

*Curriculum Vita — Julie K. Bartley*  
*Environment, Geography, & Earth Sciences, Gustavus Adolphus College*

**EDUCATION**

- A.B. Bryn Mawr College, Chemistry, 1988, *cum laude*  
M.S. University of California, Los Angeles, Chemistry, 1990  
Supervisor: Kendall N. Houk; Thesis: *Conformational Studies of Medium-Sized Rings and a Theoretical Investigation of the gem-Dialkyl Effect*  
Ph. D. University of California, Los Angeles, Geology, 1994  
Supervisor: J. William Schopf; Dissertation: *Approaches toward Interpreting Precambrian Environments: Actualistic Studies of Carbon Isotopes and Taphonomy in Modern Microbial Communities*

**HONORS**

- 2020 Faculty Service Award – Gustavus Adolphus College  
2015 Janet Anderson Lectureship Award – Midstates Consortium for Math & Science

**TEACHING EXPERIENCE/POSITIONS HELD**

- 2018-present Professor, Gustavus Adolphus College  
2016-2018 Associate Provost and Dean of Sciences and Education, Gustavus Adolphus College  
2009-2018 Associate Professor, Gustavus Adolphus College (Tenure awarded 2012)  
1997-2009 Faculty, Geosciences, University of West Georgia  
2006-2009 First-Year Experience Coordinator, University of West Georgia  
2005-2009 Director, Learning Community Programs, University of West Georgia  
2004-2009 Director, West Georgia Microscopy Center, University of West Georgia  
1997 Lecturer, Earth and Planetary Sciences, Harvard University  
1995-1997 Postdoctoral Fellow, Organismic & Evolutionary Biology, Harvard University  
1995 Teaching Assistant, Earth and Planetary Sciences, Harvard University  
1994-1995 Planetary Biology Intern; Postdoctoral Research Associate, NASA ARC, CA  
1990-1994 Teaching Associate/Fellow, Geology, University of California Los Angeles  
1988-1990 Teaching Assistant/Associate, Chemistry, University of California Los Angeles  
1987-1988 Teaching Assistant, Chemistry, Bryn Mawr College

**COURSES TAUGHT AT GUSTAVUS ADOLPHUS COLLEGE**

- |             |                                  |   |
|-------------|----------------------------------|---|
| EDU 247     | Science for Elementary Education | Taught Geology content for this course<br>2025: also delivered Chemistry section of this course |
| ENV/GEO120  | Geochemistry of the Environment  | Geological and chemical processes   |
| ENV/GEO121  | Geochem of Env Laboratory        | Laboratory course for ENV/GEO-120   |
| FTS 100     | Evolution                        | FTS: Evolution in science & society   |
| FTS 100     | Time                             | FTS: Perceptions and frameworks around time   |
| GEO 105     | Dinosaurs & Their Food           | IEX: Paleontology of the age of dinosaurs   |
| GEO 110     | Our Planet: Intro Earth Science  | Process and mechanism in geology  |
| GEO 111     | Our Planet: Laboratory           | Laboratory course for GEO-110   |
| GEO 262/263 | Evolution of the Earth w/ Lab    | Time and events in geologic history   |
| GEO 282/283 | Paleontology w/ Lab              | History of life on Earth  |
| GEO 372     | Sedimentary Systems              | The sedimentary record  |
| GEO 344     | ST: Our Global Ocean             | Interdisciplinary course linked to Nobel Conference   |
| GEO 392     | Research in Geology I            | Junior seminar: preparation for senior research   |
| GEO 393     | Research in Geology II           | Senior seminar: senior thesis work  |
| GEO 397     | Honors Thesis                    | Senior seminar for honors Geology students  |

## RECENT RESEARCH PROJECTS SUPERVISED

*Undergraduate Students – [\*indicates presentation of research]*

2025-2026	*Miranda Vizoso-Marino	Evaluating cyclicity and stromatolite morphological change in the Ordovician Prairie du Chien Group, Minnesota and Wisconsin
	*Katrinna Deters	Exploring a database approach to stromatolite morphology
	Kaya De Bruijn	Assessing carbonate associated sulfate in ancient carbonates
2024-2025	*Miranda Vizoso-Marino	Evaluating cyclicity and stromatolite morphological change in the Ordovician Prairie du Chien Group, Minnesota and Wisconsin
	*Fran Monroe	Mesoscale morphology of stromatolites in the Ordovician Prairie du Chien Group, Minnesota
2023-2024	Luke Dragseth	Developing a high-resolution method for analysis of carbonate-associated sulfate in Proterozoic carbonates
	Liv Nelson	Cyclicity and stromatolite development in the Ordovician Shakopee Formation, eastern Minnesota
2022-2023	Madeline Banks	Developing a high-resolution method for analysis of carbonate-associated sulfate in Proterozoic carbonates
	Federico Fiorda	Does the Martian surface record habitability? What a pebble survey conducted with Jezero Crater imagery can tell us
	Rebecca Eslinger	Landslide susceptibility in the Southern Minnesota River Valley
2021-2022	Theo Wilson	Shark tooth mechanical properties and crystallography
	Erin Fisher	Developing a high-resolution method for analysis of carbonate-associated sulfate in Proterozoic carbonates
	Jackson Miest	Relationships between stromatolite lamina structure and stromatolite morphology
	Charles Miller	Seven Mile Creek Water Quality Monitoring
	Elizabeth Lawrence	Seven Mile Creek Water Quality Monitoring
	Luke Dragseth	Seven Mile Creek Water Quality Monitoring
2020-2021	Matthew Allison	Arsenic concentrations in domestic wells in Nicollet and Sibley counties, Minnesota
2019-2020	Aidan Dahlseid	MN statewide landslide inventory
	Matthew Allison	MN statewide landslide inventory
	Hannah Schroeder	Seven Mile Creek Water Quality Monitoring
	Shauna Capron	Seven Mile Creek Water Quality Monitoring
2018-2019	*Madison Adams	Rover operations strategies – effective and efficient sampling
	Thais Altenberg	Recognition of biosignatures in stromatolites at lamina scale
	Emily Fischer	MN statewide landslide inventory
	Alex Senjem	MN statewide landslide inventory
2017-2018	*Sarah Bruihler	Cross-scale comparison of modern and ancient microbialites
	*Madison Adams	Rover sampling protocols: Evaluating data quality in an analog system
2016-2017	*Russell Krueger	Distinguishing till members in Minnesota using trace and rare Earth elements
	Lindsey Reiners	Lamina-scale geochemical and textural variation in stromatolites
	Tanner Eischen	A morphological and textural atlas of microbialites
	Michael Erving	Heavy metal concentration analysis of Gastropods in the Red Sea, Egypt
	*Ruby Schaufler	Rover instrumentation: Identifying extraterrestrial biosignatures
	Skuyler Ward	Looking into the past with lacustrine sediment sequences
2015-2016	*Lindsey Reiners	Textural analysis of stromatolites
	*Tanner Eischen	Textural analysis of stromatolites
	Grant Noennig	Porosity and three-dimensional structure in Eocene stromatolites
	Zachary Martinez	Porosity and pore development in Eocene stromatolites
	Kelly Neubauer	Carbonate mineralogy by XRD and trace element analysis
	Ruby Schaufler	Sampling strategies for Mars

### *Graduate Students – Committee Member*

*PhD, geology* (University of Tennessee)

Natasha Tagle (2025-2029). Water chemistry and sedimentology of crater lakes in central Australia  
Agustin Kriscautzky (2018-2022). Characterization of molar-tooth structure by petrographic and geochemical techniques.

*PhD, geology* (Rutgers University)

Ashley Murphy (2017-2021). Characterization of stromatolitic biosignatures after secondary dolomitization

*M.S., geology* (University of Tennessee)

Catie Caterham (2022-2024). Herringbone carbonate and the mystery of deposition, diagenesis, and its linkages to ocean chemistry

Miles Henderson (2008-2010). Nature and preservation of *Grypania*, an enigmatic middle Proterozoic fossil

Mark Pollock (2000-2003). Molar-tooth fabric: Belt Supergroup, Montana

*M.S., geology* (University of Cincinnati)

Jeff Osterhout (2013-2016). Diversity of microfossils and preservation of thermally altered stromatolites from anomalous Precambrian paleoenvironments

*M.S., geology* (University of Missouri)

Tara Selly (2013-2015). Predators and predation in the Cambrian Period: Quantitative methods in taphonomy and paleoecology

### **INFORMAL AND K-12 EDUCATION**

Adult Education, Nicollet County Historical Society, *Our Landscape as a Time Machine: St. Peter's Geologic Past* December 2024

Adult Education, St. Peter Summer Reading Program, *Maps as Time Machines: St. Peter's Geologic Past* June 2024

Substitute Teacher, World Learner School (grades 1-8), 2022

Smithsonian Journeys speaker for Celebrity Cruise Lines, July-August 2012

Workshop leader, Minnesota Minerals Education Workshop, June 2012

### **GRANT PROPOSALS RELATED TO TEACHING**

InTeGrate Program, sponsored by NSF (2014). The defining challenge of our age – Climate science across the liberal arts curriculum. Requested \$25,129. Status: Funded, \$25,000.

