

# ELIZABETH M. TREVATHAN

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- EDUCATION** Macalester College in St. Paul, MN (2022 to Present)  
Majors: Geology and Geography  
Cumulative GPA: 3.84 Major GPA: 3.89  
Extracurriculars: GeoClub member, Women's Tennis (captain),  
Student-Athlete Mentor
- OBJECTIVE** I intend to pursue a Ph.D. to further my education and interest in paleoclimatology. I am especially interested in reconstructing paleoenvironments to further our understanding of how historical climate changes impacted life in these landscapes. I am eager to learn how to integrate remote sensing and GIS into this topic. I recognize the importance of integrating science communication into this field to better educate on historical and present climate change events.
- EXPERIENCE** *Research Assistant, Macalester Geology, Professor Alan Chapman, May 2024 – present*
- Conduct a self-motivated research project under the guidance of Professor Chapman, completing fieldwork in California, mineral separation at Macalester, and data processing at Arizona LaserChron Center. I am currently analyzing data and writing a formal paper.
  - Experience creating geologic maps, mineral separation (for zircons), and data analysis through IsoplotR and DetritalPy.
  - Developing geochronology data of detrital zircon in the Franciscan Complex of Northern California, specifically at Goat Mountain in the Eastern belt.
- Presentation & Accepted Abstract at The Geological Society of America Cordilleran Section – 121<sup>st</sup> Annual Meeting, 2025**  
Onset of Subduction Accretion in the Franciscan Complex Varies Along Strike: New U-PB Detrital Zircon Insights from the Skaggs Springs and Goat Mountain Schists  
ESQUENET, Sophia<sup>1</sup>, TREVATHAN, Elizabeth Marie<sup>1</sup>, CHAPMAN, Alan<sup>1</sup> and WAKABAYASHI, John<sup>2</sup>, (1) Geology Department, Macalester College, St. Paul, MN 55105, (2) Department of Earth and Environmental Sciences, California State University, Fresno, CA 93740
- Museum Intern, The Mammoth Site, Summer 2025*
- Design and teach public education programs on the Ice Age and paleontology for the general public.
  - Engage museum visitors through informal science communication, interpreting ongoing research and conservation.
  - Conduct fieldwork within the active bonebed, including excavation and in-situ preservation/conservation.
  - Gain hands-on experience in fossil preparation, including manual preparation, air scribe techniques, consolidant usage, and housing methods.
  - Assist with collections management tasks including cataloging, inventory, and database work.
- Teaching Assistant, Macalester Geology, Professor Alan Chapman, Spring 2025*

- Host weekly office hours to support instruction, focusing on lab topics such as 3-point problems, geologic mapping, and stereonet construction and analysis for GEOL255: Structural Geology.

**Teaching Assistant, Macalester Geology, Assistant Professor Emily First, Fall 2025**

- Assist in teaching and answering questions during lab periods, teach and supervise the creation of thin sections, plan and lead group study sessions, host office hours, and grade quizzes and labs for GEOL 250: Mineralogy.

**Apprentice Tennis Professional, Fridley Life Time and Blooming South Life Time, Summer 2023-2024**

- Teach tennis fundamentals, support player development, and create adaptable group lesson plans for varying skill levels.

**Teaching Assistant, Macalester Geography, Assistant Professor Xavier Haro-Carrión, Fall 2023 and Spring 2024**

- Prepare in-class assignments, assist students, host office hours and study sessions, coach essay writing, and grade assignments and essays for GEOG 239: Neotropical Landscapes and GEOG 204: Earth and the Environment – Elements of Physical Geography.

**Lab Assistant, Macalester Geology, Laboratory Supervisor Jeff Thole, Summer 2023**

- Catalog a collection of ~500 Lake Superior agates by physical characteristics and create a Google Sheets database.
- Summarized recent scientific articles on agate genesis.
- Conducted elemental analysis using Micro-XRF Spectrometry and prepared thin sections for petrographic microscope analysis.

## WRITING EXPERIENCE

**Student Journalist, St. Paul Academy, 2018 – 2022**

I was an active student journalist, developing a three-year science-journalism series on topics such as environmental disasters, climate policy, and the development of local mining projects. I directed RubicOnline for two years, supervising quality control and staff, coordinating initiatives, and developing weekly class plans to train and mentor staff. The Journalism Education Association honored me as the Minnesota Journalist of the Year for 2022. This award recognizes the top student journalists in the country based on their journalism portfolios. My portfolio can be viewed at [elizabethtrevathan.com/portfolio](http://elizabethtrevathan.com/portfolio).

## SCHOLARSHIPS & AWARDS

**DeWitt Wallace Distinguished Scholarship, Macalester College, 2022:** awarded for achievements in high school, demonstrated by academic record and contributions to the community.

## PROGRAMMING & COMPUTER SKILLS

WordPress (including website design), ArcGIS Pro, and Python

## LAB SKILLS

Micro-XRF Spectrometry, preparing thin sections, organized sample collection in the field, mineral separation processes for detrital zircon, fossil preparation (manual and air scribe techniques), in-situ fossil conservation and consolidation, specimen cataloging and housing management, and excavation.

## OTHER SKILLS

Adobe Creative Cloud (InDesign, Illustrator, Photoshop), intermediate photography skills and photo editing skills, science communication and public outreach, educational program design, interdisciplinary collaboration.

