

EarthSci News

**Andersons lead 21st geomorphology
trip to Utah. page 19.**

**Cover photo: Factory Butte near Utah's
Fremont River. Pleated Cretaceous shale
skirt swishes out across the landscape
beneath a belt of beach sandstone.**

photo credit: Bob Anderson

Editors:

**Anne Sheehan
Dan Mitchell**

Summer 2026

Letter from the Chair

Dear Alumni, Friends, and Colleagues,

Welcome to this year's edition of Geology News. It has been another busy and productive year for our department, with many activities, accomplishments, and a strong community of faculty, staff, students, and alumni.

Perhaps the most visible change is one that has been many years in the making. This summer, we officially became the Department of Earth Science. While our new name reflects the breadth of our research and educational mission, it also recognizes something that has been true for a long time: our faculty and students have been making important contributions across the Earth sciences, from geology and geophysics to paleoclimate, Earth surface processes, hydrogeology, geochemistry, and planetary science. Geology remains the foundation of our department, and our commitment to outstanding field-based education and fundamental Earth science has never been stronger.

This transition also coincides with several enhancements to our academic programs. We are now offering a Bachelor of Science degree and have launched a new Bachelor's Accelerated Master's (BAM) program, allowing outstanding undergraduates to continue directly into graduate study. Quantitative analysis and geospatial skills have long been central to our curriculum, and as Earth science becomes increasingly data-rich, we have expanded our undergraduate offerings to include Python and data visualization. While new tools evolve rapidly, our goal remains to ensure that every graduate has the quantitative skills and scientific understanding needed to ask good questions, analyze data critically, and solve complex Earth science problems.

Field education is one of the hallmarks of our department. This year, our students participated in an exceptional range of advanced field courses, many of which are highlighted in this newsletter. We were pleased to build on our collaboration with colleagues at Université Marie et Louis Pasteur (UMLP) in France through our Alps field course, and to welcome students from Escuela Superior Politécnica del Litoral (ESPOL) in Ecuador to our Geology of Colorado Augmester field course. These international partnerships enrich the educational experience for all involved and strengthen the global connections of our department.

Our research enterprise is vibrant despite a challenging national funding environment. Among many highlights this year, our researchers uncovered new evidence for the timing and intensity of ancient meteorite impacts across the inner Solar System,



Dr. Anne Sheehan at the 2026 Department graduation ceremony.
photo credit: Leo Dienstfrey

investigated naturally occurring geologic hydrogen as a potential carbon-free energy source, explored the chemistry that governs the ocean's ability to store carbon, mapped previously unrecognized earthquake faults beneath urban areas, and identified new principles explaining why different parts of Antarctica respond differently to climate change. Our planetary science program reached a major milestone when Professor Bethany Ehlmann was elected to the National Academy of Sciences, recognizing her pioneering research on water in the Solar System, planetary evolution, and NASA exploration missions. The excellence of our department is reflected in the latest QS World University Subject Rankings, which placed CU Boulder No. 5 in the United States and No. 8 in the world in both Geology and Geophysics, and No. 1 for Earth Sciences in the Shanghai Global Rankings.

Our alumni remain one of our department's greatest strengths. Over the past year, we have expanded opportunities to connect through receptions at IMAGE, the Geological Society of America, and the American Geophysical Union meetings, our annual Earth Science Symposium, and LinkedIn. Our Earth Science advisory board is also working to enhance connections with our alumni. Stay tuned for updates! We appreciate those alumni who share internship and employment opportunities by email or LinkedIn, and these connections make a real difference for our students as they explore career paths.

Private philanthropy is another way alumni and friends make a lasting impact. This year, donor support helped fund undergraduate and graduate scholarships, student research, field education, and improvements to our teaching and research facilities, creating opportunities that would not otherwise be possible. Our endowed fellowships and research funds have become increasingly important in sustaining our graduate program as federal research funding becomes more constrained. We are deeply grateful to everyone who invests in our students and our future, whether through annual gifts, endowed funds, or by including the department in their estate plans.

This year, our department mourned the loss of Emeritus Professor Joseph Smyth, who was a valued colleague and member of our department for more than three decades. Joe’s pioneering research transformed our understanding of how water is stored deep within the Earth’s mantle, and his teaching of mineralogy inspired generations of CU students. Joe’s enthusiasm extended well beyond the classroom, and he was an avid whitewater rafter and snowboarder who enjoyed sharing these experiences with students, friends, and colleagues. He will be greatly missed.

As always, I encourage you to stay connected. We hope to see many of you at our alumni receptions during the IMAGE (Houston) and GSA (Denver) meetings, the University of Colorado booth at the AGU (San Francisco) conference, and at our annual Earth Science Symposium in the fall. Whether you graduated recently or many years ago, you remain an important part of our community. I always enjoy hearing from alumni, and I hope our paths cross at

Contents

Letter from the Chair	2	GSA Penrose.....	13
The Front Office	3	In The Field.....	14
Greetings from the GAB.....	4	Geomorph in Utah.....	19
Welcome Ali.....	5	Environment in Mongolia	21
Emily Verplanck Retires.....	6	Student Awards.....	22
Faculty Awards.....	6	Shannon O’Dunn Gift.....	26
Sharing Geology with NHS	7	SamPLE Facility update.....	27
Geology of Greenland	7	CU TRaIL.....	28
B.A. to B.S.....	8	Degrees Awarded.....	30
Bruce Curtis Fellowship	9	Alum News	32
Geology Club	10	In Remembrance.....	32
Department Launches BAM..	11	Department Roster.....	35

one of this year’s events.

On behalf of our faculty, staff, and students, thank you for your continued friendship and support. I hope you enjoy this year’s newsletter and all the stories it contains.

Warm regards, Anne Sheehan

Acknowledgements

Thank you to everyone who contributed to this year’s newsletter. We could not have completed this publication without your time, input, and willingness to share your knowledge, experiences, and stories. Your contributions have made this newsletter a richer and more meaningful resource for our community.

We gratefully acknowledge content contributions from: Lon Abbott, Bob Anderson, Suzanne Anderson, Conner Antonio Diaz, Laurel Bayless, Ali Boden, Carolyn Crow, Leo Dienstfrey, Becky Flowers, Stacey Gerasimov, Steve Jacobsen, Anya Keena, Seb Kopf, Cullen Kortyna, Kevin Mahan, Kathryn Materna, Jim Metcalf, Karl Mueller, Irina Overeem, Penny Patterson, Max Pommer, Anne Sheehan, Olivia Stanley, and Sierra Weirens.
Thank you for helping make this year’s newsletter possible.

The Front Office

The Earth Science front office saw several personnel transitions this year. In January 2026, Anne Marie Summers accepted a new opportunity as Assistant Director of Gift Fund Administration with the Office of Advancement after serving as our Manager of Finance and Business Operations. In May, Kara Bajdas also moved on to a new role as Graduate Program Administrator in Aerospace Engineering. We thank Anne Marie and Kara for their many contributions to the department and wish them all the best in their new roles.

We were delighted to welcome Ali Boden, who joined the department in March 2026 as Manager of Finance and Business Operations. Before joining Earth Science, Ali served as an Arts & Sciences support rotator, bringing a broad range of experience and expertise to the position. We are excited to have Ali on our team and look forward to her contributions to the department.

Anne Sheehan

Department Chair
EarthSciChair@Colorado.EDU

Graduate Program Administrator

EarthSciGrad@Colorado.EDU

Marilynn Bender

Accounting Tech III
EarthSciAcct@Colorado.EDU

Brett Bertok

Undergraduate Program Administrator
EarthSciUG@Colorado.EDU

Ali Boden

Manager of Finance and Business Operations
EarthSciAdmin@Colorado.EDU

Geological Sciences Front Office Hours:
Monday - Friday, 8am - 5pm

Contact: EarthScience@Colorado.EDU

Greetings from the Alumni Advisory Board

by Penny Patterson

Dear Alumni, Students, and Friends of the Department of Earth Science,

We have had a great year working with the department, students, and our earth science community. I am thrilled to report on upcoming events for the Department and the University and update you on the work the Alumni Advisory Board has accomplished during the past year.

First, let me say that this is an exciting year for the Department of Geological Sciences. Beginning in August, the Department will be renamed the Department of Earth Science. This name change better reflects the Department's broadening focus on Earth's processes, environmental systems, natural hazards, and climate through geologic time. To mark the new name, the Department is planning a celebratory event, possibly in conjunction with the Earth Science Symposium during the Fall 2026 semester, bringing together students, faculty, staff, alumni, friends of the department, and our earth science community. Details are still in progress.