Alice Richards Foundation, 2008, Improving Motivation, Performance and Attitudes of Children & Teachers (IMPACT) for Science and Mathematics in West Georgia. Senior collaborator with PI S. Basu-Dutt. Requested \$100,000 per year. Funded (\$300,000; 3 yrs).

National Science Foundation, STEP Program, 2003, Generating Enthusiasm for Math and Science (GEMS) at the University of West Georgia. Investigator with PI V. Geisler. Funded (\$877,093).

Center for Teaching and Learning (supported by the Regents' Distinguished Professor Fund), 1999, Taking Science Outside: A model outdoor classroom integrating science education with geochemistry and ecology. Principal Investigator. Funded (\$65,000).

### **COLLEGE & DEPARTMENT SERVICE (AT GUSTAVUS):**

Anti-bias training for the Faculty Personnel Committee	September 2025
Enrollment Management Committee of the Board of Trustees	2024-present
Space Proposals Working Group	2024-present
Fourth-year Review Committee, Member (for V. Faychuk)	2024, 2025
Third-year Review Committee, Member (for K. Aguilar)	2024
Review Committee, Member (for J. Imholte)	2024
Scientific Instrumentation Working Group	2022-2024
Faculty Mentor (to Lai Sze Tso, S/A)	2022-2024
Faculty Senate	2021-2024

Senior Continuing Review Committee, Member (for T. Wilkens)	2022
Personnel Committee	2018-2020
Member, Second-Year Review Committee for V. Faychuk	2019
Working Group – Quantitative Reasoning General Education Requirement	2018
Faculty Shepherd, Nobel Hall of Science Renovation and Addition Project	2016-2020
Title IX Deputy Coordinator	2016-2020
<i>Ex officio</i> member of the following committees, while serving as Associate Provost:	
2017-2018: Diversity, Equity, and Inclusion Committee	
2016-2018: Academic Affairs Coordinating Council; Department Chairs and Program Directors Committee; Faculty Development Committee	
2016-2017: Faculty Committee on Student Life	
Member, Steering Committee, Lund Center Renovation Project	2017-2018
Chair, Academic Probation Committee	2016-2018
Member, Provost Search Framework Working Group	2017
Chair, Academic Petitions Committee	2016-2017
Convener, Grade Appeals Board	2016-2017
Convener, Honor Board	2016-2017
Member, First-Year Registration Working Group	2016-2017
Member, Curriculum Logistics Working Group	2016
Member, Strategic Action Team	2015-2016
Member, Transitions working group of the Strategic Action Team	2015
FTS Advisory Committee	2015-2016
Chair, Course Approval Subcommittee (CAPSUB)	2015-2016
Curriculum Committee	2014-2016
Course Evaluation Working Group	2014-2016
Liberal Arts Search Representative (LASR) – MCS tenure track search	2015
Coordinator, Science-Math Intercultural Learning Experience (SMILE) initiative	2012-2013
Co-chair (with Joel Carlin), Nobel Conference 48: Our Global Ocean	2012
Reviewer, SoTL Proposals (Kendall Center for Engaged Learning)	February 2012
Nobel Hall of Science Facilities Planning Group	2011-2016
Scholarship Day Interviews	Spring 2011, 2012
Faculty Development Committee	2010-2012
Explore Gustavus Lunches and Summer Snapshot Lunches, Talks	Summers 2010-2012
DCPD Committee	2010-2013; 2014-2016
LARS Area Review Committee	2010-2013
NASP Area Review Committee	2012-2013
Treasurer, Sigma Xi (Gustavus Chapter)	2010-2016
Gustavus Site Coordinator, North Star STEM Alliance (LSAMP)	2010-2012
Instrumentation Planning Group	2010-2011
Led assessment planning for geology curriculum	2010-2011
Volunteer staff: Gustavus' State Fair Booth	September 2010
<i>Service as faculty member at the Department Level</i>	
Department Chair, Environment, Geography, and Earth Sciences	2022-present
Department Chair, Geology	2010-2013; 2014-2016
Member, Search Committee – Assistant Professor, conservation biology and ecology	2022-2023
Search Committees – Visiting Assistant Professor	2016, 2018, 2019, 2022, 2025
Program Review leader – Geology	2019
Library Liaison – Geology	2018-2020; 2021-22
Program Assessment Liaison – Geology	2017-2020
Faculty host, Nobel Conference (for David Montgomery)	2018
Member, Search Committee – Assistant Professor, Solid Earth Geology	2017

**ADVISING (AT GUSTAVUS):**

Summer advising/registration for first-year students Summer 2010-12; 2016; 2022-25  
Advising of geology majors, environmental studies majors, prospective majors, and undeclared FTS students: Between 7 and 40 students annually from 2010-present.  
Career advising and mentoring for geology majors and environmental studies majors

**COMMUNITY AND K-12 OUTREACH AND SERVICE (WHILE AT GUSTAVUS):**

Presentation to grades pre-K–5, St. Anne’s School (Le Sueur), April 2024  
Chair, School Board, World Learner School (Chaska), July 2022 – June 2024  
Panelist, Gustavus Women in Leadership STEM/Humanities/Social Sciences Event 10/2019.  
Presentation to third-grade students, John Ireland School (St. Peter): 2012, 2013, 2015, 2016, 2017.  
Introduced students to fossils and led a fossil identification activity and museum tour.  
Presentation to Upper Elementary class, World Learner School (Chaska), Spring 2013. Led students in a hands-on activity to explore the geology of Minnesota.  
Resource development, Upper Elementary, World Learner School (Chaska), Fall 2013. Helped improve rock identification resources and developed an identification key for classroom rock/mineral sets.  
Leader, fossil collecting field trip to Rockford, IA, July 2012  
Led a group from the Minnesota Gifted and Talented Children’s Association to the Fossil and Prairie Center in Rockford.  
Participant/leader, fossil collecting field trip to Lilydale Brickyard, June 2011, 2012  
Organized by the MN Chapter of the Association for Women Geoscientists. Helped participants from the Twin Cities identify their fossils collected at the Lilydale Brickyard in St. Paul.  
Organizer, St. Peter Day, September 2011, 2012  
The geology department hosted an open house with talks on the geology of Nicollet County and tours of the museum during St. Peter Day events.  
Organizer, National Fossil Day, October, 2010  
The geology department hosts an open house during Earth Science week for campus and community members. Participants are invited to bring a geologic specimen for identification, take a tour of the museum, and take home a fossil.  
Presentation to second-grade students from North Elementary (St. Peter), May 2010.  
Introduced students to fossils and led a fossil identification activity and museum tour.  
Resource development, Middle School, World Learner School (Chaska), February 2010.  
Assisted the science teacher with curriculum development and assembled a rock and mineral identification activity for middle school students.  
Presentation to Middle School, World Learner School (Chaska), February 2010, Fall 2013, Fall 2015.  
Led a discussion about Earth history and brought specimens for examination by students.  
Presentation to Lower Elementary, World Learner School (Chaska), January 2010.  
Introduced students to fossils and lead a fossil identification activity.  
Presenter, Science & Nature Conference (held at GAC), October 2009, 2010.  
10/2009: *Beyond Bones* – an introduction to fossils and the fossil record (grades 6-9)  
10/2010: *Geology Rocks!* – an introduction to the geology of Minnesota (grades 6-9)

**OFF-CAMPUS PROFESSIONAL SERVICE AND PROFESSIONAL DEVELOPMENT:**

External reviewer for Program Review, Department of Geology, Augustana College, March 2024  
Certificate in Effective Instruction: Fostering a Culture of Belonging, Association of College and University Educators, 2023.  
Session Convener/co-chair, Geological Society of America Annual Meeting 2021. Session title: *Life’s innovations from the early Earth to the search on modern Mars: honoring the career of Andrew H. Knoll.*  
ADVANCEGeo Partnership, Trained Facilitator. 2020-present  
Workshops facilitated to date: 40

ADVANCEGeo Partnership, Train-the-trainer workshop. January 2020; May 2023  
 Traveling Workshop Program (National Association of Geoscience Teachers), workshop facilitator  
 2026: NAGT Traveling Workshop leader, Rutgers University (Newark)  
 2025: NAGT Traveling Workshop leader, Brigham Young University  
 2023: Workshop Leader, East Carolina University Departments of Geography, Planning & Environment and Geological Sciences  
 2021: Workshop Leader, Mississippi State Department of Geosciences  
 2021: Workshop Leader, Colorado College Geology Department  
 2019: Workshop Leader, University of Wisconsin System's Women in STEM Program  
 2019: Workshop Leader, Northern Arizona University  
 Session Convener/co-chair (with T.A. Hickson), Geological Society of America Annual Meeting, 2017.  
 Session title: *Microbialite textures and chemical signatures in continental settings: Forging the link between modern and ancient.*  
 External reviewer of credentials for promotion and tenure. University of Cincinnati, reviewer for Dr. Andrew Czaja. 2017.  
 Sigma Xi Annual Meeting November 2016. Chapter delegate for Gustavus Sigma Xi chapter.  
 Reformed Teacher Observation Project (RTOP) leadership and training team. Trained observers for classroom observations; analyzed data; planned program activities. 2013-2016.

