Ashley N. Prow-Fleischer

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Education

2025	Ph.D. Syracuse University | Paleoclimatology | PI: Dr. Zunli Lu Dissertation: Body Size Trends of Late Devonian Dacryoconarid Tentaculitoids and Protocol Development for I/Ca analysis in corals by LA-ICP-MS
2017	B.S. Florida State University | Environmental Chemistry
2017	B.S. Florida State University | Biomathematics

Publications

Peer-Review Journals

Prow-Fleischer, A.N., & Lu, Z. (2025). A laser ablation ICP-MS protocol for high-resolution I/Ca profiling in corals. *Rapid Comm. Mass Spec.* ***https://doi.org/10.1002/rcm.10002***

Prow-Fleischer, A.N., Lu, Z., Blättler, C.L., He, T., Yang, Z., Singh, P., Kemeny, P.C., Todes, J.P., Pohl, A., Bhattacharya, T., van de Schootbrugge, B., Wignall, P.B., Payne, J.L. (2025). Calcium isotopes support spatial redox gradients on the Tethys European margin across the Triassic-Jurassic boundary. *Chemical Geology. https://doi.org/10.1016/j.chemgeo.2024.122530*

Prow-Fleischer, A.N., Lu, Z., Meehan, K.C., Yang, Z., Ivany, L.C., Payne, J.L., (2024) Body-size reductions in dacryoconarid tentaculitoids during Late Devonian warming. *Geosphere. https://doi.org/10.1130/GES02759.1*

He, R., Pohl, A., Zhang, X., Chang, C., **Prow, A**., Payne, J.L., Ridgwell, A., Lu, Z. (in review). A reversed latitudinal ocean oxygen gradient in the Proterozoic. *Nature Geoscience.*

He, R., Pohl, A., **Prow. A.N.,** Jiang, G., Huan C. C., Saltzman, M., Ridgwell, A., Lu, Z. (2024). The dynamic ocean redox evolution during the Late Cambrian SPICE event: evidence from the I/Ca proxy. *Global and Planetary Change. https://doi.org/10.1016/j.gloplacha.2024.104354*

Lu, Z., Rickaby, R.E.M., Payne, J.L., **Prow, A.N.** (2024). Phanerozoic Coevolution of O_2-CO_2 and Ocean Habitability. *National Science Review. https://doi.org/10.1093/nsr/nwae099*

Prow, A.N., Lu, Z., Frappier, A., Weisbeck, L., Underwood, C. (2023). Extraction of calcareous Dacryoconarid microfossils from limestones and mudrocks by surfactants paired with freeze-thaw processing. *Marine Micropaleontology.* https://doi.org/10.1016/j.marmicro.2023.102216

Lu, Z., Thomas, E., Rickaby, R.E.M., Lu, W., and **Prow, A.N.** (2023). Commentary: Planktic foraminifera iodine/calcium ratios from plankton tows: Frontiers in Marine Science, doi:10.3389/fmars.2023.1221835

Grants and Fellowships

2025	The Micropaleontology Society Angelina Messina Grant | $600
2024 - 2025	Research Excellence Doctoral Funding Graduate Fellowship (Syracuse University)
2024	GSA On-to-the-Future Mentor Program | $600
2024	GSA/Chevron Field Trip Grant | $290
2024	William B. & Dorothy Heroy Research Grant | $2200
2023	Syracuse University GSO PAC (Travel) Grant | $600
2023	Travel Grant Pre-GSA workshop, EarthCube Geochronology | $800
2023	Summer Research Grant, Merriam Endowment, Syracuse University Internal | $2000

Presentations

Talks

April 2024	Prow, A.N., Lu, Z., Blättler, C.L., He, T., Yang, Z., Singh, P., Kemeny, P.C., Todes, J.P., Pohl, A., Bhattacharya, T., van de Schootbrugge, B., Wignall, P.B., Todaro, S. Payne, J.L. "Calcium isotopes validate spatial redox gradients on the Tethys European margin across the Triassic-Jurassic boundary." NE Geobiology Symposium, New Haven, CT.
Dec.2023	Prow, A.N., Lu, Z., Blättler, C.L., He, T., Yang, Z., Singh, P., Kemeny, P.C., Todes, J.P., Pohl, A., Bhattacharya, T., van de Schootbrugge, B., Wignall, P.B., Payne, J.L. "Temporal and spatial dynamics of paleo-redox conditions across the Triassic-Jurassic boundary." American Geophysical Union Annual Meeting. San Franciso, CA
Oct. 2023	Prow, A.N., Lu, Z., Meehan, K.C., Yang, Z., Ivany, L.C., Payne, J.L., "Dacryoconarid Body Size Trends across the Late Devonian Punctata Event: Insights into their