Another exciting event this year is the University of Colorado's 150th anniversary. The University was founded on March 14, 1876, and its first classes were held in September 1877 in the newly constructed Old Main Building. Numerous campus-wide events will commemorate this milestone. For more information, please visit: <https://www.colorado.edu/150/>

Now for news from the Advisory Board. We have had a few membership changes on both the Alumni Advisory Board and the Emeritus Board. This past year, two Advisory Board members rotated off the Board. Connor Newman accepted a new position with Earth Sciences New Zealand, New Zealand's equivalent to the USGS. Connor commented that commuting from New Zealand would be too challenging to remain on the Board! He guided the Board on hydrogeology and environmental geochemistry initiatives. Sean Sundermann has been teaching Engineering Geology each spring semester in



Geology Advisory Board Chair Penny Patterson.

the CU College of Engineering while continuing to run his company, Golden Geotechnics, Inc. Sean led the Advisory Board in compiling potential career pathways for earth science students and mentored students in engineering geology. In addition, Patty Corbetta rotated off the Emeritus Advisory Board this past year. Patty was instrumental in organizing and establishing the Professor Emeritus William Atkinson, Jr. Scholarship Fund, which recognizes Bill's inspirational impact on students and the Department. We sincerely appreciate Connor's, Sean's, and Patty's service and significant contributions to the Advisory Board and the Department of Earth Science, and we wish them well in their next endeavors.

At the Fall 2025 meeting of the Advisory Board, we welcomed new Alumni Advisory Board member Billy Baum (B.A. 2014). Billy is a Senior Geophysicist at Parsons in Denver, Colorado, where he uses geophysical methods to locate unexploded military ordnance in support of environmental remediation efforts. At the Spring 2026 Advisory Board meeting, we welcomed two new members, Ben Schupack

Earth Science Advisory Board Members

Eric Anderson

USGS

Jacob Bauer

LRE Water

William (Billy) Baum

Parsons Corporation

Lisa Campbell

Retired, Anschutz Exploration Co.

Clara Chew

Muon Space

Mason Dykstra

MinersAI

Graham Ellsworth

Donlin Gold LLC

Mario Guzman

Colorado Geological Survey

Michael Leibovitz

Graven Resources LLC

Penny Patterson - Chair

Retired, ExxonMobil Exploration Company

Nadine Reitman

USGS

Ben Schupack

BP

Joe Zamudio

Mineral exploration and remote sensing consultant

(M.S. 2010) and Graham Ellsworth (B.A. 2012). Since earning his M.S., Ben has built his career at BP as a Senior Geologist, leading BP's geoscience efforts in deepwater exploration in the U.S. Gulf of Mexico. Graham is the Senior Geological Modeler for Donlin Gold. He leads the integration of drill core data, assay geochemistry, and geophysics into comprehensive 3D geological models that support exploration drilling, resource estimation, and geotechnical pit design. The Advisory Board is delighted to welcome these three new members as we continue to expand our membership to include a diversity of careers, earth science disciplines, and professional experience.

At the Spring 2026 meeting, the Advisory Board discussed amendments to the Board Mission Statement and Bylaws. These discussions resulted in an amendment establishing two new Board officer positions: Secretary and Chair-Elect. Both positions will be elected by the Advisory Board membership, subject to approval by the Department Chair. The Chair-Elect will begin service one year before the end of the current Chair's term, assist the Chair with ongoing matters, and assume the position upon the Chair's retirement.

A tradition of the Advisory Board is hosting Career Night for the Department's undergraduate and graduate students. Career Night brings together students, Advisory Board members, faculty, and

alumni to discuss career opportunities in earth science and pathways to achieve those goals. Career Night was held on March 26, 2026, and organized by Advisory Board member Joe Zamudio. Joe did a great job organizing the event and leading discussions on careers in geoscience. We welcome alumni and members of our earth science community to attend Career Night, meet our students, and provide career insights and guidance.

Finally, this past year, the Advisory Board assisted the Department in hosting an Alumni Reception at the IMAGE Conference in Houston, Texas. This reception, along with receptions at GSA and AGU, was well attended and enjoyed by all. The Advisory Board is working with the Department on future receptions to continue bringing together our alumni and earth science community.

It is with much sadness that I relay the news that Professor Emeritus Joseph Smyth passed away in January 2026. Joe will be remembered for the enthusiasm he brought to students, the Department, and his research in experimental mineral physics.

In closing, it has been my pleasure and honor to serve as Chair of the Advisory Board for the 2025–2026 academic year. I look forward to seeing everyone at the upcoming Department events.

Warm Regards, Penny E. Patterson

Welcome Ali Boden

Ali Boden joined the department as the Manager of Finance and Business Operations in March of this year. Before taking on the role full-time, she became familiar with the department while filling in during the position's vacancy as a College of Arts & Sciences Finance and HR Rotator, a new program designed to assist with heavy workloads during vacancies across Arts & Sciences at CU.

Ali comes with a decade-long career in the environmental and supply chain world. She has worked in corporate, startup, non-profit, and higher education sectors, and for most of her career, was driven by improving material waste streams (i.e., packaging design, community education, and recycling). In late 2024, Ali decided to pivot her career in a new direction. After years of focusing on external operations and processes, she wanted to "look inward" and focus on the internal operations that make a workplace function effectively. With her process improvement and program management experience, as well as her passion for workplace health and wellbeing, she is excited to strengthen operations and the community of the Earth Science



Admin Office, as well as the students and faculty they support.

Outside of work, you can find Ali spending as much time as possible outdoors with her partner, their corgi, and her friends and family. Please stop by Ali's office to say "hi!" next time you're around Benson!

Celebrating the Retirement of Emily Verplanck



In January 2026, colleagues, students, and friends gathered to celebrate the retirement of Emily Verplanck after nearly 40 years as manager of the CIRES/GEOL Thermal Ionization Mass Spectrometry (TIMS) facility. Working alongside TIMS laboratory director and Principal Investigator Professor Lang Farmer, Emily kept the facility running smoothly. She was responsible for the daily upkeep and operation of the entire facility, including a 1,300-square-foot clean chemistry laboratory. Generations of graduate students, undergraduate students, and visiting scientists owe their training and high-quality isotopic analyses to Emily's expertise and calming influence.

We congratulate Emily on her well-deserved retirement and thank her for the lasting impact she has made on our department and research community.

Emily Verplanck and Lang Farmer at Emily's retirement reception.

Faculty Awards

Bethany Ehlmann – National Academy of Sciences – This award recognizes Bethany's significant contributions to planetary science and is among the highest honors in science.

Carolyn Crow – Exceptional Graduate Mentor, CU Graduate School.

Shemin Ge – College Scholar Award, College of Arts and Sciences.

Sebastian Kopf was awarded the Humboldt Research Fellowship in 2025, which allows international scholars to conduct research projects in collaboration with a host institution in Germany.

Irina Overeem – Inaugural Sustainability Research Initiative Research Fellow and was promoted to Full Professor.

Julio Sepúlveda - EAGS Outreach Lecturer.

The EAG-GS Outreach Program is a partnership between the Geochemical Society and the European Association of Geochemistry. Dr. Sepulveda gave lectures at nine different institutions in Chile, Colombia, Peru, and Panama, in 2025-26.

Katie Snell and Valentine Combaudon – UROP Mentor Honorable Mention.

Alexis Templeton – CU Boulder Distinguished Research Lecture, "Hydrogen: Integrating the Searches for New Energy Sources and Novel Life Activity Within the Earth," Nov. 20, 2025. The Distinguished Research Lectureship is awarded annually by the Research and Innovation Office, and recognizes faculty for their distinguished body of academic work.

Lizzy Trower - Simons Foundation Pivot Fellowship.

2026 CU Green Labs Program Award

The Department received this award for Shared Resources, in recognition of actions to promote sustainability in the scientific community. It recognizes the department's work in shifting to shared lab spaces that boost efficiency while reducing energy use and costs and enhancing collaboration.



Research Associate Srishti Kashyap poses with the 2026 Green Labs Program Award.

Sharing our love of geology with Northglenn High School students

The department's Collaborative Inquiry-based Research Community (CIRC) has had a longstanding partnership with the unusually dynamic Northglenn High School geology program, led by Kent Hups. His passion for geology and paleontology has created what is easily the region's largest high school geology curriculum. This year, CIRC student Lark Jones (a May 2026 graduate who is now a graduate student studying geology at the University of Akron) led a group of Northglenn High geology students on a field trip to examine sedimentary rocks at Loveland's Devil's Backbone Open Space and one of the best fault exposures in the Front Range along the Big Thompson River. Lark took the students on a journey of guided discovery as they used field observations to infer the depositional environments that produced the Backbone's Lykins, Morrison, and Dakota sedimentary units and reconstruct the complex geologic history experienced by the rocks cut by the Green Ridge fault. In just that one outcrop, they were able to detect the calling cards of three separate orogenies the Front Range has experienced during the last 1.7 billion years.



Recent graduate Lark Jones ensuring that all the Northglenn High students have the HCI they need to test for limestone in the stratigraphy of Devil's Backbone Open Space.
photo credit: Lon Abbott

Informing the Public About the Geology of Greenland

The Colorado Scientific Society (CSS), founded in 1882, is a geoscience-based organization that is the oldest scientific society in the Rocky Mountain region. Given how much Greenland is in the news of late, in large part because of interest in its geologic attributes, the CSS program committee realized its members wanted to learn about the continent's geology from recognized experts. They reached out to our department for suggestions, and it was easy to deliver. Lecturer Flemming Mengel has done years of fieldwork and published multiple papers on the island's bedrock geology, and Assistant Professor Brad Markle is currently doing high-resolution re-analysis of the climate record in the famous GISP2 Greenland ice core. So, on April 22, 2026, CSS took a field trip to the Benson Earth Science building to hear Flemming give a high-level synthesis of Greenland's bedrock geology and Brad describe its Quaternary climate history.