#### **CURRENT MEMBERSHIP IN PROFESSIONAL SOCIETIES**

Am. Assoc. for the Advancement of Science	National Association of Geoscience Teachers
American Geophysical Union	The Paleontological Society
Association of Women Geoscientists	Sigma Xi, the Scientific Honor Society
Geological Society of America	Society for Sedimentary Geology (SEPM)

#### **PUBLICATIONS AND PRESENTATIONS (\*INDICATES STUDENT AUTHOR)**

ORCID #0000-0001-8686-0906

##### Peer-reviewed articles, in print, in press, or in review —

- Hammer, M.N., DeLong, S.B., Engle, Z.T., Richard, E., Gran, K.B., Triplett, L.D., Jennings, C.E., Bartley, J.K., Blumentritt, D.J., Breckenridge, A.J., Day, S., Kohout, M., Larson, P.H., and McDermott, J.A., 2025, Landslide susceptibility modeling results and maps covering the northwestern, northeastern, southern, and southeastern parts of Minnesota, USA: USGS Data Release, doi: [10.5066/P14XOJSM](https://doi.org/10.5066/P14XOJSM).
- Triplett, L.D., Hammer, M.N., DeLong, S.B., Gran, K.B., Jennings, C.E., Engle, Z.T., Bartley, J.K., Blumentritt, D.J., Breckenridge, A.J., Day, S., Kohout, M.A., Larson, P.H., McDermott, J.A., and Richard, E.M., 2025, Factors influencing landslide occurrence in low-relief formerly glaciated landscapes: Landslide inventory and susceptibility analysis in Minnesota, USA: Natural Hazards, doi: <https://doi.org/10.1007/s11069-025-07262-8>.
- Yingst, R.A., Bartley, J.K., Cohen, B.A., Hynek, B.M., Kah, L.C., Archer, R., Lotto, M., Mooney, J.T., Wang, J.L, and Wogsland, B., 2022, Using rover-analogous methodology to discriminate between volcanic and sedimentary origins in successions dominated by igneous composition: The Planetary Science Journal v. 3(10), 240 doi.org/10.3847/PSJ/ac8429.
- Yingst, R.A., Bartley, J.K., Chidsey, T.J., Cohen, B.A., Curran, N., Hynek, B.M, Kah, L.C., Minitti, M.E., Vanden Berg, M.D., Williams, R.M.E., Gemperline, J., Lotto, M., Black, S., Bartley, B.C., and \*Pearson, T., 2022, Testing rover science protocols to identify possible biosignatures on Mars: Achieving sampling goals under a highly constrained time line: Astrobiology v. 22(11), p. 1310-1329 doi.org/10.1089/ast.2021.0177.
- Kriscautzky, A., Kah, L.C., and Bartley, J.K., 2022, Molar-tooth structure as a window into the deposition and diagenesis of Precambrian carbonate: Annual Reviews of Earth and Planetary Sciences v. 50, doi.org/10.1146/annurev-earth-031621-080804.

- Kah, L.C., and Bartley, J.K., 2021, Carbonate fabric diversity and environmental heterogeneity in the late Mesoproterozoic Era: *Geological Magazine* v. 159(2), p. 220-246  
doi.org/10.1017/S0016756821000406.
- Bartley, J.K., \*Firmin, S.M., and \*Berger, J.T., 2021, Stromatolites and calcitized evaporite in a hypersaline playa lake: Rossport Formation (Mesoproterozoic, Ontario): *The Depositional Record* v. 8(1), p. 127-142, doi.org/10.1002/dep2.162.
- Bartley, J.K., and \*Gilliland, P.J., 2021, Experimental rain prints and gas escape structures as a framework for interpreting circular imprints in shales of the Pottsville Formation (Pennsylvanian, Alabama): *The Depositional Record* v. 7(3), p. 470-479, doi.org/10.1002/dep2.142.
- Manning-Berg, A., \*Selly, T., and Bartley, J.K., 2022, Actualistic approaches to interpreting the role of biological decomposition in microbial preservation: *Geobiology* v. 20(2), p. 216-232  
doi.org/10.1111/gbi.12475.
- Yingst, R.A., Bartley, J.K., Chidsey, T.J., Cohen, B.A., Hynek, B.M., Kah, L.C., Minitti, M.E., Vanden Berg, M.D., Williams, R.M.E., \*Adams, M., Black, S., el-Maarry, M.R., Gemperline, J., Kronyak, R., and Lotto, M., 2020, Is a linear or a walkabout protocol more efficient when using a rover to choose biologically relevant samples in a small region of interest?: *Astrobiology* v. 20, p. 327-348.
- Wittkop, C., Bartley, J.K., \*Krueger, R., Bouvier, A., Georg, R.B., Knaeble, A.R., St. Clair, K., Piper, C., and Breckenridge, A., 2020, Influence of provenance and depositional process on the geochemistry and radiogenic (Hf, Nd, and Sr) isotopic composition of Pleistocene glacial sediments, Minnesota, USA: *Chemical Geology* v. 532, 119390.
- Gilleaudeau, G.J., Romaniello, S.J., Luo, G., Kaufman, A.J., Zhang, F., Klæbe, R.M., Kah, L.C., Azmy, K., Bartley, J.K., Zheng, W., Knoll, A.H., Anbar, A.D., 2019, Uranium isotope evidence for limited euxinia in mid-Proterozoic oceans: *Earth and Planetary Science Letters*, v. 521, p. 150-157.
- Osterhout, J.T., Czaja, A.D., Bartley, J.K., Fralick, P., 2019, Preservation of carbon isotopes in kerogen from thermally altered Mesoproterozoic lacustrine microbialites: *Canadian Journal of Earth Sciences*, v.56, p. 1017-1026. doi.org/10.1139/cjes-2018-0309.
- Yingst, R.A., Bartley, J.K., Chidsey, T., Cohen, B., Gilleaudeau, G., Hynek, B., Kah, L.C., Minitti, M.E., Williams, R.M.E., Black, S., Gemperline, J., \*Schaufler, R., Thomas, R., 2018, Testing the efficiency of rover science protocols for robotic sample selection: A GeoHeuristic Operational Strategies Test: *Acta Astronautica*, v. 146, p. 300-315.
- Teasdale, R., Viskupic, K., Bartley, J.K., McConnell, D., Manduca, C., Bruckner, M., Farthing, D., and Iverson, E., 2017, A multidimensional assessment of reformed teaching practice: *Geosphere*, v. 13, p. 608-627.
- Gilleaudeau, G.J., Frei, R., Kaufman, A.J., Kah, L.C., Azmy, K., Bartley, J.K., Chernyavskiy, P., Knoll, A.H., 2016, Oxygenation of the mid-Proterozoic atmosphere: clues from chromium isotopes in carbonates: *Geochemical Perspectives Letters*, v. 2, p. 178-187.
- Bartley, J.K., Kah, L.C., Frank, T.D., Lyons, T.W., 2015, Deep-water microbialites of the Mesoproterozoic Dismal Lakes Group: Microbial growth, lithification, and implications for coniform stromatolites: *Geobiology*, v. 13, p. 15-32.
- Gomez, F.J., Kah, L.C., Bartley, J.K., and Astini, R.A., 2014, Mineralized microbialites in a high-altitude Andean lake as a natural analogue for Proterozoic stromatolite formation: *PALAIOS*, v. 29, p. 233-249.
- Kah, L.C., Bartley, J.K., and \*Teal, D.A., 2012, Chemostratigraphy of the Late Mesoproterozoic Atar Group, Taoudeni Basin, Mauritania: Muted isotopic variability, facies correlation, and global isotopic trends: *Precambrian Research* v. 200-203, p. 82-103.
- Kah, L.C., and Bartley, J.K., 2011, Protracted oxygenation of the Proterozoic biosphere: *International Geology Review* v. 53, p. 1424-1442.
- Basu-Dutt, S., \*Slappey, C., and Bartley, J.K., 2010, Making chemistry relevant to the engineering major: *Journal of Chemical Education* v. 87, p. 1206-1212.
- Bartley, J.K., Basu-Dutt, S., Geisler, V.J., Khan, F.A., and Swamy-Mruthinti, S., 2010, Making chemistry relevant to science and engineering majors: *in* Basu-Dutt, S., ed., *Making Chemistry*

*Relevant: Strategies for Including All Students in a Learner-Sensitive Classroom Environment* (John Wiley, NY), p. 169-192.

