

# Micki (E.M.) Recchuiti

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## EDUCATION

### **North Carolina State University**

Ph.D. Earth Science; Volcanic Systems

Expected May 2026

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### **University of Tennessee, Knoxville**

M.Sc. Earth and Planetary Sciences

May 2022

- Understanding Hydrogen Variations in Silicate Glasses as a Result of Degassing: Fire-Fountaining on the Moon and Earth

### **Western Carolina University, Honors College**

B.S. Geology

May 2020

- Senior thesis: Paleoecology of Fossil Communities in Pennsylvanian Shales of Texas

B.S. Anthropology; Archaeology

- Minor in Japanese

## CONFERENCE POSTERS AND PRESENTATIONS

**E. M. Recchuiti**, V. Haag, and A. Soldati. 2024. 55th Lunar and Planetary Science Conference, "Fractal Dimensions of Lava Flows on Earth and Venus as Flow Morphology Indicators," #1115, Houston, Texas.

T. J. Barrett, A. Ariza Pardo, A. Balance, J. Davis, C. Diaz, F. Diotte, E. Etheridge, C. Hundal, B. Kathir, S. Perez-Lopez, **E. M. Recchuiti**, and D. A. Kring. 2024. 55th Lunar and Planetary Science Conference, "Physical Properties of Lunar Regolith Analogue at Cinder Lake Crater Field, Arizona," #1352, Houston, Texas.

Dyar, M. D., A. Lanzirotti, M. C. McCanta, **E. M. Recchuiti**, E. C. Sklute, and S. Sutton. 2022 Apollo 17-ANGSA Workshop, "Redox States, Oxygen Fugacity, and Hydrogen Distribution in Lunar Volcanic Glass Beads: Results from the Spectroscopy Consortium Addressing Redox Acquired by Beads (SCARAB) Team," #2011, Houston Texas.

**Recchuiti, E. M.**, M. C. McCanta, M. D. Dyar, E. Sklute, and A. Lanzirotti. 2022. 53rd Lunar and Planetary Science Conference, "Hydrogen Variations in Lunar Glass Beads: Eruptive Degassing in ANGSA Samples," #2193, Houston, Texas.

Fagan, A. L., M. Hall, **E. M. Recchuiti**, & C. Utterback. 2022. 53rd Lunar and Planetary Science Conference, "Preliminary Classification of Lithic Clasts in Lunar Regolith Breccia Meteorite Northwest Africa 8783," #2889, Houston Texas.

**Recchuiti, E. M.**, M. C. McCanta, M. D. Dyar, E. Sklute, E. Lanzirotti. 2021. 52nd Lunar and Planetary Science Conference, "Mapping Hydrogen Variations in Silicate Glasses: Eruptive Lunar Degassing," #1299, online oral presentation.

**Recchuiti, E. M.**, M. C. McCanta, M. D. Dyar, E. Sklute, and E. Lanzirrotti. 2020. American Geophysical Union Fall Meeting, "Mapping Hydrogen Variations in Silicate Glasses: Record of Lunar Eruptive Degassing," V013-0009, online poster.

Fagan, A. L., K. H. Joy, M. Hall, **E. M. Recchuiti**, C. Utterback, and S. E. Roberts. 2020. 51<sup>st</sup> Lunar and Planetary Science Conference, "Lunar Regolith Breccia Meteorite Northwest Africa 8783: Clast Diversity with Implications for Bombardment History and Crustal Evolution," Online poster.

Lloyd, Austin, **Erin M. Recchuiti**, Frank Forcino, Emily Stafford. 2019. Southeastern Geological Society of America, "The Influence of Sample Size on the Perception of Fossil Community Differences Between In-Place and Surface Collected Samples," Geological Society of America, Charleston, SC.

Ingram, Kenya, **Erin M. Recchuiti**, Donovan Hier, Kayla LeDuc, John Morgan, Evan Skeen. 2018. Southeastern Geological Society of America, "Analyzing the Mineral Chemistry of the NWA 8632 Meteorite for Olivine Phenocrysts," Geological Society of America, Knoxville Convention Center, Knoxville, TN.

**Recchuiti, Erin M.**, Kenya Ingram, Donovan Hier, Kayla LeDuc, John Morgan, Evan Skeen. 2018. Western Carolina University Undergraduate Research Exposition, "Analyzing the Mineral Chemistry of the NWA 8632 Meteorite for Olivine Phenocrysts," Western Carolina University, Cullowhee, NC.

## **RESEARCH EXPERIENCE**

**Graduate Research Assistant,** Fall 2022-Present

Department of Marine Earth and Atmospheric Sciences

Dr. Arianna Soldati, Assistant Professor, North Carolina State University

**Graduate Research Assistant,** Summer 2020-Summer 2022

Department of Earth and Planetary Science

Dr. Molly McCanta, Associate Professor, University of Tennessee Knoxville

**Undergraduate Researcher and Senior Thesis,** Fall 2018-Spring 2020

Department of Geosciences and Natural Resources

Dr. Frank Forcino, Professor of Geosciences, Western Carolina University

**Undergraduate Researcher,** Fall 2017-Spring 2020

Department of Geosciences and Natural Resources

Dr. Amy Fagan, Professor of Geosciences, Western Carolina University

## **INVITED LECTURES**

*Graduate Applications* in Professions in Marine, Earth, & Atmospheric Science at NCSU April 2023

*Applying to Graduate School* Careers in Geoscience at Western Carolina University December 2022