Flemming described the island's impressively diverse geology and explained where the rare earth and other deposits of potential economic interest lie and explained the geologic and tectonic context that produced them. Brad stepped the audience



Professor Brad Markle showing the audience a Greenland ice core.
photo credit: Lon Abbott

through an analysis of ice core records, including a comparison of the original and his new, ultra-high resolution reanalysis of the GISP2 core. He ended the evening by wowing the audience by letting them examine a piece of an actual Greenland core up close.

Department Introduces Bachelor of Science Degree

Beginning in Fall 2026, all undergraduate students majoring in our department, including those who originally enrolled in the BA in Geology, will graduate with a Bachelor of Science (BS) in Earth Science. The new degree will offer two emphasis options: Geosciences and Geophysics.

For years, our BA degree has required the same strong foundation in chemistry, physics, calculus, laboratory courses, and field geology that is characteristic of BS degrees at peer institutions. The transition to a BS better reflects the education our students already receive and aligns our degree with the expectations of employers, graduate programs, and professional organizations.

The new degree name also reflects the breadth of modern Earth science. In addition to taking courses such as mineralogy, sedimentology, and structural geology, our students investigate topics ranging from hydrogeology, geochemistry, paleoclimate, and paleobiology to Earth's role in the energy transition, natural hazards, and sustainable resource management.

We thank Dr. Lon Abbott for shepherding our department's proposal through the university approval process. We also thank the Natural Sciences Division of the College of Arts and Sciences for its leadership in advocating for Bachelor of Science degrees across CU's natural sciences. For decades, CU Boulder

has awarded only BA degrees in disciplines such as physics, chemistry, biology, and geology, even though the curricula have long been comparable to BS programs at peer institutions. We are excited that, beginning in Fall 2026, both current and future students will graduate with a Bachelor of Science degree in Earth Science, with Geosciences and Geophysics options.



photo credit: Leo Dienstfrey

2026 Graduation Ceremony on the south lawn of the Benson Earth Sciences building. Graduates and Faculty pose by the globe.



Undergraduate researchers study the Grand Canyon and Boulder area exhumation

Thanks to generous donations from many departmental alumni to the Bruce Curtis Fellowship Fund, the department has been able to support many undergraduate research experiences this year. Four Curtis researchers worked on projects with Lon Abbott in Professor Rebecca Flowers' Thermochronology Research and Instrumentation Laboratory (CU TRaIL).

Yasmin Umairah Binti Ahmad Nazari and Muhammad Ammar Shahril Adha used their Curtis Fellowships to compare the U/Pb age populations of detrital zircon and detrital titanite grains for four samples from the Grand Canyon. They picked several hundred zircon and titanite grains from one sample of modern Colorado River sand, one modern sand from the river's perennial Hermit Creek tributary, and two Pleistocene terraces perched at the rim of the Canyon's Inner Gorge at the Hermit Creek-Colorado River confluence.

Thousands of detrital zircon studies have been done on modern and ancient river sands from all around the world because zircon U/Pb age populations provide powerful constraints on the extent of ancient river drainage basins. Titanite also yields U/Pb dates but can be more challenging to obtain reliable age information from because it retains common lead, so only a handful of detrital titanite studies have been conducted to date. But comparing zircon and titanite age populations offers the promise of extracting additional information about drainage basins because zircon is almost indestructible, so detrital zircon age spectra contain abundant recycled grains, whereas titanite is much less durable in the sedimentary environment, so it provides a more faithful record of first-cycle sediment flux in the drainage basin.

Muhammad and Yasmin wanted to examine how the first cycle versus recycled detrital signatures differ between detrital zircon and titanite records for a major river like the Colorado, a small tributary stream, and older, Pleistocene terrace deposits. Their analysis of the data continues, but as expected, the titanite data sets contain more young grains than the zircon ones.

Last year, recent graduate Taran Renfrow received a Curtis Fellowship to conduct (U-Th)/He dating (He dating) of Laramide-age dikes and sills that intrude at multiple levels in the Boulder area's stratigraphic sequence. He dating is a thermochronologic technique that records the cooling history of a rock sample. Frequently, as in this case, that cooling is triggered by erosion of once overlying rocks, so doing He dating on the same sample using both zircon and



Undergraduate researcher Helena Biscuola learns how to orient paleomagnetic samples from USGS researcher Mark Hudson while in the background Leah Morgan, Sean Gaynor, and Rebecca Flowers (from left to right) discuss plans for analyzing a Laramide-age sill that intrudes Dakota sandstone just north of Boulder. photo credit: Lon Abbott

apatite, which have different closure temperatures, enables researchers to track the sample's exhumation history toward the surface. Taran did He dating on a sill that intrudes the Fountain Formation near Lyons and on Valmont Butte, which intrudes the Pierre Shale. His data show that Boulder experienced a pulse of rapid Eocene exhumation.

Current junior Helena Biscuola received both a Curtis Fellowship and a Colorado Scientific Society Fellowship this year to build on Taran's work, which she is doing in parallel with an Ar/Ar, U/Pb, and paleomagnetic study of the same rocks being conducted by USGS researchers Leah Morgan, Sean Gaynor, and Mark Hudson. She is currently doing apatite He analysis of a sill that intrudes the Dakota just north of Boulder and on the Ralston Dike north of Golden. Her funding carries into next year, which will enable her to examine yet more samples, which will help constrain the northern Front Range exhumation history even better.

Meanwhile, this year, Taran obtained a CU Core Facilities grant to do He dating on cuttings from two wells near Fort Lupton that were generously donated to him by departmental alum Allison Kimbrough and Breck Johnson from Occidental Petroleum. Taran is hoping this work will extend the Cenozoic exhumation history he and Helena are constructing for the northern Front Range well out into the Denver Basin.

CU Geology Club Rocks On!

The CU Geology Club had an exciting and active year filled with field trips, research talks, community events, and opportunities for students to connect outside the classroom. A huge thank you goes to this year's board members: Anya Keena (President), Brayden Parks (Vice President), Micheala Martinez (Secretary), Taran Renfrow (Treasurer), Ashley Askins (Secretary), Amelia Fonda (Social Media), Emma Marble (Trip Planner), and Soren Rollin (Trip Planner), whose hard work made this year possible.

Throughout the year, the club organized several camping and hiking trips across Colorado and the Southwest. Highlights included an overnight trip to Florissant Fossil Beds National Monument and a five-day spring break excursion to Zion National Park. Members also participated in day trips to the Painted Mines, rock hounding near Jamestown, a fall colors hike near Peaceful Valley, the Denver Rock and Mineral Show, and a hike up Bear Peak. All trips were organized and led by student trip leaders, helping members gain hands-on geological experience while building community within the department.

In addition to outdoor activities, the club hosted several events on campus that helped build community within the department. Members toured the Rock Shop, collaborated with the Anthropology Club for a club mixer, and printed Geology Club T-shirts designed by Brayden Parks, Atticus Baker, and Jaxon Bartell. Social highlights included a Geo Club Friendsgiving potluck and a Halloween party where members dressed as their favorite geology professors. The club also welcomed research presentations from Dr. Flowers, Dr. Snell, and Dr. Trower, giving students the opportunity to learn about

Geo Club at the top of Angel's Landing in Zion National Park.
photo credit: Anya Keena

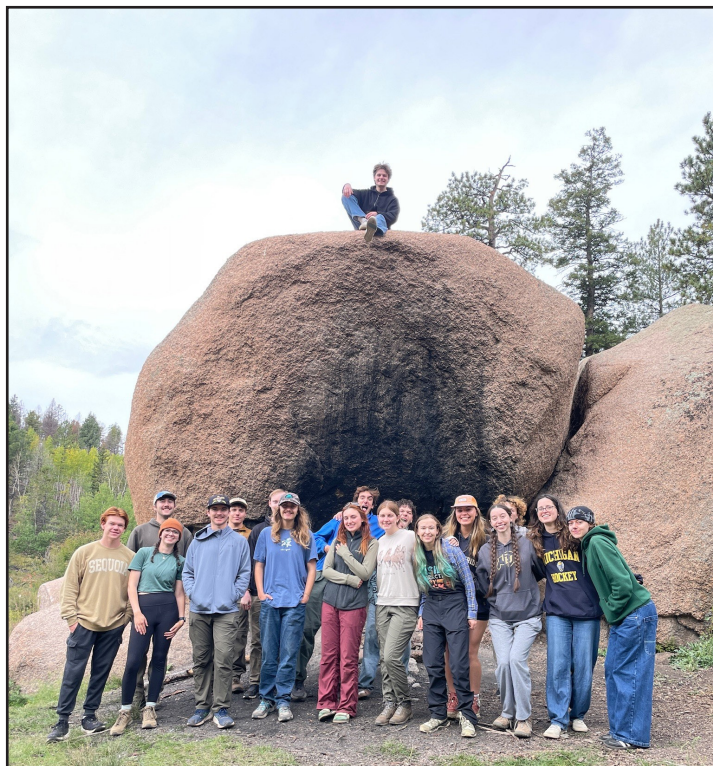


Geology Club at the Painted Mines.
photo credit: Anya Keena

current work being done within the department. Toward the end of the year, the club hosted a career panel featuring recent and soon-to-be graduates who shared their experiences with job searches and graduate school applications.