- Kah, L.C., Bartley, J.K., and \*Stagner, A.F., 2009, Reinterpreting a Proterozoic enigma: *Conophyton-Jacutophyton* stromatolite reefs of the Mesoproterozoic Atar Group, Mauritania: Special Publication of the International Association of Sedimentologists v. 41, p. 277-295.
- Bartley, J.K., Kah, L.C., \*McWilliams, J.L., and \*Stagner, A.F., 2007, Carbon Isotope Chemostratigraphy of the Middle Riphean type section (Avzyan Formation, Southern Urals, Russia): Signal recovery in a fold-and-thrust belt. *Chemical Geology* v. 237, p. 211-232.
- Kah, L.C., \*Crawford, J.C., Bartley, J.K., Kozlov, V.I., Sergeeva, N.D., and Puchkov, V.N., 2007, Carbon isotope chemostratigraphy as a tool for verifying the age of Riphean deposits in the Kama-Belaya aulacogen, the East European Platform: *Stratigraphy and Geological Correlation* v. 15, p. 12-29.
- Kah, L.C., Bartley, J.K., Frank, T.D., and Lyons, T.W., 2006, Reconstructing sea level change from the internal architecture of stromatolite reefs: An example from the Mesoproterozoic Sulky Formation, Dismal Lakes Group, arctic Canada: *Canadian Journal of Earth Sciences* v. 43, p. 653-669.
- \*Pollock, M.D., Kah, L.C., and Bartley, J.K., 2006, Morphology of molar-tooth structures in Precambrian carbonates: Influence of substrate rheology and implications for genesis: *Journal of Sedimentary Research* v. 76, p. 310-323.
- Bartley, J.K., and Kah, L.C., 2004, Marine carbon reservoir,  $C_{org}$ - $C_{carb}$  coupling, and the Mesoproterozoic carbon isotopic record: *Geology* v. 32, p. 129-132.
- Semikhatov, M.A., Kuznetsov, A.B., Podkovyrov, V.N., Bartley, J.K., and Davydov, Yu. V., 2004, The Yudoma Group of stratotype area: C-isotope chemostratigraphic correlations and Yudomian-Vendian relation: *Stratigraphy and Geological Correlation* v. 12, p. 435-459.
- Pope, M.C., Bartley, J.K., Knoll, A.H., and Petrov, P.Yu., 2003, Molar tooth structures in calcareous nodules, early Neoproterozoic Burovaya Formation, Turukhansk region, Siberia: *Journal of Sedimentology* v. 158, p. 235-248.
- Bartley, J.K., Semikhatov, M.A., Kaufman, A.J., Pope, M.C., Knoll, A.H., and Jacobsen, S.B., 2001, Global events across the Mesoproterozoic-Neoproterozoic boundary: C and Sr isotopic evidence from Siberia: *Precambrian Research: Theme Issue – Rodinia and the Mesoproterozoic Earth-Ocean System* (J.K. Bartley and L.C. Kah, editors) v. 111, p. 165-202.
- Bartley, J.K., Knoll, A.H., Grotzinger, J.P., and Sergeev, V.N., 2000, Lithification and fabric genesis in precipitated stromatolites and associated peritidal carbonates, Mesoproterozoic Billyakh Group, Siberia: *in* Grotzinger, J.P., and James, N.P., editors. *Carbonate Sedimentation and Diagenesis in the Evolving Precambrian World*, SEPM Special Publication 67, p. 59-73.
- Bartley, J.K., Pope, M., Knoll, A.H., Petrov, P.Yu., Semikhatov, M.A., and Sergeev, V.N., 1998, A Vendian-Cambrian boundary succession from the western Siberian Platform: *Geochemistry, stratigraphy, and paleontology: Geological Magazine* v.135, p. 473-494.
- Bartley, J.K., 1996, Actualistic taphonomy of cyanobacteria: Implications for the Precambrian fossil record: *Palaios* v. 11, p. 571-586.

Peer-reviewed textbook contributions and editorials —

- Bartley, J.K., 2002, Climate Change in Your Community: *in* EarthComm Sourcebook for High School Earth Sciences. (AGI, Washington, DC).
- Kah, L.C., and Bartley, J.K. 2001, Rodinia and the Mesoproterozoic Ocean-Atmosphere System (Preface): *Precambrian Research: Theme Issue – Rodinia and the Mesoproterozoic Earth-Atmosphere System* (J.K. Bartley and L.C. Kah, editors) v. 111, p. 1-4.
- Kaplan, I.R., and Bartley, J.K., 2000, Global biogeochemical cycles: Carbon, sulfur, and nitrogen: *in* Ernst, W.G. *Earth Systems: Processes and Issues* (Cambridge University Press, New York). Chapter 19, pp. 278-296.

Book Reviews —

- Bartley, J.K., 2002, *Liaisons of Life: From Hornworts to Hippos, How the Unassuming Microbe has Driven Evolution* by Tom Wakeford: *Palaios* v. 17, p. 414-415.  
Bartley, J.K., 2001, *Environmental Evolution* by Lynn Margulis: *Geotimes*.

Invited Presentations (accompanying abstracts, if published, listed) —

- Gustavus Faculty Retreat – 8/2025. Leader/facilitator: *Belonging without Burnout*  
Camp Kendall – 5/2025. Workshop leader: *Small change, big impact; cultivating belonging in your courses*  
Geological Society of Minnesota – 4/2025. *Stromatolite Morphology and Diversity – How did (mostly) brainless pond scum build large, complex structures?*  
Camp Kendall – 5/2024 & 8/2024. Workshop leader: *Course redesign for a changing curriculum*  
Kendall Center Shop Talk — 4/2023. *Inclusive Excellence in STEM and Beyond*  
Geological Society of Minnesota – 4/2019. *The Rover as a Field Geologist: Strategies for Understanding a Planet*  
Kendall Center January Workshop – 1/2019. Workshop leader: *Course (re)design for student-centered classrooms*  
Teachers Talking – 12/2017: *Academic Honesty*  
CIC Workshop for Department and Division Chairs – 5/2017. Discussion facilitator: *Special Challenges of the Small Department*.  
Celebration of Learning and Development – 4/19/2017. *The Geology Capstone Experience Informs Curriculum Design*.  
Earth Educators' Rendezvous – 7/2016. Panelist: *What is Sustainability Education, and How Do We Get There?*  
Camp Kendall – 6/2016. Workshop leader: *Course (re)design*.  
InTeGrate webinar – 4/2016. Panelist: *Improving Climate Literacy through Your Undergraduate Course*.  
Teachers Talking – 3/2016: *Course Makeovers*  
Midstates Math & Science Consortium, Janet Anderson Lecture – 11/2015. *Biosignatures: Records of life on Earth, and elsewhere*.  
University of Missouri, Colloquium – 4/2015. *Time, Environment, and Microbes: Understanding Stromatolites*.  
Jackson County Library Association, Brown Bag Series – 4/2015. *Bison Bones in the Des Moines River: A Prehistoric Mystery*.  
Gustavus Adolphus College Shop Talk – 12/2014. *Biosignatures: Records of life on Earth, and elsewhere*.  
University of Illinois at Chicago, Colloquium – 10/2014. *From Proterozoic to Modern: What do we know about stromatolites?*  
University of St. Thomas, Colloquium – 4/2014. *Stromatolites: Past and Present*.  
University of Minnesota, Earth Science Seminar Series – 3/2014. *From Proterozoic to Modern: What Can We Learn From Stromatolites?*  
University of Cincinnati, Geology Department Colloquium – 3/2014. *From Proterozoic to Modern: What Can We Learn From Stromatolites?*  
University of Minnesota, Soft Rock Seminar Series – 2/2014. *What can taphonomy tell us about taxonomy? Experimental approaches*.  
American Association for the Advancement of Science, AAASLocal: Minnesota – 4/2013. *Stromatolites: Life and Environment*.  
University of Minnesota Duluth, Geological Sciences Seminar – 3/2013. *What Can Modern Microbialites Tell Us About the Precambrian, Oil Exploration, and Mars?*  
Conoco Phillips Field Course: Microbial Carbonates – 10/2012. *Proterozoic Life and Environment*.

Gustavus Adolphus College, *Teachers Talking* – 12/2012. Supporting student engagement with challenging classroom topics (with co-presenters Kate Knutson and Sarah Ruble)

Gustavus Adolphus College Library, *Darwin/Dickens Celebration* —2/2012. Panelist/speaker.

Gustavus Adolphus College, *Scholarship of Teaching & Learning Lunch* — 9/2010. Panelist, inquiry learning.

Gustavus Adolphus College, *Shop Talk* – 3/2010. Guided Inquiry Learning in an Upper-Division Geology Course: Successes and Challenges.

Exploring Religious Questions Series – *God vs. Atheism: Engaging Natural Science and Religion* – 2/2010. Life in this World: Biological Evolution.

