

Bridgette I. Fritz

UNIVERSITY OF TENNESSEE • KNOXVILLE, TN

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EDUCATION

Master of Science in Geography, University of Tennessee, Knoxville

May 2019

Relevant Coursework: Quantitative Methods in Geography, Environmental Modeling and Geospatial Analysis, Introduction to Python Programming, Grant Proposal Writing, Remote Sensing of the Environment

Bachelor of Sciences in Geology and Environmental Studies, University of Tennessee, Knoxville

May 2017

Graduated *Summa cum laude*; Recognized Top Graduate in Geology and Environmental Studies

Minor: Geography

Relevant Coursework: Landscape Analysis, Operative Landscapes, GIS in the Community, Contemporary Urban Spaces

SKILLS

ArcGIS 10.6 (4)

Python Programming (3)

Hazus Flood Modeling Software (3)

Fieldwork (4)

Remote Sensing (3)

Microsoft Office Suite (4)

R Statistical Software (2)

Model Builder (3)

Google Earth Pro (3)

QGIS 3.4 (2)

ArcGIS Online (3)

Cartography (3)

1-Fundamental Awareness

2-Novice

3-Intermediate

4-Advanced

5-Expert

RESEARCH EXPERIENCE

2018 *Soil Micromorphology Workshop*, Knoxville, TN

- Attended a workshop that emphasized the practical interpretation of thin sections of paleosol samples from fluvio-lacustrine stratigraphic successions

2018 *Palaeohydrology Workshop*, Chattanooga, TN

- Attended a palaeohydrology workshop that included several presentations on paleofloods in the Tennessee River Valley as well as a USGS-led field trip to several field sites for observation and discussion

2017-18 *Graduate Research Assistant*, University of Tennessee

- Served as a graduate research assistant on an Electrical Power Research Institute funded project researching the paleoflood history of the Upper Tennessee River Basin
- Created an algorithm (with python scripting) for identifying and characterizing sinkhole locations

2017 *ORNL Science Undergraduate Laboratory Internship*, Oak Ridge National Lab

- Applied statistical techniques to remotely-sensed time series data to identify changes in vegetation cover (forest, cropland, and pastureland)

2016 *Undergraduate Research Assistant*, University of Tennessee

- Investigated paleoflood histories within the Little Tennessee River Basin using Hazus, ArcGIS and Model Builder software
- Modeled the 1867 Chattanooga mega-flood scenario within the Little Tennessee Watershed reaches using HAZUS flood modeling software and historical data

2016 *Undergraduate Research Assistant*, University of Tennessee

- Investigated the urban heat island effect in Knoxville, Tennessee over a span of two years using satellite imageries from Landsat 8
- Explored the relationship between Normalized Difference Vegetation Index (NDVI) and Land Surface Temperature (LST) using ModelBuilder and remote sensing imagery

2015-16 *Undergraduate Research Assistant*, University of Tennessee

- Led invasive species inventories over 1,000 acres of urban properties in Knoxville's "Urban Wilderness"
- Coordinated volunteer outreach with university students and the community for species mapping
- Compiled a historical inventory the land parcels that was later published within a report for the Legacy Parks Foundation and the City of Knoxville

FIELD EXPERIENCE

- 2018** *Tennessee River Paleoflood Project*, Upper Tennessee River Basin
- Served as a field assistant to aid in the collection of flood sediment samples and thin section samples used for soil micromorphology research from the banks of the Tennessee River
- 2018** *Urban Floodplain Contamination Research Project*, Knoxville, TN
- Served as a field assistant to aid in the collection of sediment cores from floodplain regions for investigating sedimentation, post-industrial disturbance, and contamination along two urban creeks
- 2018** *Belize International Research*, Deep River Forest Reserve, Toledo, Belize
- Served as a field assistant to aid in the collection of lake sediment cores from a pond in the coastal savannas of Belize
- 2015** *BioBlitz at High Ground Park and the River Bluffs*, Knoxville, TN
- Participated in biological surveying of two urban parks

TEACHING EXPERIENCE

- 2018-19** *Graduate Teaching Assistant*, University of Tennessee
- Served as a graduate teaching assistant for Geography 131 (Weather/Climate/Climate Change) and Geography 411 (Intermediate GIS)
- 2016-17** *Undergraduate Tutor for the Multicultural Student Life Center*, University of Tennessee
- Served as a tutor for students in introductory courses of geography, calculus, statistics, and geology
- 2016** *Undergraduate Teaching Assistant*, University of Tennessee
- Served as an undergraduate teaching assistant for Geology 103 (The Earth's Environments)

PUBLICATIONS

Emily P. Zefferman, Michael L. McKinney, Thomas Cianciolo, **Bridgette I. Fritz**. Knoxville's Urban Wilderness: *Moving Toward Sustainable Multifunctional Management*, Urban Forestry & Urban Greening, 2017.

GRANTS & AWARDS

- 2018** Awarded Graduate Student Senate Travel Grant (\$1200)
- 2018** Awarded the Stewart K. McCroskey Memorial Fund Travel Grant (\$500)
- 2017** Awarded Graduate Student Senate Travel Grant (\$900)
- 2017** Awarded Top Graduate in Geology and Environmental Studies
- 2016** Awarded the Ryan Edwards Environmental Service Scholarship (\$2000)
- 2015** Awarded the Scholarship for Academic Excellence in Geology (\$300)

PROFESSIONAL MEMBERSHIPS

Phi Beta Kappa National Honors Society
Southeastern Division of the American Association of Geographers

American Association of Geographers
Geological Society of America

PRESENTATIONS

Creating an Enhanced Sinkhole Dataset for the Upper Tennessee River Basin
Annual Meeting of the American Association of Geographers. Washington, DC. April 4-7, 2019.

Identifying Sinkholes with The Potential for The Accumulation and Preservation of Paleoflood Sediments in The Upper Tennessee River Basin
Annual Meeting of the Geological Society of America. Indianapolis, Indiana. November 4-7, 2018.

Detecting Sinkholes with Potential for the Deposit of Paleoflood Sediments in the Upper Tennessee River Basin
Annual Meeting of the American Association of Geographers. New Orleans, Louisiana. April 10-18, 2018.

Detecting Sinkholes with the Potential for the Deposit of Paleoflood Sediments in the Upper Tennessee River Basin
Annual Meeting of the Southeastern Division of the American Association of Geographers. Mississippi State University. Starkville, MS. November 19-20, 2017.

Using Time Series Satellite Data for Monitoring Changes in Biomass
Department of Energy Science Undergraduate Laboratory Internship Meeting. Oak Ridge, TN. August 10, 2017.

Mapping Abandoned Urban Lands for Recreation and Conservation
16th Annual Meeting of the American Ecological Engineering Society. Knoxville, TN. June 20, 2016.