The year concluded with elections for the 2026–2027 board. Congratulations to the incoming officers: Brayden Parks (President), Daniele Callioni (Vice President), Micheala Martinez (Secretary), Garrett Lowry (Treasurer), Khloie Gordon (Social Media), and Adam Almalki (Trip Planner). We are excited to see what the Geology Club accomplishes next year.

Geo Club Camping Trip to Florissant.
photo credit: Anya Keena



Department Launches Bachelor's - Accelerated Master's (BAM) Program

This fall, we are launching our new Bachelor's–Accelerated Master's (BAM) Program in Earth Science, giving outstanding CU Boulder undergraduates a new pathway to earn both a BS and an MS in less time. While BAM programs have been available in other departments across campus for many years, this is the first time our department has offered one. Accelerated BS/MS programs are also relatively uncommon among geology and Earth science departments, making this an exciting addition to our undergraduate and graduate programs.

The BAM Program allows students to begin graduate coursework during their senior year while completing their bachelor's degree, creating a

seamless transition into our MS program. Whether they are seeking the intellectual challenge of graduate-level coursework, planning for doctoral study, or looking to enhance their career opportunities with an advanced degree, the BAM Program allows students to build on the relationships, research experiences, and momentum they have developed as undergraduates.

Students interested in the BAM Program should begin planning early and are encouraged to speak with one of the Earth Science Faculty Mentors (Lon Abbott or Jennifer Stempien) as well as potential faculty advisors during their sophomore year or early in their junior year.

Earth Science Symposium Brings Together Students, Alumni, and Geoscience Professionals

On Saturday, November 15, 2025, the Department of Geological Sciences hosted the Earth Science Symposium in the Benson Earth Sciences Building, welcoming nearly 80 students, alumni, faculty, staff, and geoscience professionals for a day of research presentations, networking, and community building.

Held throughout the main level of the Benson Earth Sciences Building, including an introduction to the event in Room 180, poster sessions and a speed-networking event in the Jerry Crail Johnson Earth Sciences Library, and coffee and lunch in the Atrium, the symposium provided students and early-career researchers with an opportunity to showcase their work and connect with professionals from academia, government, industry, and consulting. Many students used the event to present research they had shared at the Geological Society of America meeting, prepare posters for the upcoming AGU Annual Meeting, or highlight projects from other research experiences.

The event emphasized mentorship and professional development, featuring a lively speed-networking session and informal conversations over coffee and lunch. We are especially grateful to the alumni, advisory board members, and local geoscience professionals who generously volunteered their time to engage with our students and share their career experiences.

The department extends its sincere appreciation to Professor Suzanne Anderson for leading the organization of the symposium. Special thanks also go to Phil White for coordinating access to the Jerry Crail Johnson Earth Sciences Library, Paloma Siegel

for organizing the speed-networking session, and CIRES for loaning the poster stands. The symposium was organized by Suzanne Anderson, Pam Stephens, Eric Small, Paloma Siegel, Ryan Flat, Phil White, and Anne Marie Summers. Building on the success of this year's symposium, the department looks forward to hosting the event again in Fall 2026. The 2026 symposium will be held on November 7, 2026, and will mark the third annual offering of this event, as well as celebrate the launch of the department's new name, providing another opportunity to bring together students, alumni, faculty, and the broader geoscience community. Please reach out to Professor Suzanne. Anderson@Colorado.EDU to RSVP for the Nov. 7, 2026 Earth Science Symposium!

Ph.D. candidate Paloma Siegel presents at the Nov. 2025 Earth Science Symposium.
photo credit: Bob Anderson





2nd floor view of the Benson Earth Sciences Atrium at the Nov. 2025 Earth Science Symposium.
photo credit: Bob Anderson

Science Bound students learn about careers in geology

CU's Miramontes Arts and Sciences Program (MASP) organizes Science Bound, a year-long seminar designed to help first-year natural science students explore which scientific fields most fuel their passions and ease their integration into a supportive cohort of like-minded people. One key seminar activity is to visit each natural science department on campus to expose students to the diverse career opportunities available in the natural sciences. A trip to the Department of Geological Sciences kicks off the round of departmental visits every January.

This event is a perfect opportunity for science-curious students to learn about what geoscientists do. Most Science Bound students plan to study physics, chemistry, or biology; geoscience was not on most of their radars, so the visit is a real eye-opening experience for many of them. They learn how many possibilities exist to apply their interest in those disciplines to the study of the Earth.

This year, three members of the department's very active Geology Club hosted the Science Bound



Undergraduate student Soren Rollin presents his findings at the Nov. 2025 Earth Science Symposium.
photo credit: Bob Anderson

class and fielded their thoughtful questions about subjects like departmental undergraduate research opportunities and career possibilities in geoscience. The panelists, Anya Keena and Taran Renfrow, both graduating seniors, and Brayden Parks, a Junior, all of whom have done extensive undergraduate research, were perfectly positioned to deliver information the students sought.

The visit culminated with an animated tour of the Thermochronology Research and Instrumentation Laboratory (TRaIL), given by TRaIL manager Dr. Jim Metcalf. Jim's tour framed the sophisticated physics and chemistry considerations that underpin modern mass spectrometry, leaving no doubt in the minds of the Science Bound students that the Geology Club panel was not joking when they described their regular application of physics, chemistry, and biology to their diverse research projects. Don't be surprised if some inspired Science Bound students change their major to Earth Science before they finish their undergraduate career.

Dr. Jim Metcalf explaining the nuances of inductively coupled plasma mass spectrometry to Science Bound students.
photo credit: Lon Abbott



Dr. Suzanne Anderson, Olivia Stanley, and Sierra Weirens Represent at the 2026 GSA Penrose Conference in Nepal

The three recently participated in the 2026 Geological Society of America (GSA) Penrose Conference, held in the scenic mountain town of Dhulikhel, Nepal. The international conference brought together leading scientists, researchers, and practitioners from around the world to advance understanding of hydrogeology in high mountain environments and address the challenges facing these rapidly changing regions.

A highlight of the conference was the opening ceremony, where representatives from the Geological Society of America (GSA) and the Nepal Geological Society (NGS) signed a Memorandum of Understanding (MOU). This agreement marks an important step toward strengthening future scientific collaboration, knowledge exchange, and partnership between the two organizations.

Throughout the conference, technical sessions focused on the critical role of mountain groundwater systems. Researchers emphasized that groundwater stored within mountain bedrock is often a hidden but essential resource, supporting local communities, sustaining downstream water supplies, maintaining ecosystem health, and helping reduce landslide hazards. As climate and environmental conditions continue to evolve, understanding these groundwater systems has become increasingly important for both scientific research and water resource management.

Participants also explored the human dimensions of hydrogeologic change. During final breakout discussions, experts examined how shifts in groundwater availability, snowmelt patterns, and mountain water resources directly affect vulnerable populations living within and downstream of the Himalayan region. These conversations underscored the importance of integrating social vulnerability into future water resource planning and research efforts.

The conference fostered productive cross-disciplinary collaboration among hydrologists, geologists, climate scientists, and social scientists. Through workshops and group discussions, attendees developed a shared set of research priorities aimed at improving understanding of high mountain hydrogeologic systems and enhancing resilience in communities facing environmental change.

In addition to the technical program, participants had the opportunity to take part in field excursions throughout the Himalayan landscape. These field trips provided firsthand observations of the geologic and hydrologic processes discussed during the conference

and offered valuable opportunities for scientific exchange in one of the world's most dynamic mountain environments.



Sierra Weirens, Suzanne Anderson, and Olivia Stanley at the GSA Penrose Conference in Dhulikhel, Nepal.

Sierra Weirens at Melamchi Khola River, Nepal.



Olivia Stanley at monastery in Melamchi Valley, Nepal.

In The Field

A defining feature of our undergraduate program is the breadth of our advanced field courses. After Introduction to Field Geology, every student chooses two advanced field modules from a broad range of offerings. Our field course offerings in 2025-2026 included Field Sedimentology and Stratigraphy, Field Geophysics, Field Geomorphology, Field Snow Hydrology, Field Geobiology, Colorado Field Geology, Planetary Field Geology, Alps Structure and Tectonics, and the Juneau Icefield Research Program. The next few pages highlight these and other field experiences.

In the fall of 2025, **Field Sedimentology and Stratigraphy** examined sediments and strata spanning the Phanerozoic to the modern, and even a bit of Precambrian. The class kicked things off on Colorado's Front Range, where students built foundational descriptive and interpretive skills on classic local strata: the Codell-Niobrara, Fountain-Lyons-Lykins, and Morrison-Dakota systems.

The highlight of the course was an eight-day field trip through western Colorado and eastern Utah. The class immersed itself in a modern depositional system at Great Sand Dunes National Park, then worked through the Pennsylvanian Hermosa Group of the Paradox Basin, Jurassic eolian and fluvial systems in eastern Utah, and the Eocene Green River Formation in the Uinta Basin. The trip wrapped up at Dinosaur National Monument, with a hike across Pennsylvanian eolianites to see uplifted Precambrian siliciclastics across a modern river; a fitting reminder of the immense span of geologic time and sedimentary processes.

