Stanford



Susannah Herz

Ph.D. Student in Earth and Planetary Sciences, admitted Autumn 2023

Bio

BIO

I am a Ph.D. candidate in the Payne Paleobiology Lab where I explore the impacts of ocean chemistry on major biological events throughout Earth's history, especially mass extinctions. My dissertation is centered around investigating the role of ocean chemistry and anoxia in the End-Permian Mass Extinction. In my work, I utilize a variety of isotope geochemistry techniques, including explorations of the sulfur, calcium, and thallium systems through both modeling and lab-based approaches.

EDUCATION AND CERTIFICATIONS

- B.S., Allegheny College , Geology and Environmental Science & Sustainability (2023)

SERVICE, VOLUNTEER, AND COMMUNITY WORK

- Student Organizing Committee Co-Chair - Northern California Geobiology Symposium (November 2023)
- Stanford Engineering Research Introductions (SERIO) Mentor (November 2023)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am interested in investigating the impacts of ocean anoxia through the end Permian mass extinction. My work utilizes a variety of isotope geochemistry techniques, including investigations of the sulfur, calcium, and thallium systems through both modeling and lab-based approaches.

LAB AFFILIATIONS

- Jonathan Payne, Paleobiology Lab (9/26/2023)

Teaching

COURSES

2023-24

- Coevolution of Earth and Life: EARTHSYS 4, EPS 4 (Aut)

Publications

PUBLICATIONS

- **Coupled carbonate-shale thallium isotopes reveal the evolution of deep-marine anoxia during the end-Permian mass extinction.** *Science advances*

Herz, S. C., Li, M., Siciliano, A. A., Ostrander, C. M., Nielsen, S. G., Mukerji, T., Grasby, S. E., Altiner, D., Lehrmann, D. J., Bond, D. P., Yu, M., Fernandez, D. P., Anderson, et al
2026; 12 (44): eaef5669