Gustavus Adolphus College, *Teachers Talking* – 2/2010. Inquiry-based Learning (with co-presenters Barbara Kaiser and Jon Grinnell).

Gustavus Adolphus College, *SoTL Lunch* – 11/2009. What makes a good class perform badly? Rationalization, reasons, and interventions.

USG STEM Institute meeting, 2/09. Cooperative and Collaborative Learning (co-presenter: S.B. Dutt).

California State University, Fullerton, Colloquium 3/08. Reefs without coral and ooze without plankton: The Proterozoic carbonate factory.

Little Tallapoosa Botanical Society, Guest Speaker 3/08. The Origin and Evolution of Land Plants.

The Center for Place-based Education, Workshop and Field Trip Leader 3/08. The Geology of Chattahoochee Hill Country.

Learning Festival, UWG College of Education 6/07. Finding inspiration in college student engagement: Dual Teacher-learner roles.

UWG Advanced Academy 9/06. Reefs before animals – Carbonate platform development in the Proterozoic Atar Group, Mauritania.

UWG Sigma Xi Chapter Symposium 4/06. Reefs before animals – Carbonate platform development in the Proterozoic Atar Group, Mauritania.

Alabama Paleontological Society 2/06. Reefs before animals – Carbonate platform development in the Proterozoic Atar Group, Mauritania.

Virginia Polytechnic Institute, Colloquium 4/05. Life at high [DIC]: Carbon cycle linkages and the marine carbon reservoir.

Virginia Polytechnic Institute, Geobiology Brown-Bag 4/05. Paleobiological implications of carbonate oversaturation: Proterozoic taphonomy and stromatolites.

Geological Society of America Session – 1500 to 2500 Ma: A Period of Changing Mantle Regimes in Earth History? 11/04. Upper mantle oxidation as a mechanism for initiating coupling between biospheric oxygen and carbon reservoirs [abstract published]  
*Published Abstract:* Bartley, J.K., Kah, L.C., 2004, Upper Mantle Oxidation As A Mechanism For Initiating Coupling Between Biospheric Oxygen And Carbon Reservoirs: Abstracts with Program – Geological Society of America v. 36(5), p. 206.

International Basement Tectonics Association Meeting 7/04. Tectonic events as a trigger for Proterozoic carbon isotopic evolution.

Atlanta Geological Society 10/04. Reefs before animals – Carbonate platform development in the Proterozoic Atar Group, Mauritania (West Africa).

Pennsylvania State University, 2/04. Life at high [DIC]: Carbon cycle linkages and the marine carbon reservoir.

Indiana University, Geology Colloquium 9/03. The carbon cycle before skeletons: Carbon cycle linkages and the marine carbon reservoir.

Indiana University, Biogeochemistry Brown-Bag 9/03. Life at high [DIC] – carbonate platforms, taphonomy, and carbon cycling.

Georgia State University, Geology Colloquium 9/01. Mesoproterozoic Ocean Chemistry: Clues from Stromatolites, Microbes, and Isotopes.

Harvard University, Earth History and Paleontology Seminar Series 2/01. Mesoproterozoic Carbon Cycling: Dullest Time or Critical Interval?

- Smithsonian Associates Short History of Life 1/01. How Life Arose on Earth: The Origin and Early History of Life.
- State University of West Georgia, Center for Teaching and Learning 9/00. Taking Science Outside: Problem Based Learning in Environmental Science (with Frank Orr, Greg Payne, Chris Tabit, and Richard Sanders).
- Georgia Southern University, Geology Department Lecture Series 11/99. Not Dull at All! The End of the Mesoproterozoic: Reefs, Geochemistry, and a Supercontinent.
- University of Georgia, Geology Department Lecture Series 10/99. Not Dull at All! The End of the Mesoproterozoic: Reefs, Geochemistry, and a Supercontinent.
- University of Southern California, Geology Department Lecture Series 9/99. Not Dull at All! The End of the Mesoproterozoic: Reefs, Geochemistry, and a Supercontinent.
- Tennessee Technological University, Earth Sciences Department Lecture Series 2/99. Geochemical record of supercontinent assembly.
- Georgia Institute of Technology, Earth and Atmospheric Sciences Lecture Series, 10/98. Biogeochemical and tectonic events near the Mesoproterozoic-Neoproterozoic boundary.
- University of Tennessee, Knoxville; Geology Department Lecture Series, 10/98. Experimental taphonomy of microbes and the Proterozoic fossil record.
- AAPG/SEPM meeting, Salt Lake City, UT, 5/98. Biogeochemical and tectonic events near the Mesoproterozoic-Neoproterozoic boundary in Siberia.  
*Published Abstract:* Bartley, J.K., Kaufman, A.J., Knoll, A.H., Semikhatov, M.A., Jacobsen, S.B., 1998, Biogeochemical and tectonic events across the Mesoproterozoic-Neoproterozoic transition in Siberia: Annual Meeting Expanded Abstracts – American Association of Petroleum Geologists, 1998.
- University of Maryland, College Park; Department of Geology Lecture Series, 4/98. Biogeochemical and tectonic events near the Mesoproterozoic-Neoproterozoic boundary in Siberia.
- State University of West Georgia, Sigma Xi Lecture Series, 12/97. What did the Earth look like a billion years ago, and how do we know?
- Auburn University, Geology Lecture Series 11/97. Taphonomy of cyanobacteria: Results of experiments and applications to the fossil record.
- CSPG/SEPM meeting, Calgary, Alberta, 6/97. Peritidal carbonate precipitates in the Kotuikan Formation, Mesoproterozoic, Anabar Uplift, Siberia.  
*Published abstract:* Bartley, J.K., Knoll, A.H., Grotzinger, J.P., Sergeev, V.N., 1997, Peritidal carbonate precipitates in the Kotuikan Formation, Mesoproterozoic, Anabar Uplift, Siberia: Program with Abstracts – CSPG-SEPM Joint Convention, 1997, p. 31.

Abstracts; to accompany volunteered presentations (\*indicates student author) —

- Bartley, J.K., and Kah, L.C., 2025, Beyond morphology – reading stromatolites as accretionary structures: Geological Society of America Abstracts with Program v. 57(6), doi: 10.1130/abs/2025AM-9300.
- Bartley, J.K., Kah, L.C., 2024, Stromatolite diversity in the Mesoproterozoic mimics environmental heterogeneity: Geological Society of America Abstracts with Program v. 56(4), doi: 10.1130/abs/2024CD-399626.
- Bartley, J.K., \*Firmin, S., and \*Berger, J., 2021, Recognition of a calcitized evaporite from a hypersaline playa lake setting: Rosspport Formation (Mesoproterozoic, Ontario): Geological Society of America Abstracts with Program v. 53(6), doi: 10.1130/abs/2021AM-369517.
- Kah, L., and Bartley, J., 2021, Lamina structure in the understanding of stromatolite morphology: Geological Society of America Abstracts with Program v. 53(6), doi: 10.1131/abs/2021AM-369385.
- Bartley, J.K., Hickson, T.A., 2017, Continental microbialites through time: The problem of limited analogues and a possible solution: Geological Society of America Abstracts with Program v. 49(4), paper 119-11.