Geology student Morgan Brown overlooking the Valley of the Gods at Mule Point in Utah. photo credit: Max Pommer



In the spring of 2026, **Petroleum and Transitional Reservoir Geology** took a more applied approach, exploring subsurface reservoirs for hydrocarbons, carbon sequestration, helium, hydrogen, lithium, and geothermal resources; all critical to modern life and the future of the energy transition. Students built diverse, integrated skillsets and gained hands-on experience with real subsurface datasets. The course applied everything from petrography, stratigraphy, seismic, well logs, geochemistry, and petrophysics in lecture, laboratory, and field settings.

Field Sedimentology and Stratigraphy students (and field assistant John Allard) immersed in modern sediments at the Great Sand Dunes National Park. photo credit: Max Pommer



Geology students Yasmin Nazari and Chris Nathan examining karsted carbonates overlain by red siliciclastics in the Permian Ingleside Formation in Northern Colorado. photo credit: Max Pommer





A view of the Brawley Fault Zone where it crosses Harris Road in Imperial County, CA, and produces a sharp break in the pavement. The Brawley fault is an oblique right-lateral/normal fault in the Imperial Valley with a slip rate of several mm/yr. This view is to the south, and the hanging wall of the normal fault is on the right (west) side. This fault ruptured in a M6.5 earthquake in 1979 and has been creeping episodically in the years since.
photo credit: Kathryn Materna



Graduate students Morow Tan and Hong-Mao Huang and professor emeritus Roger Bilham install a creepmeter across the Brawley fault. The students use an impact hammer to drill rebar rods into the soil, which serve as anchors for the two ends of the creepmeter instrument.
photo credit: Kathryn Materna

Over the 2026 spring break, graduate students **Morow Tan** and **Hong-Mao Huang** joined **Dr. Kathryn Materna** and **Dr. Roger Bilham** during the installation of a creepmeter on the Brawley Fault in southern California. The work was part of a NEHRP-funded project to make high-resolution measurements of creep on the Imperial fault system. The Brawley fault is an oblique normal-faulting branch of the Imperial fault that is actively creeping. During the work, the team also surveyed an offset drain using RTK GNSS to determine the partitioning of dip slip and strike slip on the fault.

*Gave
THE
Date(s)*

*for CU alumni events at Geoscience
Conferences this year!*



IMAGE 2026 (SEG/AAPG), Houston, TX - Wednesday, August 19, 2026.

All-alumni reception, 5:30-7:30 pm at the
Marriott Marquis Houston, downtown
Follow the signs to the 'All-Alumni Reception'
Please RSVP to Ben Schupack bschupack@gmail.com



GSA Conference, Denver, CO
Monday, October 12, 2026,
7:00pm-9:30 pm.
Group Alumni Reception.
Hyatt Regency, Denver.

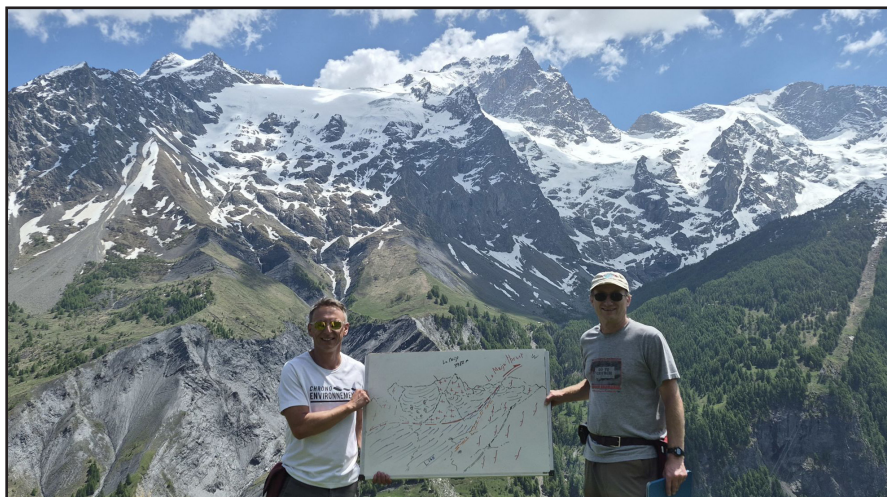
AGU, San Francisco,
December 7-11, 2026.
Stop by the CU Boulder booth in the Exhibit Hall

**AGU ANNUAL
MEETING**

@cubouldergerology

Check us out on Instagram

[instagram.com/cubouldergerology/](https://www.instagram.com/cubouldergerology/)



Dr. Philippe Goncalves (UMLP) and Dr. Kevin Mahan (CU) with geologic cross section and the stunning La Meije massif as a backdrop.

Thanks to a new international exchange partnership with the University of Marie and Louis Pasteur (Besançon, France), **ERTH 4719/5719 Field Tectonics in the French Alps** is now offered annually. This past May, students spent 10 days traversing the Western Alps, gaining hands-on experience analyzing sedimentary, metamorphic, and igneous rocks while exploring the tectonic processes that build some of the world's most spectacular mountain ranges.



Students hike through an alpine village during the Western Alps Field Tectonics course.

Our Summer Undergraduate **Field Planetary Geology** class spent a week in southern Colorado and northern New Mexico investigating planetary analog sites that help us interpret landscapes across the Solar System. From the aeolian processes shaping the dunes at Great Sand Dunes National Park, to the astrobiological significance of Soda Dam in Jemez Springs, to volcanic landforms at Capulin Volcano National Monument, students observed, discussed, and analyzed how these features form on Earth and how similar processes are expressed on other planets and moons.



Planetary field geology undergraduate students at Jemez Springs Soda Dam exploring and lecturing on astrobiological processes. photo credit: Conner Antonio Diaz





Planetary field geology students in the field.
photo credit: Conner Antonio Diaz

Planetary field geology Observing aeolian processes at Great Sand Dunes National Park.
photo credit: Carolyn Crow



Planetary field geology students posing near Folsom, NM.
photo credit: Conner Antonio Diaz

Planetary field geology undergraduate students at Capulin Volcano National Monument discussing cinder cones and their formation processes on Earth, and on other planets.
photo credit: Conner Antonio Diaz



Field Methods in Geomorphology class

The **Field Methods in Geomorphology** class roamed around the Front Range, studying landslides, debris flows, and hillslope erosion in Rocky Mountain National Park and the Front Range foothills. Class started with a March snowstorm, so it turned into a good time to build instrumentation in Professor Irina Overeem's Cryosphere and Surface Processes lab. But this being the Front Range in March, the very next day, the class could already move outside. Students learned to survey and to instrument geomorphological features in steep terrain. They then followed the pathway of the sediments down into the Big Thompson, Lefthand, and Boulder Creek - measuring boulder dimensions to back out hydraulics, measuring gravel pond bathymetry to estimate crevasse volumes, and ultimately measuring sediment grain size, bedforms, and river discharge in the South Platte. By then, the temperatures were in the high 70s and the bravest souls dipped into the river.



Girlpower: Morgan Brown and Rachel Underhill are working on an ADCP instrument mount for Field Methods in Geomorphology, March 2026. photo credit: Irina Overeem

Dr. Steve Jacobsen and the GEOL 3010 mineralogy class on a hike to find the elusive Green Mountain kimberlite just west of CU.



Close up of mantle pyrope garnet at the kimberlite.

The **GEOL 3010 mineralogy class** pose for a group photo just west of CU.



Geomorphology field trip to Utah 2026



Geomorphology students inspecting a block of carbonate-cemented Muddy River terrace gravel that has tumbled off its perch atop Cretaceous shale seen on the skyline.
photo credit: Bob Anderson

This year marked the 21st offering of the four-day field trip to Utah's desert that serves as the gem of the geomorphology course. This year's trip was led by **Professors Bob and Suzanne Anderson**. We visit the landscape that lies between the southern edge of the San Rafael Swell and the Fremont River. The eolian sandstones of the swell are traversed by slot canyons that allow us to talk about the processes of bedrock river incision as well as the processes that generate the unique stratigraphic signature of eolian sandstones. The well-developed terraces of the Fremont River long challenged our ability to establish timing in these landscapes. The problem eventually yielded to dating of terrace gravel using cosmogenic radionuclides. After lunch on the upper terrace, we walk into the Cretaceous Bluegate shale badlands that bound the Fremont. These were reinvigorated by post-glacial maximum incision of the Fremont, and serve as a natural experiment with all the elements of an active landscape that include rapidly incising channels and parabolic hilltops. There is plenty of weirdness to boot... like isolated blocks of sandstone that have tumbled from the cliffs that bound North Caineville Plateau and now cap pillars of shale... and

hilltops that are anchored by the less erodible meter-scale shells of *Inoceramus* clams that inhabited the Cretaceous seafloor. It is always fun to wake up to the sunrise illuminating Factory Butte near Utah's Fremont River. (Cover photo)

This year, a brewing storm forced a slightly truncated version of our trip into the shale moat outboard of the San Rafael Swell. We inspected the terraces of the Muddy River, which drains through the middle of the swell, something the Fremont does not do. The extreme carbonate cementation of the terrace gravels on the Muddy, which allows these Quaternary terraces to stand tall and proud above the Cretaceous shales in the moat, can be attributed to the weathering of outcrops of the Kaibab limestone within the swell. The students got really used to the notion of inversion of topography: when the Muddy river transported the gravel, it was at the bottom of the landscape (rivers are always at the bottom), whereas these same gravels - especially in their highly cemented state - now cap the landscape.

