry in Alluvial Deltaic Deposits from Large Tributaries of the Susquehanna River  
PI.: M. Ricker, co-participant with M. Shepard

## 2019 Teaching

- Spring: Introduction to Environmental Science (EGGS 100)  
Groundwater Hydrology (EGGS 470)  
Senior Seminar in Environmental, Geographical, and Geological Sciences (EGGS 495)
- Fall: Introduction to Environmental Science (EGGS 100)  
Surface Hydrology (EGGS 370)

## 2019 Department Service

- Fall 2018-present Department Promotion Committee chair  
Fall 2018-present Department Tenure Committee chair  
Fall 2017-present Co-manager BU Geography, Geosciences, & EGGS Alumni and Friends facebook page  
2018-19 EGGS Search committee for Tenure-Track Soils position  
2016-present Observation and Evaluation Committee  
2012 – present Department assessment czar  
2011 – present Department BOLT czar  
2010 – present Organize and present biannual Majors Meetings  
2009 – present Advisor to BUGS/MaPERs student groups

2009 – present Sabbatical committee member

**2019 University Service**

2019 Chair, TALE Director Search Committee  
2017-present Chair, COST Research Day Committee  
2012-present Member of the Bloomsburg University Green Campus Initiative  
2013-2019 URSCA Grant Review Committee & Planning and Review Committee

**2019 Community Service**

2017 – present Member of the Central Columbia High School Ag Advisory Council/Occupational Advisory Council  
2013 – present Chair: Columbia-Montour Coalition for Source Water Protection (CMC4SWP)  
<http://www.columbiamontourswp.org/>  
2014 – present Secretary, Fishing Creek Watershed Association  
Apr. 6, 2019 Helped run an information station on proper disposal of prescription drugs for the CMC4SWP  
Good Water = Good Fishing Day at Kocher Park.  
Mar. 30, 2019 Ran Clean Water Activity table (Enviroscape and Groundwater Models) for the Columbia County Family Center 29th Annual Children’s Fair. More than 250 families attended.  
Jan. 14/15, 2019 Columbia County Vo-Tech: seven *Streams, Rivers, and Floods* presentations and accompanying hands-on stream table activities

**Dr. Stephen Whisner**  
**Associate Professor**



**Scholarly Interests**

I have a variety of interests. Foremost is the in the field of Structural Geology and Tectonics, I have worked in the Rockies and the Appalachians mainly in sedimentary foreland fold and thrust belts. I am currently interested in the changes in structural style at the boundary of the Pennsylvania Fold and Thrust belt and the Pennsylvania Plateau and how these changes manifest themselves in fracture patterns, changes in bedding orientation as well as change in microstructures. Along these lines, I was a stop leader and wrote a guidebook entry for the 84<sup>th</sup> meeting of the Field Conference of Pennsylvania Geologists. I am also interested in the use of thermal imagery for planetary analysis and terrestrial analogues of planetary features. My research interests also extend to past seismic activity (paleoseismology), especially in the comparatively seismically inactive Eastern United States. I am continuing to study a shear zone in the central Pyrenees with a colleague from Sam Houston University.

**Education**

- 2005 Ph.D., Geology (Structural Geology and Tectonics), University of Tennessee  
Dissertation: The Middle Ordovician Tellico-Sevier Syncline: A Stratigraphic, Structural, and Paleoseismic Investigation. Advisor: Dr. Robert D. Hatcher, Jr.
- 1998 M. S., Geology (Structural Geology), Western Michigan University  
Thesis: Application of the Paleomagnetic Fold Test to Determine the Relative Timing of Sill Intrusion and Deformation in the Southwest Helena Salient, Montana. Advisor: Dr. Christopher J. Schmidt.
- 1994 B. S., Geology, Western Michigan University.

**2019 Teaching**

- Spring: Physical Geology (EGGS 120), Geomorphology (EGGS 265)  
Summer: Co-taught 6 week Geologic Field Camp in the Spanish Pyrenees  
Fall: Physical Geology Lab (EGGS 120), Geomorphology (EGGS 265)  
Structural Geology (EGGS 369)

**2019 Service Activities**

- Member COST Curriculum Committee
- COST Science Iditarod
- Teaching Volunteer for Columbia County Water Education Day demonstrating Stream dynamics
- Outreach at Columbia-Montour Vo-Tech demonstrating Stream dynamics
- STEM Outreach at Southern Columbia High School and Central Columbia Middle School