- Bartley, J.K., Berger, J., \*Eischen, T., \*Firmin, S., and \*Reiners, L., 2016, Hypersaline conditions for stromatolite growth in the Rosspoint Formation (Mesoproterozoic, Ontario): Institute on Lake Superior Geology Proceedings, v. 62, p. 8-9.
- Bartley, J.K., Kah, L.C., Frank, T.D., 2015, Microbial community behavior recorded in cusped microbialites: Mesoproterozoic Dismal Lakes Group: GAC-MAC-AGU Joint Assembly 2015.
- Bartley, J.K., \*Firmin, S., \*Reiners, L., \*Hilgren, B., \*Berger, J., and \*Eischen, T., 2015, A hypersaline environment for stromatolite growth in the Mesoproterozoic Sibley Group, Ontario, Canada: Open-File Report – US Geological Survey 2015, p. 24-25.
- Bartley, J.K., Triplett, L., Dontje, J., Huber, T., Koomen, M., Jeremiason, J., La Freniere, J., Niederriter, C., Versluis, A., 2014, Climate science across the liberal arts curriculum at Gustavus Adolphus College: Abstract ED138-3451 presented at 2014 Fall Meeting. AGU, San Francisco, CA, 15-19 December.
- Bartley, J.K., \*Selly, T., \*Manning-Berg, A., \*Cole, P., 2014, Experimental taphonomy as a tool for deciphering the biological affinities of microfossils: The Paleontological Society Special Publication v. 13, p. 123.
- Bartley, J.K., Kah, L.C., Frank, T.D., Lyons, T.W., 2013, Growth and preservation of cusped microbial forms, Mesoproterozoic Dismal Lakes Group, Arctic Canada: Abstracts with Program – Geological Society of America v. 45(7), p. 243.
- Gomez, F.J., Kah, L.C., Bartley, J.K., Astini, R.A., 2012, Microbialites in a high-altitude Andean lake as a natural analogue for Proterozoic stromatolite formation: Abstracts with Program – Geological Society of America v. 44(7), p. 211.
- Bartley, J.K., and Kah, L.C., 2011, Cement stratigraphy suggests chemically distinct water masses in the Mesoproterozoic ocean: Abstracts with Program – Geological Society of America v. 43(5), p. 96.
- Bartley, J.K., and Kah, L.C., 2010, Glacier National Park as a natural laboratory for geologic observation and first-principles discussion of geologic processes: Abstracts with Program – Geological Society of America v. 42(5), p. 661.
- Bartley, J.K., and Kah, L.C., 2007, Unusual carbonate microspar associated with “fluidized” beds: A geologic snapshot of spontaneous water-column nucleation and formation of a viscous colloid: Abstracts with Program – Geological Society of America v. 39(6), p. 420.
- Bartley, J.K., 2007, Teaching stratigraphy by POGIL (process-oriented guided inquiry learning): successes and challenges, Georgia Journal of Science v. 65, p.43.
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- Bartley, J.K., 2006, Rapid grain size and orientation measurements in carbonates using SEM and EBSD: Abstracts with Program – Geological Society of America v. 38(3), p. 49.
- Bartley, J.K., and \*Cole, P.M., 2005, Environmental scanning electron microscopy as a tool for assessing taphonomic bias in Proterozoic acritarchs: Abstracts with Program – Geological Society of America v. 37(7), p. 115.
- Kah, L.C., and Bartley, J.K., 2005, Understanding Proterozoic carbon cycle evolution: Implications of reservoir size: Abstracts with Program – Earth Systems Processes 2, No. 1, p. 44.
- Bartley, J.K., and Kah, L.C. 2002, The role of reservoir size in controlling the rate and magnitude of secular variation in carbon isotopic composition during the Mesoproterozoic Era: Abstracts with Program – Geological Society of America v. 34(6), p. 221.
- Bartley, J.K., Sanders, R.P., Orr, F., Payne, G., and Tabit, C., 2000, A problem-based approach to teaching environmental science at the graduate and undergraduate level: Abstracts with Program – Geological Society of America v. 32(7), p. A-491.
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- Kah, L.C., and Bartley, J.K., 1999, Ocean chemistry links to the Mesoproterozoic assembly of Rodinia: European Union of Geologists Meeting; Journal of Conference Abstracts v. 4(1), p. 118.

- Bartley, J.K., Kah, L.C., Frank, T.D., and Lyons, T., 1999, Photosynthetic and possible chemosynthetic communities of the ~1.3 Ga Dismal Lakes Group, NWT, Canada: Abstracts with Program – Geological Society of America v. 31(3), p. A-4.
- Bartley, J.K., and Kah, L.C., 1998, Ocean chemistry links to the Mesoproterozoic assembly of Rodinia: Part 2 – Strontium isotopic record: Abstracts with Program – Geological Society of America v. 30(6), p. A-109.
- Bartley, J.K., Pope, M., Knoll, A.H., and Petrov, P.Yu., 1997, Molar-tooth nodules, Burovaya Formation (early Neoproterozoic), Turukhansk Uplift, Siberia: Abstracts with Program – Geological Society of America v. 29(6), p. A-192.
- Bartley, J.K., Knoll, A.H., Pope, M., Petrov, P.Yu., Semikhatov, M.A., and Sergeev, V.N., 1996, Chemostratigraphic recognition of a Proterozoic-Cambrian boundary succession on the western Siberian Platform; implications for paleogeography and ocean circulation: Abstracts with Program – Geological Society of America v. 28(7), p. A-220.
- Bartley, J.K., and Knoll, A.H., 1995, Taphonomy as a guide to the timing of lithification in Proterozoic carbonates: Abstracts with Program – Geological Society of America v. 27(6), p. A-271.
- Bartley, J.K., 1994, Analyzing cyanobacterial taphonomy; method and applications: Abstracts with Program – Geological Society of America v. 26(6), p. A-296.
- Bartley, J.K., 1994, Semiquantitative analysis of cyanobacterial taphonomy: *Paleobios* v. 16(1), p. 2.
- Bartley, J.K., 1993, Carbon isotope trends with depth in microbial mats from Bahia San Quintin, Baja California Norte, Mexico: *Paleobios* v. 14(4), p. 1-2.
- Bartley, J.K., and Schopf, J.W., 1993, Carbon isotopic studies of microbial mats; analogs for Precambrian ecosystems: Abstracts with Program – Geological Society of America v. 25, p. A-356.
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*Abstracts; to accompany collaborator or student presentations —*

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- \*Deters, K.R., Bartley, J.K., and Hickson, T.A., 2025, Testing a database approach to describing microbialite features: Geological Society of America Abstracts with Program v. 57(6), doi: 10.1130/abs/2025AM-10436.
- Newbille, A., Doss-Watson, S., Manning-Berg, A.R., and Bartley, J.K., 2024, Lab-created silica gels: Environmental insights into silicification processes of the Proterozoic: Geological Society of America Abstracts with Program v. 56(5), doi: 10.1130/abs/2024AM-404364.
- Kah, L.C., and Bartley, J.K., 2024, Molar-tooth microspar as a window into Proterozoic carbonate precipitation, stabilization, and diagenesis: Geological Society of America Abstracts with Program v. 56(4), doi: 10.1130/abs/2024CD-399617.
- Hickson, T.A., and Bartley, J.K., 2023, A unique snapshot in time of an ancient lake: The spectrum of lacustrine carbonate morphologies and textures from a single stratum: Abstracts with Program – Geological Society of America v. 55(6), doi 10.1130/abs/2023AM-391974.
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- Murphy, A., Bartley, J.K., Reid, R.P., and Glamočlija, M., 2022, The effects of biofilm in burial dolomitization and potential mineralogical biosignatures: An experimental study using modern Bahamian stromatolites: Astrobiology Science Conference, Abstracts with Program.
- Yingst, R., Bartley, J., Cohen, B.A., Hynek, B., Kah, L., Archer, R., Lotto, M., Mooney, J.T., Wang, J., and Wogsland, B., 2022, Using rover-analogous instrumentation to discriminate between volcanic and sedimentary processes in successions dominated by igneous chemistry: the Tjörnes, Iceland example: Geological Society of America Abstracts with Program v. 54(3), doi 10.1130/abs/2022NE-374546.
- Cotton, B.K., Fortner, S.K., Bartley, J.K., Gross, D.S., and Bender-Awalt, M., 2021, Train the facilitators: Applying lessons from URGE to NAGT professional development programming: American Geophysical Union, Fall Meeting 2021, abstract #U35A-2259.
- Yingst, R., Bartley, J., Cohen, B.A., Hynek, B., Kah, L., Archer, R., Lotto, M., Mooney, J.T., Wang, J., and Wogsland, B., 2021, Using rover-analogous instrumentation to discriminate between volcanic and sedimentary processes in successions dominated by igneous chemistry: Geological Society of America Abstracts with Program v. 53(6), doi 10.1130/abs/2021AM-365260.
- Kah, L.C., and Bartley, J.K., Heterogeneity in the Mesoproterozoic record of carbonate rocks: Geological Society of America Abstracts with Program v. 52(6), doi: 10.1130/abs/2020AM-356645.
- Yingst, R.A., Williams, R.M.E., Bartley, J.K., Chidsey, T., Cohen, B.A., Hynek, B.M., Kah, L.C., Minitti, M.E., Vanden Berg, M.D., Curran, N., Lotto, M., \*Adams, M., \*Bartley, B., and \*Pearson, T., 2020, Mars sample selection using a highly constrained tactical timeline: a GHOST terrestrial analog field study: American Geophysical Union, Fall Meeting 2020, abstract #P059-01.
- \*Schroeder, H., \*Capron, S., Triplett, L., and Bartley, J.K., 2020, Monitoring water quality in the Seven Mile Creek Watershed: Geological Society of America Abstracts with Programs v. 51, 34-12. *Note: This presentation was done as a virtual poster for the North-Central GSA Meeting*
- \*Krippner, K., Allison, M., Triplett, L.D., Bartley, J.K., DeLong, S.B., DeLong, W.M., Engle, Z., Gran, K.B., Jennings, C., and Wickert, A.D., 2020, Landslide characterization I the lower Minnesota River Valley: Geological Society of America Abstracts with Programs v. 51, 14-3. *Note: This presentation was withdrawn when the North-Central GSA Meeting was moved to an online format. The abstract remained published*
- Engle, Z.T., DeLong, S.B., Bartley, J.K., Blumentritt, D., Breckenridge, A.J., Day, S.S., Gran, K.B., Jennings, C.E., Larson, P.H., McDermott, J.A., Triplett, L.D., and Wickert, A.D., 2020, Towards design of a landslide inventory geodatabase for Minnesota: Geological Society of America Abstracts with Programs v. 51, 14-1. *Note: This presentation was done as a virtual poster for the North-Central GSA Meeting*
- Jennings, C.E., Gran, K.B., DeLong, S.B., Bartley, J.K., Blumentritt, D., Breckenridge, A.J., Dahly, D.T., Day, S.S., Engle, Z., Hammer, M., Kurak, E., Larson, P.H., McDermott, J.A., Richard, E.M., Swanson, M., and Triplett, L.D., 2020, A landslide inventory for Minnesota: Geological Society of America Abstracts with Programs v. 51, 4-3. *Note: This presentation was done as part of the virtual meeting of the North-Central GSA.*
- Wittkop, C., Bartley, J.K., \*Krueger, R., Bouvier, A., Georg, R.B., Knaeble, A.R., Piper, C., St. Clair, K., and Breckenridge, A.J., 2020 Geochemical and isotopic tools for Pleistocene sediment provenance in the North American midcontinent: Geological Society of America Abstracts with Programs v. 51, 31-11. *Note: This presentation was withdrawn when the North-Central GSA Meeting was moved to an online format. The abstract remained published.*
- \*Adams, M., Bartley, J.K., Yingst, R.A., Kah, L.C., Lotto, M., Minitti, M.E., Williams, R.M.E., 2018, Laboratory analysis of rock sample suites from a Mars rover simulation conducted on Green River Formation specimens, Uintah Basin, Utah: Geological Society of America Abstracts with Programs, v. 50(6), 15-12.