The trip was capped by a visit to Utah's Goblin Valley State Park, illustrating yet another example of differential erosion, this time within a single formation: the Entrada.

Geomorph students among the goblins.
photo credit: Bob Anderson



Example hoodoo developed in the Entrada formation's siltstones of Goblin Valley, Utah.
photo credit: Bob Anderson

Students explore Colorado geology with Ecuadorian colleagues

During August of 2025, students in the **GEOL4725-Field Geology of Colorado** class explored the state's geology along with colleagues from Ecuador's ESPOL Institute. ESPOL is Ecuador's leading engineering and technical school. ESPOL and CU have a memorandum of understanding for joint projects. ESPOL students participated in GEOL4725 here in Colorado in 2019, but the pandemic put the partnership on hold for a few years. In 2024, CU students studied the geology of coastal Ecuador and the Galápagos Islands at the invitation of ESPOL, and this last summer the Ecuadorians returned to Colorado.

Our group based out of the University of Oklahoma Bartell Field Station in Canñon City for the first week of class, with five ESPOL and six CU students forming international teams that interpreted the unroofing history during uplift of the Laramide Rocky Mountains, measured Cretaceous stratigraphic section at Pueblo Lake State Park, mapped faults at several locations in the Canñon City area, saw world-class Ordovician trackways at the Indian Springs Trace Fossil Site, interpreted the Paleozoic and Mesozoic sedimentary sequences in the Canñon City Embayment, and examined Precambrian igneous and metamorphic rocks of the Wet Mountains.

We then shifted venues to the Wanderlust Hostel in Gunnison for the second week, which afforded us the opportunity to examine andesitic and rhyolitic volcanic products in the San Juan and West Elk volcanic fields, analyze river knickpoints in tributaries of the Gunnison River, map Laramide thrust faults in the Elk Range, reconstruct the locations of Ancestral Rocky

The GEOL4725 team taking in the scenery at Chasm View in Black Canyon of the Gunnison National Park. photo credit: Lon Abbott



Students measuring Cretaceous marine deposits from the Western Interior Seaway at Pueblo Lake State Park. photo credit: Lon Abbott



Students examining Oligocene river deposits along the Black Canyon of the Gunnison north rim drive. photo credit: Lon Abbott

Mountain highlands and basins, and compute paleo-stream gradients for Cretaceous rivers using clast size distributions in conglomerates shed off the newly-risen Laramide mountains.

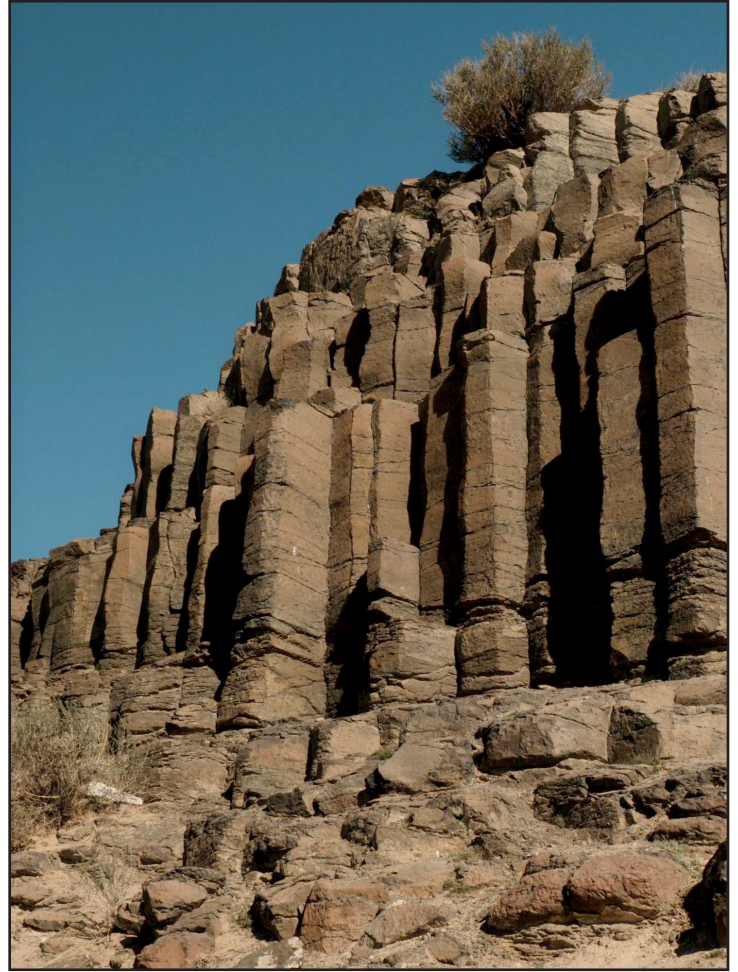
Not only did this class afford our majors opportunities to examine chapters of Colorado's geologic history that aren't accessible in day trips around Boulder, but they also got an international cultural experience to boot. We look forward to a return to Ecuador and the Galápagos in the Summer of 2027, a trip that is currently in the planning stages.

Reconstructing Ancient Seawater Environments in Mongolia

Over this past summer, fieldwork was conducted in southwestern Mongolia by a group of CU Boulder researchers in collaboration with Professor Sersmaa Gonchigdorj of the Mongolian University of Science and Technology. The CU Boulder group included **Associate Professor Lizzy Trower, Postdoctoral Associate Lexie Millikin, and graduate students Stacey Gerasimov and Ashlee Stratton**. This work is part of a broader research collaboration funded by the W.M. Keck Foundation, led by PIs Lizzy Trower and Carl Simpson, focused on investigating the relationship between the Neoproterozoic (1000–539 Ma) Snowball Earth glaciations and the evolution of complex multicellularity.

One aspect of this research involves utilizing a novel ooid paleotemperature proxy developed by Lizzy Trower. Ooids are concentrically coated carbonate grains formed through the equilibrium between wave-induced physical abrasion and chemical precipitation. These sedimentary grains can be found in the modern-day Great Bahama Bank, among other locations, but are never >2 mm in diameter. However, giant ooids (>2 mm) have occurred in rare instances in the geologic past and are potential indicators of extreme climate. In Mongolia, giant ooids occur within Neoproterozoic sedimentary successions that also preserve Snowball Earth glacial deposits. As a result, the stratigraphy of Mongolia provides an ideal opportunity to apply the ooid paleotemperature proxy in an effort to reconstruct ancient seawater environments during a time of great evolutionary change.

For two weeks, the CU Boulder-led team retrieved samples, mapped, and measured sections across multiple sites. Through this work, the team discovered that the distribution of giant ooids is more complicated than previously reported. Because of this discovery, Lexie Millikin and Stacey Gerasimov will return to Mongolia for an extended time this summer to improve upon initial mapping efforts of this past field season and to document lateral changes across a basin-wide transect. Specifically, the team will focus on generating high-resolution stratigraphic sections and sedimentological data to provide context for the ooid paleotemperature proxy work. Additionally, the team is working on improving the geochronology of the region, which, when paired with the ooid paleotemperature proxy, will help constrain rates of climatic change leading up to the Snowball Earth glaciations. Ultimately, this work will test whether the proliferation of complex multicellularity occurred as a result of extremely cold (<10°C) seawater temperatures.



Columnar basalts within southwestern Mongolia.
photo credit: Stacey Gerasimov



CU Boulder researchers discussing the geology of the area. Neoproterozoic strata in the foreground where light grey rocks outcrop, while Cambrian aged strata can be seen in the background. Pictured from left to right: Lizzy Trower, Lexie Millikin, and Ashlee Stratton.
photo credit: Stacey Gerasimov

Student Awards

W.L. Calvert Memorial Scholarship

John Allard
Catherine Fontana
James Gutoski
Indigo Heine
Jacob Tidwell

American Philosophical Society's Lewis and Clark Fund for Exploration and Field Research in Astrobiology

James Gutoski

Tobacco Root Geological Society Field Grant

James Gutoski

Jacob van Ek Award

Amelia Ghandi
Soren Rollin

2026 CU President's Inclusive Excellence Award

Connor Antonio Diaz

Rocky Mountain Association of Geologists (RMAG) Awards

RMAG Neal J. Harr Award

Anya Keena

RMAG Dickinson Grant

Soren Rollin

RMAG Bolyard Award

John Allard
Paige McDowell

National Graduate Fellowships

NASA FINESST

Lena Nyblade

NSF GRFP

Alana Robinson

Honorable Mention NSF GRFP

Amelia Ghandi

DOE SCGSR Fellowship

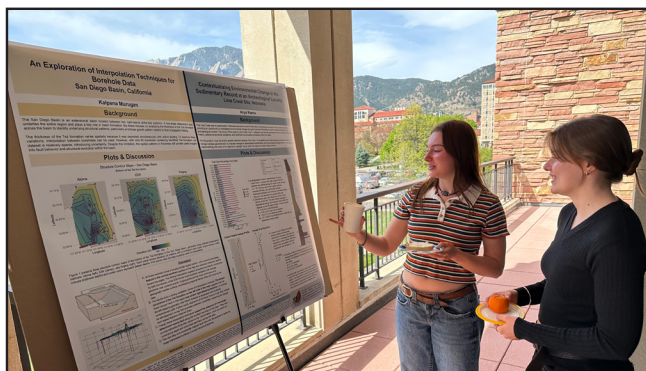
Catherine Fontana

ARCS organization (Achievement Rewards for College Scientists)