Evolutionary Responses to Paleoenvironmental Shifts." Geological Society of America Connects , Pittsburg, PA

Aug. 2023 Prow, A.N., Lu, Z., Meehan, K.C., Yang, Z., Ivany, L.C., Payne, J.L., "Exploring Dacryoconarid Body Size Trends across the Late Devonian Punctata Event: Insights into their Evolutionary Responses to Paleoenvironmental Shifts." Paleontological Research Institute Summer Symposium

Posters

Sept. 2024 Prow-Fleischer, A.N. & Lu, Z. "A laser ablation ICP-MS protocol for high-resolution I/Ca profiling in corals." GSA Connects Annual Conference, Anaheim, CA

Aug. 2024 Prow-Fleischer, A.N. & Lu, Z. "A laser ablation ICP-MS protocol for high-resolution I/Ca profiling in corals." Goldschmidt Annual Conference, Chicago, IL

Sept. 2023 Prow, A.N., Lu, Z., Meehan, K.C., Yang, Z., Ivany, L.C., Payne, J.L., "Dacryoconarid body size and diversity trends across the *punctata* carbon isotope excursion, Appalachian Basin**"** International Sub-Commission for Devonian Stratigraphy conference, Geneseo NY.

Research Experience

2022 - Graduate Research Assistant | Syracuse University | Supervisor: Dr. Zunli Lu

2016 - 2017 Undergraduate Research Assistant | Florida State University Department of Earth, Ocean and Atmospheric Sciences | Supervisor: Dr. Jeremy Owens

2015 - 2016 Undergraduate Research Assistant | Florida State University Department of Earth, Ocean and Atmospheric Sciences | Supervisor: Dr. Christopher Holmes

Teaching Experience

Summer 2024 Instructor on Record Climate Change: Past, Present and Future | Syracuse University

2021 - 2022 Graduate Teaching Assistant | Syracuse University

Courses Assisted: Introduction to Oceanography, Climate Change Past and Present

2018 - 2021 Teaching Specialist I | Florida State University Department of Chemistry

Courses instructed: Introduction to Analytical Chemistry, Advanced (Instrumental) Analytical Chemistry, Physical Chemistry

- Trained students in wet and instrumental laboratory analytical techniques
- Manage staffing and chemical inventory; SOP development; routine instrument maintenance and troubleshooting.

Professional Experience

2017 - 2018 Lead Lab Technician | Surterra Wellness

- Supervised high-performance liquid chromatography (HPLC) operations for pharmaceutical product quality control
- Formulated products and fulfilled orders

Professional Service

Professional Societies

April 2025 - Geological Society of America Student Advisor Council member (2 year term)

Sept 2024 Organizer of Geological Society America '24 (Anaheim) Topical Sessions Part I and II "Piecing together the extinction puzzle: Integrated approaches to quantifying organism-environment interactions."

Refereed Journals

Marine Micropaleontology, Science Advances

Departmental Committees

2024 - 2025 Syracuse University Chief Diversity Officer, Department Graduate Student Organization (GeoGo)

2022 - 2023 Student Affairs Coordinator, Department Graduate Student Organization (GeoGo)

2022 - Member Diversity, Equity, and Inclusion Committee, Syracuse University Department of Earth and Environmental Sciences

University Organizations

2022 - 2024 Member of Women in Science and Engineering Future Professionals Program (WISE-FFP) at Syracuse University (Certificate conferred 2024)

Awards and Honors

2025	Syracuse University College of Arts and Sciences Doctoral Prize
2024	GSA Foundation Penrose Circle Heroy Student Award
2024	Marjorie Hooker Outstanding Thesis proposal
2024	Honorable Mention Syracuse University Dean's Award
2023/24	Publication Award, Syracuse University Department of Earth & Environmental Sciences
2013	Women's History Month Excellence in STEM award, Tallahassee Community College

Community Engagement

2022-2025 Board Member Friends of Clark Reservation State Park

- Membership Chair; newsletter contributor
- Organize and lead educational field excursions for adults and children focusing on geological structures and fossil localities at the park
- Staff nature center and educate visitors on display items