- \*Bruhler, S., and Bartley, J.K., 2018, Characterization of modern stromatolites by microscale features: Hamelin Pool, Australia and Exuma Cays, Bahamas: Geological Society of America Abstracts with Programs, v. 50(6), 204-7.
- Yingst, R.A., Bartley, J., Chidsey, T., Cohen, B.A., Hynek, B.M., Kah, L.C., Minitti, M.E., Vanden Berg, M., Williams, R.M.E., Adams, M., Black, S., El-Maary, M., Gemperline, J., Kronyak, R., and Lotto, M., 2018, Is a linear or a walkabout protocol more efficient for robotic sample selection in a small region of interest?, Lunar and Planetary Science Conference v. 49, abstract 1173.
- Niederriter, C., Huber, T., Jeremiason, J., Bartley, J.K., Dontje, J., 2017, Climate science across the liberal arts curriculum at Gustavus Adolphus College: Summer Meeting of the American Association of Physics Teachers, July 2017.
- Gilleaudeau, G.J., Frei, R., Kaufman, A.J., Luo, G., Romaniello, S.J., Zhang, F., Kläbe, R.M., Sahoo, S.K., Azmy, K., Bartley, J.K., Chernyavskiy, P., Knoll, A.H., Anbar, A.D., 2017, Deciphering the carbonate record of Mesoproterozoic biospheric oxygenation: Insights from chromium and uranium isotopes, Goldschmidt Abstracts 2017, 1349.
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- Hickson, T.A., and Bartley, J.K., 2017, Microbialite textures and chemical signatures in continental settings: Some thoughts on data needs: Geological Society of America Abstracts with Programs v. 49(4), paper 119-1.
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- \*Hill, S., and Bartley, J.K., 2001, Phytoremediation of heavy metals in the Buffalo Creek watershed, Carroll County, Georgia: Georgia Journal of Science v. 59(1), p. 35-36. [undergraduate best paper award at Georgia Academy of Sciences meeting, Earth Science Division]
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- Kah, L.C., and Bartley, J.K., 1999, Reef facies and possible chemosynthetic communities of the Sulky Formation, ~1.3 Ga Dismal Lakes Group, NWT, Canada: Abstracts with Program – GAC-MAC Annual Meeting, 1999.
- \*Taylor, C., \*Helms, M., and Bartley, J.K., 1999, Morphological and chemical decomposition of vascular plant leaves under back-swamp conditions: Abstracts with Program – Geological Society of America v. 32(3), p. 70.
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- \*Tyrrell, K.M., and Bartley, J.K., 1999, Stable isotope geochemistry of carbonates from the Atar Group, West Africa: Georgia Journal of Science v. 57(1), p. 60.
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- Kah, L.C., and Bartley, J.K., 1998, Ocean chemistry links to the Mesoproterozoic assembly of Rodinia: Part 1 – Carbon isotopic record: Abstracts with Program – Geological Society of America v. 30(6), p. A-160.
- Kah, L.C., and Bartley, J.K., 1997, Establishing a carbon isotopic reference curve for the Mesoproterozoic; biogeochemical links to the tectonic assembly of Rodinia: Abstracts with Program – Geological Society of America v. 29(6), p. A-115.

## **OTHER PROFESSIONAL DEVELOPMENT ACTIVITIES**

### *Editorial & Review Roles*

- Associate Editor, *Elements of Paleontology* (Cambridge University Press) 2018-present.
- Co-editor, special issue of *Palaeoceanography, Palaeoclimatology, Palaeoecology*, 2007.
- Panelist, NASA Astrobiology: Exobiology and Evolutionary Biology 10/2004.
- Associate Editor, *Palaios*, 2002-2006.
- Panelist, NSF/ATE Program, 5/2004.
- Panelist, NSF POWRE Program (Professional opportunities for women in research and education), April, 2000.
- Theme Session Chair and Coordinator, GSA, Southeastern Regional Meeting, March, 1999.
- Co-editor, *Precambrian Research*, special volume: Rodinia and the Mesoproterozoic Ocean-Atmosphere System. 1999-2001.

### *Leadership & Facilitator Roles*

- Workshop Leader, Course (re)Design, June 2016, sponsored by the Kendall Center.
- Grant-Writing Workshop Facilitator (with B. Weisenfeld), June 2014, sponsored by the Kendall Center.
- Leadership Team Member, Reformed Teaching Observation Protocol Project, 2012-2015.  
The RTOP project aims to make an inventory of pedagogy in the geosciences at the college level, nationwide. Sponsored by SERC.
- START Workshop Trainer, UWG Technology Expo, April, 2002, 2003.
- START Workshop Trainer, GAS Meeting, March, 2002.

### *Participant Roles*

- Participant, Mid-States Consortium for Math and Science Mid-Career Revitalization Workshop, February 2011.
- Participant, SERC Cutting Edge Workshop, Course Design, May 2010.
- Participant, SERC Cutting Edge Workshop, Teaching Paleontology in the 21<sup>st</sup> Century, 2009.
- Participant, SERC Cutting Edge Workshop, Building Strong Geoscience Departments, 2009.

## **PROFESSIONAL REVIEW ACTIVITIES (SINCE 2009)**

### *Review of manuscripts for the following journals/volumes:*

- 2025 — *Nature Communications, Journal of Geophysical Research (Biogeosciences), Precambrian Research, Geology, Sedimentology, Astrobiology*
- 2024 — *Journal of Geophysical Research (Biogeosciences)*
- 2023 — *Geochemical Perspectives Letters*
- 2022 — *Chemical Geology*
- 2021 — *Chemical Geology, Geobiology, Nature Communications, Geological Magazine*
- 2020 — *Earth and Planetary Science Letters, Geobiology*
- 2018 — University of Minnesota Press
- 2017 — *Precambrian Research, Nature Communications, Current Biology, Geobiology; Encyclopedia of Geochemistry*
- 2016 — *Precambrian Research, Southeastern Geology, Earth & Planetary Science Letters,*

- 2015 — *Nature Communications, Earth & Planetary Science Letters, Precambrian Research, Alcheringa, Geobiology, Geology*
- 2014 — *Precambrian Research*
- 2013 — *Geobiology, Precambrian Research, Geology, Chemical Geology, Astrobiology*
- 2012 — *Precambrian Research, Astrobiology*
- 2011 — *Acta Geologica Sinica; Paleontological Society Special Publication: Teaching Paleontology in the 21<sup>st</sup> Century*
- 2010 — *Earth & Planetary Sciences Letters; Geology; Sedimentology; Precambrian Research*
- 2009 — *Precambrian Research; Earth & Planetary Sciences Letters; Special Volume of Topics in Geobiology: Quantifying the Evolution of Early Life; Southeastern Geology*

*Review of grant proposals for the following funding agencies/programs:*

- 2025 — SEPM Foundation Student Assistant Grants – Reviewer
- 2024 — NSF Frontier Research in Earth Sciences Program – Reviewer
- 2024 — SEPM Foundation Student Assistant Grants – Reviewer
- 2022 — SEPM Foundation Student Assistant Grants – Reviewer
- 2020 — NASA Mars 2020 Participating Science Program – Panelist, Sedimentology
- 2020 — NSF Geology and Paleontology
- 2019 — Austrian Science Fund
- 2019 — NASA Mars 2020 Participating Science Program – Panelist, Mineralogy
- 2018 — NSF Sedimentary Geology & Paleobiology
- 2017 — Petroleum Research Fund
- 2015 — NASA Postdoctoral Program; NSF Instrumentation & Facilities Program; Petroleum Research Fund
- 2014 — NASA Postdoctoral Program; NSF Chemical Oceanography
- 2013 — NASA Postdoctoral Program; ACS Petroleum Research Fund
- 2012 — NSF Sedimentary Geology and Paleobiology
- 2011 — NSF Sedimentary Geology and Paleobiology; NSF Instrumentation & Facilities; NSF Chemical Oceanography
- 2010 — NSF Sedimentary Geology & Paleobiology; NSF Instrumentation & Facilities
- 2009 — NSF Sedimentary Geology & Paleobiology

**SPONSORED PROJECTS/CONTRACTS**

- Landslide Hazards and Impacts on Minnesota’s Natural Environment. Project manager: Karen Gran (UMD). Role: Collaborating Scientist, 7/2017 – 6/2020
- Seven Mile Creek Assessment and Implementation. PI Laura Triplett. Role: Collaborating Scientist 3/2018 – 8/2021.
- GeoHeuristic Operational Strategies Test (GHOST) project. PIs R. Aileen Yingst and Michelle Minitti. Role: Collaborating Scientist, 8/2015 – 10/2021.