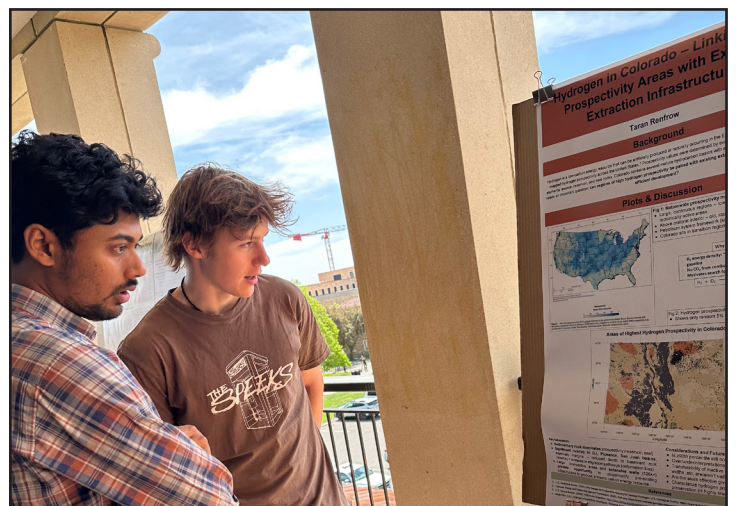
3-year scholarship
Laurel Bayless
Corey Flynn

Spring 2026 Graduate Research Awards

GEOL Grad Education and Research Support Fund.
Laurel Bayless
Haley Brumberger
Catherine Fontana
Hong-Mao Huang
Jacob Sims
Helle Skjetne
Olivia Stanley



Students present their posters during the Data Visualization class (GEOL 4444/5444) poster session.
photo credit: Anne Sheehan



Dr. Sebastian Kopf's Data Visualization class (GEOL 4444/5444) poster session that was on the patio outside Benson Rm 380, and had great views in addition to the great science and posters.
photo credit: Anne Sheehan

Spring 2026 Graduate Research Awards

Spetzler Family Fund Graduate Research Award

Connor Antonio Diaz
Israel Carrillo
Jess Hankins

Penny E. Patterson Graduate Research Award

Bianca Artigas
Tyler Lincoln
Claire Puranananda
Jacob Tidwell

Benson Research Award

Jacob Sims

Wallace Rush and Mary Oswald Griffiths Research Award

Evan Hoeft

Shannon O'Dunn Research Award

Bianca Artigas

Birkeland Research Award

Victoria Gonzalez
Mobeen Zahid

2026 Colorado Scientific Society Student Research Grant Awardees

John Allard
Lily Zugschwert

Want to check out
older Geology News editions?
Scan the QR code below



Do you have
Geology News editions from
the 1970s and 1980s?
We would love to get copies.



CU President Todd Saliman, Connor Antonio Diaz, and Carolyn Crow after Connor received the 2026 CU President's Inclusive Excellence Award.

Publications

Corrine Celupica-Liu; Nicholas Ayres; Shemin Ge (2026).

A novel method to estimate baseflow using open-source well data. *Hydrogeology Journal*.

Diaz, C. A., Flowers, R. M., Crow, C. A., Metcalf, J. R., & Economos, R. (2026). Heterogeneous ejection temperatures recorded in a "low-shock" Martian meteorite by (U-Th)/He thermochronology and a high-pressure phosphate polymorph. *Earth and Planetary Science Letters*, 679, 119826.

Hankins, J. C., & DeCarlo, T. M. (2025). Multidecadal decoupling between coral calcifying fluid and seawater saturation states. *Science Advances*, 11(35), eadr0264. <https://doi.org/10.1126/sciadv.adr0264>.

Melia S. Kendall, Paul E. Specht, Chad A. McCoy, Sakun Duwal, Michael J. Abere, David E. Kittell, Mark A. Rodriguez, David P. Adams; Measurements of the inert Hugoniot and observation of mechanical ignition in Ni(V) + Al reactive multilayers via x-ray diffraction. *J. Appl. Phys.* 28 February 2026; 139 (8): 085301. <https://doi.org/10.1063/5.0308428>.

Rozmiarek, Kevin S., et al. "Microbial and chemical predictors of methane release from a stratified thermokarst permafrost hotspot." *Frontiers in Microbiology* 16 (2025): 1657143.

Skjetne, H. L., Singer, K. N., Stopar, J. D., Crow, C. A., & Hayne, P. O. (2026). Ejecta fragment transport across the Moon: Implications for lunar sample provenance. *Journal of Geophysical Research: Planets*, 131(2), e2025JE009198.

Bruce Curtis Undergraduate Mentorship Program Fall 2025 - Spring 2026

Mentee	Mentor	Research Project
Muhammad Ammar Shahril Adha	Lon Abbott	Comparison of detrital zircon and detrital titanite signatures in Grand Canyon sediments Part 2: Hermit Creek and P2 terrace.
Ashley Askins	Anne Sheehan	Site-specific Seismic Risk Analysis using Distributed Acoustic Sensing derived Vs30.
Yasmin Binti Ahmad Nazari	Lon Abbott	Comparison of detrital zircon and detrital titanite signatures in Grand Canyon sediments Part 1: Colorado River and P1 terrace.
Helena Biscuola	Lon Abbott	Constraining the Cenozoic exhumation history at several areas along the Front Range using apatite and zircon (U-Th)/He thermochronology.
Jaydan Booth	Valentine Combaudon	Understanding the water-rock reactions producing geologic hydrogen in the Mid-Continent Rift rocks of Kansas.
Morgan Brown	Bri Hibner	Investigating Late Holocene shifts in isotopic composition and structure of Halimeda.
Daniele Callioni	Laurel Bayless	Planktic Stable Isotopes and Carbon-14 Measurements in Chatham Rise Core RC8-78.
Moira Edwards	Stacey Gerasimov	Calibrating Neoproterozoic Strata Across Multiple Cratons.
Amelia Fonda	Tom Marchitto	Stable isotope stratigraphy and paleoceanography of marine sediment core RC8-78, Chatham Rise, New Zealand.
Amelia Gandhi	Vera Schulte-Pelkum	Transcrustal magmatic structures at Alaskan and Aleutian volcanoes.
Andrew Hillyer	Sierra Weirens	Glacial melt contribution to stream discharge and baseflow in the Green Lakes Valley Watershed, Colorado.
Anya Keena	Nicole Mizrahi	Reconstructing Paleozoic marine silica cycle evolution using silicon isotope analyses of fossil sponges and radiolarians.
Faria Khan	Haley Brumberger	Using Microscopy to Evaluate Diagenetic Alteration in Late Cretaceous Dinosaur Eggshells.
Faria Khan	Robert Bourque	Exploring how ecosystem recovery following the K-Pg mass extinction was affected by geography.
Emily Kimball	Paloma Siegel	Expanding the Climate Record of the Juneau Icefield to 1948 through Digitization of Physical Climate Data.
Garrett Lowry	Shemin Ge	Exploring using seawater-cooled groundwater to cool buildings in coastal cities.
Emma Marble	Corey Flynn	Stress estimates using recrystallized grain size piezometry in a seismically active, lower crustal shear zone.
Kian Oaklief	Amy Vodopyanov	Determining Organic Matter Content of Wildfire Affected Soils Using Loss on Ignition Experiments.
Brayden Parks	Lizzy Trower	Creating a chemostratigraphic framework for archival Great Salt Lake sediment cores.

Mentee	Mentor	Research Project
Raikha Patel	Leilani Arthurs	Public perceptions of earthquakes and volcanic hazards AND public outreach.
Taran Renfrow	Shemin Ge	Exploring using seawater-cooled groundwater to cool buildings in coastal cities.
Urania (Rain) Ross	Boswell Wing	The role of S in the origin and evolution of metabolism in Earth.
Soren Rollin	Carolyn Crow	Geochronology of Lunar Basaltic Meteorites.

