

# Anna Ruefer

*Ph.D. Student*

Department of Geological Sciences, Stanford University (aruefer@stanford.edu)

## Education

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**Ph.D. in Geological Sciences**, expected 2026  
Stanford University, CA  
*Advisor:* Dr. Ayla Pamukçu

**M.S. in Geosciences**, August 2021  
Baylor University, TX  
*Advisor:* Dr. Kenneth S. Befus

**B.S. in Geology** with Astronomy minor, May 2019  
James Madison University, VA  
*Advisor:* Dr. Elizabeth A. Johnson

## Research Experience

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**Research Assistant** **Aug. 2021 – Present**  
Stanford University

**Research Assistant** **Aug. 2019 – Aug. 2021**  
Baylor University

**Undergraduate Research Assistant** **May 2017 – May 2019**  
James Madison University (JMU)

**USGS Student Intern** **Jun. 2016 – Aug. 2019**  
Florence Bascom Geoscience Center, Reston, VA

## Publications

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Befus, K.S., **Ruefer, A.C.**, Allison, C.M., and Thompson, J.O., under review at EPSL, "Quartz-hosted inclusions and embayments reveal storage, fluxing, and ascent of the Mesa Falls Tuff, Yellowstone."

**Ruefer, A.C.**, Befus, K.S., Thompson, J.O., and Andrews, B.J., 2021, "Implications of Multiple Disequilibrium Textures in Quartz-Hosted Embayments. Front." *Earth Sci* 9 (2021): 742895.

Cronin, T.M., Clevenger, M.K., Tibert, N.E., Prescott, T., Toomey, M., Hubeny, J.B., Abbot, M.B., Seidenstein, J., Whitworth, H., Fisher, S., Wondolowski, N., **Ruefer, A.**, 2019, Holocene sea-level variability from Chesapeake Bay Tidal Marshes, USA: *The Holocene*, v. 29, no. 11, p. 1679-1693

Cronin, T.M., Seidenstein, J., Keller, K., McDougall, K., **Ruefer, A.**, Gemery, L., 2018, The Benthic Foraminifera *Cassidulina* from The Arctic Ocean: Application to Paleocyanography and Biostratigraphy: *Journal of Micropaleontology*, v. 65, no. 2, p. 105-125.

## Conference Abstracts

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Allison, C.M., Dufek, J., Befus, K.S., Thompson, J.O., Bachmann, O., **Ruefer, A.C.**, Rapid

magma ascent for the Kos Plateau Tuff caldera-forming eruption recorded in quartz-hosted embayments: *submitted to IAVCEI 2023*.

Befus, K.S., Thompson, J.O., **Ruefer, A.C.**, Allison, C.M., 2022, Hydrated glass embayments reveal decadal timescales for ignimbrite cooling at Yellowstone caldera: *Poster at AGU 2022, 12-16 Dec*.

**Ruefer, A.C.**, Befus, K.S., and Allison, C.M., 2021, Decompression and rehydration of the Mesa Falls Tuff embayments: *Talk at AGU 2021, 13-17 Dec*.

**Ruefer, A.C.**, and Befus, K.S., 2020, Anthology of quartz-hosted embayment textures: *Poster presentation at AGU 2020, 1-17 Dec. (virtual)*

**Ruefer, A.C.**, and Befus, K.S., 2020, Experimentally testing embayments as record keepers of magmatic ascent: *Talk at GSA SC 2020, Fort Worth, TX, 9-10 Mar*.

**Ruefer, A.C.**, and James, P.B., 2020, Zeeman Crater's Anomalous Massif: *Poster presentation for LPSC 2020, The Woodlands, TX, 16-20 Mar*.

**Ruefer, A.C.**, Johnson, E.A., McTaggart, E., Myers, M.L., Wilson, C.J.N., Wallace, P.J., 2018, Determining a partition coefficient for water in plagioclase for rhyolitic eruptions, Abstract #V33D-0276: *Poster presented at 2018 AGU Fall Meeting Washington, D.C., 10-14 Dec*.

## **Teaching Experience**

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**Stanford University** **Jan. 2022 – Present**  
Wrigley Field Program in Hawaii – Volcanology Module Co-Instructor  
Chemistry of the Earth and Planets Teaching Assistant

**Baylor University** **Aug. 2020 – May 2021**  
Mineralogy Teaching Assistant  
Petrology Teaching Assistant  
Undergraduate Research Mentor

## **Grants, Scholarships, and Awards**

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GSA Graduate Research Grant (**\$1,375**) **May 2020**

Baylor Geosciences Research Grant (**\$3,000**) **May 2020**

3<sup>rd</sup> Place – Three Minute Thesis (3MT) Competition **Apr. 2020**

USGS STAR Award (**\$500**) **Jul. 2019**

Geology Field Course Scholarship (**\$1,000**) **May 2018**

2<sup>nd</sup> Place – VA Council on Women STEM Essay Scholarship Award (**\$8,000**) **Apr. 2015**

## **Involvement**

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**Vice President** – Baylor Association for Women Geoscientists (BAWG) **Aug. 2020 – Aug. 2021**

**Volunteer** – Mayborn Museum **Jun. 2019 – Aug. 2021**

**Vice President** – JMU Association for Women Geoscientists (AWG) **May 2018 – May 2019**