**GRANT PROPOSALS RELATED TO INSTITUTIONAL INITIATIVES – EXTERNAL FUNDING**

- Howard Hughes Medical Institute Inclusive Excellence, 2022-2028, Fostering a sense of belonging in STEM and beyond. Phase 2 grant awarded, \$493,065.
- Howard Hughes Medical Institute Inclusive Excellence, March 2021, Fostering a sense of belonging in laboratory and field experiences at Gustavus Adolphus College. Phase 1 grant awarded, \$30,000.
- Sherman Fairchild Foundation, February 2019, Instrumentation support for the Nobel Hall of Sciences. Funds requested \$500,000. *Funded*.
- 3M Foundation, September 2017, Addition and Renovation of the Nobel Hall of Science. *Funded* (\$25,000).

## **GRANT PROPOSALS RELATED TO RESEARCH – EXTERNAL FUNDING**

- Petroleum Research Fund, October 2013, Stromatolites in atypical environments: From Mesoproterozoic to modern. Funds requested \$70,000. *Funded*.
- NSF Major Research Instrumentation program, January 2009, Acquisition of an ICP-MS for interdisciplinary water quality and geochemistry research. Co-PI with Jeff Jeremiason, Dwight Stoll, and Laura Triplett. Funds requested \$246,820. *Funded*.
- NSF Major Research Instrumentation program, February 2001, Acquisition of an environmental SEM with EDX and EBSP capability. Principal investigator, with, J. Waters, C. Lüneburg, H. Lebit. *Funded*, \$399,807.
- NSF Geology and Paleontology program, December 2000, Collaborative Research: Distribution and genesis of unusual carbonate fabrics (Atar Group, Mauritania) – Understanding the evolution of the Proterozoic carbonate fabric. Collaborative proposal with L.C. Kah (University of Tennessee). *Funded*, \$13,000.
- National Geographic Society, 2003, Carbonate Precipitation and the Development of Proterozoic Stromatolitic Reefs, Mauritania (co-I with L. Kah (PI)). *Funded*, \$25,000.
- NASA Exobiology, 2000, Recognizing biotic influences on planetary evolution: Investigating the biogeochemical record of microbial metabolism (collaborative with L.C. Kah (PI)). Funds requested: \$144,779. *Funded*, \$144,800.
- National Geographic Society, 2000, Determining the extent and timing of biogeochemical change in the Mesoproterozoic global ocean (PI with co-I L.C. Kah). Requested: \$14,000. *Funded*, \$12,000 (6796-00).

## **GRANT PROPOSALS RELATED TO RESEARCH – INTERNAL FUNDING (GUSTAVUS)**

- Presidential Faculty-Student Collaboration Grant program, GAC. 2025. Stromatolite diversity: A Phanerozoic perspective: *Funded*.
- Presidential Faculty-Student Collaboration Grant program, GAC. 2018. GHOST field tests – examining the science behind rover operations: *Funded* \$9,125.
- Presidential Faculty-Student Collaboration Grant program, GAC. 2012. Decomposition patterns in microbes: approaches toward understanding the early fossil record. Status: *Funded* \$7,984.
- RSC program, GAC. 2/2010. The Gunflint formation: Early modern environment or echo of an archaic Earth? Status: *Funded* \$1,975.

## **FIELD EXCURSIONS – RESEARCH**

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|---|--|
| Eastern Minnesota, 2014, 2023, 2024, 2025     | Belt Supergroup, Montana, USA. Sum 2001    |
| Death Valley and Eastern California, Jan 2017 | Southern Urals, Russia. May-June 2001      |
| Green River Formation, Wyoming, June 2015     | Belt Supergroup, Montana, USA. August 1999 |
| Channel Islands, Ontario, Canada. July 2013   | Atar Group, Mauritania. December 1998      |
| Thunder Bay area, Ontario, Canada. June 2010  | Dismal Lakes Group, NWT. June-July 1998    |
| Catamarca Province, Argentina. January 2009   | Castner Marble, Texas, US. March 1997      |
| Atar Group, Mauritania. November 2003         | Turukhansk Group, Russia. June-July 1995   |

## **FIELD EXCURSIONS – LEADER**

- Geological History of Southern CO and Northern NM, GEO-212 Spring Break field trip 2024
- Geochemistry of Seven Mile Creek, GEO/ENV 120 field trip (fall), 2014, 2015, 2017, 2021
- Geology of the Southern Appalachians, GEO-212 Spring Break field trip 2013, 2019
- Geologic History of West Texas and New Mexico, GEO-112 Spring Break field trip 2011
- Fossils of northeastern Iowa, FTS 100 field trip 09/11, 09/14, 9/19, 9/23
- Geologic History of Minnesota, GEO-112 field trip, 4/10
- Paleontology of SE Minnesota and NE Iowa, GEO 241 field trip, Fall 2009, 2011, 2015, 2019, 2021
- Geology of St. Peter, GEO 111 field trip, each semester
- Basalts and Potholes of the midcontinent rift, GEO 111 field trip, 2009, 2012, 2016
- Geology of Stone Mountain, GEOL 4203 field trip, 9/07

Water on the UWG Campus, GEOL 4203 field trip, 11/07  
Geology of Providence Canyon, GEOL 4203 field trip, 10/05, 10/07  
Geology of Carroll County, GEOL 4203 field trip, 11/04, 11/05, 11/07  
Mississippian Stratigraphy of Alabama; GEOL 4053 field trip, 10/03, 10/04, 10/06  
Geology of the Valley and Ridge Province (GA, AL); GEOL 4203 field trip, 9/00; 9/01; 10/05; 10/07  
Geology of the Georgia Coastal Plain; GEOL 4203 field trip, 11/00, 10/05, 10/07  
Tectonics of the southeastern US; GEOL 4063 field trip; Spring semester 1999-2009.  
Historical geology of GA; GEOL 1122L field trip; held each term  
Physical geology of the Carrollton area; GEOL 1121L field trip; 9/97-5/99 (each term)  
Physical geology of the UWG campus; GEOL 1121L field trip; 9/99-2001 (each term)  
Sedimentology and stratigraphy of upstate New York, 4/97.  
Rift valleys of central Massachusetts, Fall 1996.

#### **FIELD EXCURSIONS – PARTICIPANT**

Microbial Carbonates of Central Texas, Conoco Philips Reservoir Quality Field Course (Participant and Consultant), October 2012.  
The Emerson-Talladega Fault, the Great Smoky Fault, and adjacent folding and faulting: Geology and historical interpretations based on detailed geologic mapping in Polk and Bartow counties, Georgia; GGS Field Trip 10/08.  
Geology of the Elberton Granite Region; GGS Field Trip 10/05.  
Paleozoics, Northwest Georgia: Structure, seismicity, geomorphology, hydrogeology, and economic geology; GGS Field Trip, 10/04.  
Geology of the Americus area, Georgia; GGS Field Trip, 10/03.  
An introduction to sequence stratigraphy: Illustrations from the Valley and Ridge Province in Georgia and Alabama; Geology of Civil War battlefields in the Chattanooga and Atlanta Campaigns in the Valley and Ridge of Georgia; GGS Field Trip, 10/99.  
Sedimentology and stratigraphy of northeastern Alabama; led by T. Chowns, 11/98  
Geology of Trail Ridge and the Okefenokee Swamp; GGS field trip, 10/98  
Sedimentology of Jekyll Island; led by T. Chowns, 10/97  
Geology of Stone Mountain and surrounding areas; GGS field trip, 10/97  
Sequence stratigraphy of the Permian of West Texas and New Mexico; led by geologists from Mobil Exploration, 3/97.