## **PUBLIC OUTREACH**

Letters to a Pre-Scientist Fall 2023-Present

Skype a Scientist Spring 2023-Present

State of the Sciences at NCSU: Volcanology Table April 2023

Rocktober at the North Carolina Museum of Natural Science October 2022

Hardin Valley Elementary School STEM Night: Space Sciences Table  
Knoxville Gem and Mineral Show: Mars Exploration Table

February 2022  
September 2021

### **PROFESSIONAL SERVICE**

Chair on Department Affairs Committee for NCSU MEAS Department 2023-2024  
Chair on Education Teaching Fund Committee for NCSU MEAS Department 2023-2024  
President of NCSU MEAS Graduate Student Association 2023-2024  
NASA Review Panel, Executive Secretary 2023

### **HONORS AND AWARDS**

GMAP Planetary Geologic Mapping Winter School Certification Spring 2023  
Excellence in Teaching by GTA (UTK EPS) Spring 2022  
NASA Space Grant Excellence in Outreach (UTK EPS) Spring 2022  
Gene Tipton Graduate Award (Knoxville Gem and Mineral Society) Spring 2022  
C.H. Gordon Award for Exceptional Professional Promise (UTK EPS) Spring 2021  
Western Carolina University's Chancellor's List (> 3.8 GPA) Fall 2016-Spring 2020  
Outstanding Senior in Anthropology (WCU) Spring 2019

### **WORK HISTORY**

*Planetary Science Institute, Tucson, AZ*

Research Associate Summer 2023

- Processed FTIR data on a suite of lunar glasses using OPUS software provided by Bruker to produce maps of hydrogen contents in lunar glass beads

*Department of Marine Earth and Atmospheric Science, NCSU, Raleigh, NC*

Graduate Teaching Assistant May 2023-Present

- GEOL 110 (Introduction to Physical Geology), GEOL 410 (Mineralogy), GEOL 440 (Igneous and Metamorphic Petrology)

*Department of Marine Earth and Atmospheric Science, NCSU, Raleigh, NC*

Graduate Research Assistant August 2022-Present

- Assists Dr. Arianna Soldati with magma rheology experiments pertaining to Eucrites, the Earth, and Venus

*Department of Earth and Planetary Sciences, UTK, Knoxville, TN*

Graduate Teaching Assistant August 2020-May 2022

- GEOL 101 (The Dynamic Earth), GEOL 103 (Earth's Environments), GEOL 104 (Exploring the Planets), GEOL 310 (Mineralogy), & GEOL 330 (Igneous and Metamorphic Petrology)

Graduate Research Assistant August 2020-July 2022

- Conduct lab-based research investigating the volatile characteristics and morphology of silicate glasses produced via explosive volcanic eruptions on the Earth and Moon

*Department of Geosciences and Natural Resource Management, WCU, Cullowhee, NC*

Teaching Assistant August 2019-May 2020

- GEOL 250 (Mineralogy), GEOL 150 (Methods in Geology), and GEOL 155 (Historical Geology)

*Residential Living- Western Carolina University, Cullowhee, NC*

Resident Assistant August 2017-May 2019

- Mentored 50-60 undergraduate students living in the dormitories and hosted community events

*Writing and Learning Commons- Western Carolina University, Cullowhee, NC*

Course Tutor

August 2018-May 2020

- Japanese (JPN 101, 102, 231, & 232), anthropology (ANTH 110 & 120), and geology (GEOL 140, 150, 250, & 355)

### **SKILLS AND RELATED COURSES**

- Curation: managed the rock and mineral collections at Western Carolina University, University of Tennessee Knoxville, and North Carolina State University (digitized and supervised the creation of a database for the NCSU collection)
- Courses: Volcanology, Petrogenesis of Crystalline Rocks, Remote Sensing, ArcGIS Pro Applications, Data Management with R/R-Studio/Matlab
- Familiarity with Oscillatory Viscometer, Parallel Plate Viscometer, SEM, FTIR, Electron Microprobe
- Able to sort, identify, and count small samples (glass beads and shards, marine invertebrate fossils)

### **FIELD EXPERIENCE**

#### **Flagstaff, Arizona**

September 2023

San Francisco Volcanic Field Camp through the NASA Solar System Exploration Research Virtual Institute

- Experience in bimodal volcanic fields investigating physical volcanology and basaltic volcanism with the goal of understanding volcanic provinces in a wider planetary context (Earth, the Moon, Mars, etc.)

#### **Grindavik, Iceland**

Summer 2023

Field work in response to active eruption

- Recorded imagery of evolving morphology of the cone and flow over the course of 6 days
- Collected samples from fresh lava flows for viscosity and textural analyses

#### **Hilo, Hawaii**

Summer 2019

Field school through South Dakota School of Mines

- Studied hotspot volcanology and active faults in the field
- Interpreted data in the USGS Hawaii Volcano Observatory and Kilauea Military Camp lab
- Mapped basaltic lava flows and pyroclastic cones from Kilauea volcanic complex

### **STUDY ABROAD**

#### **Cusco, Peru**

Summer 2018

Department of Anthropology and Sociology (WCU)

- Took 2 classes on archaeology and culture in Peru and visited and examined multiple archaeological sites in and surrounding Cusco, Peru

#### **Japan**

Summer 2017

Department of World Languages (WCU)

- Visited major cities on Kyushu Island and taught English classes from elementary to high school level Japanese students