Spring 2026 Scholarships and Awards

Bruce F. Curtis Scholarship in Geological Sciences

Paige McDowell
Lily Zugschwert

Donald L. and Marilyn R. Gustafson Endowed Undergraduate Scholarship in Geological Sciences

Keila Gutierrez
Logan Maningas

Dr. John D. Edwards Geological Sciences Graduate Fellowship

Connor Antonio Diaz
Jess Hankins

Henry A. Waldrop Scholarship

Olivia Stanley

Jeffrey A. Deen Memorial Scholarship

Indigo Heine
Aggela Polymenis

Kenneth Allen Johnston Memorial Scholarship in Geological Sciences

John Bridges

Longley Wahlstrom Warner Fellowship

Jacob Sims
Sierra Weirens

Marc and Doris Kolber Scholarship in Geological Sciences

Charlie Montes

Marco J. DeMarco Endowed Scholarship Fund

Hassan Al Shihab

Miller Endowed Fund Scholarship

Brandon Alexander

Peter H. Molnar Endowed Scholarship Fund in Earth, Atmospheric and Climate Science

Maira Edwards

Philip George Worcester Endowed Scholarship in Geological Sciences

Khloie Gordon

Stephen H. Evans Scholarship in Geological Sciences

Laurel Bayless
Donavan Bolden-Stewart
Andrew Gmerek
Victoria Gonzalez
Michaela Martinez
Claire Puranananda
Urania Ross
Juliana Ruef
Ayon Saha
Ashlee Stratton

T. Keith Marks Scholarship in Geologi- cal Sciences

Jaydan Booth
Karim Brhili
Haley Brumberger
Corey Flynn
James Gutoski
Robert Kelleher
Faria Khan
Tyler Lincoln

Timothy William Stanton Endowed Scholarship in Geological Sciences

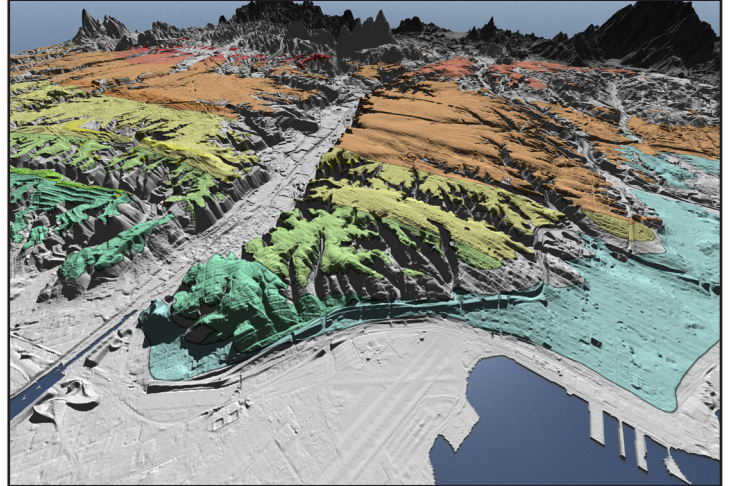
Trish Tellez

Shannon O'Dunn Scholarship Gift

A big thank you to alumna Shannon O'Dunn for her generous donation to support graduate student summer field research.

This scholarship was awarded to **Bianca Artigas** who is working with **Dr. Karl Mueller** to determine whether a newly recognized strike-slip fault system in metropolitan San Diego, CA is active and capable of generating large magnitude 7+ earthquakes.

Bianca will work on analysis of Late Quaternary strata along the fault as defined by detailed field mapping, analysis of stream channel networks and electrical resistivity profiling. Her work is part of a broader effort to define the geometry and slip rate on these active faults, which have created the modern landscape in San Diego. The scholarship will allow Bianca to spend an extended period of time in San Diego to conduct research and work with Karl Mueller and other geologists involved in the effort.



Oblique view of San Diego, where a map of marine terraces (colored areas) is draped over digital topography. Terraces here have been lowered in the hanging wall of an extensional detachment (i.e., a rollover) that connects two active strike-slip faults. A large valley with a broad, flat floor is a crestral graben that marks the edge of the rollover. San Diego airport on center of the image. Research in this region has uncovered evidence for a previously unknown, active fault system that underlies a city of 3M inhabitants.

Mud pot people (Bianca Artigas, Kalpana Murugan, and Karl Mueller) are examining active mud volcanoes near Brawley in the Salton Trough, an area of very high heat flow and crustal thinning along a stepover at the southern end of the San Andreas Fault. This is an area of active research for professor Kathryn Materna and PhD candidate Morrow Tan who are using seismicity and InSAR to define patterns of modern strain and its relation to fault system architecture in a complex releasing bend.



Close-up of a bubble in a mud pot caught at the exact time it burst. Mud pots here turn on and off and bubble away as groundwater is heated and circulated in a region with rapidly slipping faults, geothermal activity, and earthquakes.

These faults have been proposed as the most likely nucleation point of the next large destructive earthquake on the San Andreas fault, the so-called "Big One".



CU SamPLE Facility (aka, the Rock Shop) update

The CU SamPLE (Sample Preparation Lab and Educational) Facility (aka, the Rock Shop) has seen several important improvements this year. First, the new BB50 crusher was installed, which greatly enhances the efficiency of mineral separation and improves safety by eliminating most dust produced during crushing. Second, a new SamPLE Facility sign and bulletin board were installed outside the space. Finally, Dana Hauschulz created and installed a “Great Unconformity” rock wall in the water table/rock saw room to create a waterproof surface and enhance the aesthetics of the room. We are grateful to Dana for this donation and for the time that he has volunteered to support the lab over the last few years. A plaque was installed outside the SamPLE lab to recognize

Dana and future donors who make gifts of \$3k or more. Thank you to Jeffrey Abbott, who has also given a generous donation to the SamPLE lab.

This year, we established a new SamPLE Foundation account to upgrade, improve the safety of, and provide a sustainable financial and oversight model for the SamPLE lab. Over the last decade, over a hundred CU Geological Sciences undergraduates have engaged in research projects that have used this lab. We count at least 15 GEOL faculty who rely on equipment housed in this space. If you wish to make a donation to the SamPLE lab, please check out <https://www.colorado.edu/earthscience/alumni/make-gift/earth-science-sample-facility-fund>.



Excitement over Dana Hauschulz's gift of the new “Great Unconformity” rock wall in the SamPLE lab.



Dana stands in front of the plaque recognizing his donation.

If you wish to make a donation to the SamPLE lab, you can also use this QR code.



Get your name
on the plaque!

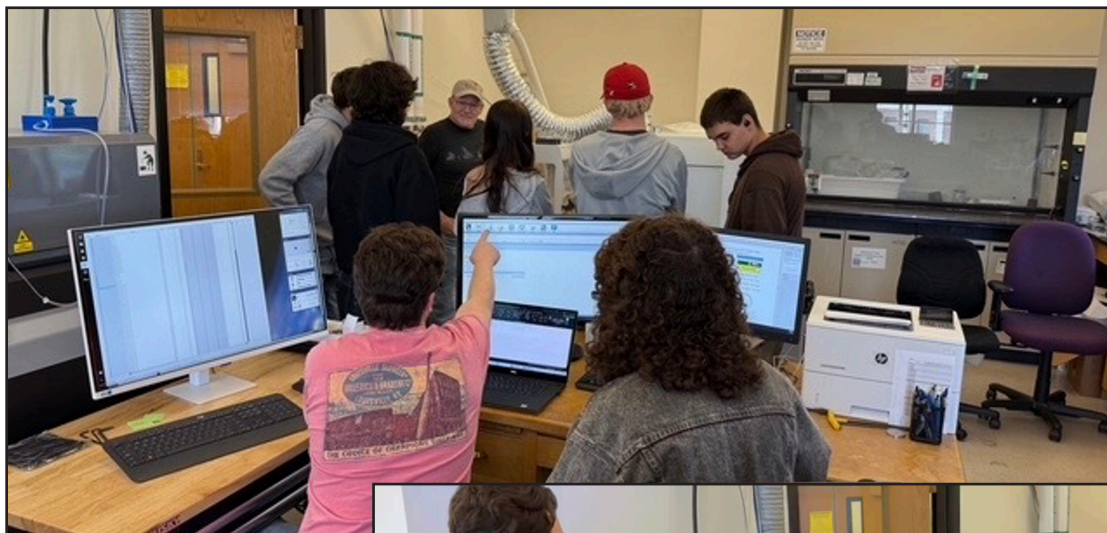
Your generous support
helps support student research
and conference travel.
Thank you!

CU TRaIL Updates

The CU TRaIL (Thermochronology Research and Instrumentation Lab), overseen by Prof Becky Flowers and managed by Dr. Jim Metcalf, has had another successful year of science and student training. Postdocs Liam-Courtney-Davies and Cat Ross began tenure-track positions at San Diego State University and Baylor University, respectively. PhD student Spencer Zeigler defended her PhD thesis, published a paper in *Chemical Geology* on (U-Th)/(Pb-He) double-dating of diamondiferous kimberlites, began a job working as a senior data scientist for the state of Colorado, and will soon start a postdoc position at Western University in Ontario, Canada. focused on understanding the stability of Canada's first deep geological repository for spent nuclear fuel. PhD student Connor Diaz published a paper in *EPSL* on his innovative application of (U-Th)/He thermochronology to a Martian meteorite, received a 2025 Wiley award for his presentation at the 2025 meeting of the Meteoritical Society, and was awarded a CU President's Inclusive Excellence award for his many efforts to increase accessibility in STEM.

Research associate Dr. Cullen Kortyna continued pushing the development of laser-ablation (U-Th)/He chronology and generated U-Pb data for internal and external users working on a variety of projects. Cullen also engaged ~100 high school students at Northglenn High School in TRaIL's SNODASE (Students of Northglenn Date Ancient Snowball Earth) program, in which the geology classes at Northglenn High School directly participate in sample preparation, geochronologic analysis, and interpretation of U-Pb data for the Snowball Earth Tava sandstone unit in Colorado. Dr. Jim Metcalf produced 1000s of (U-Th)/He analyses for scientists from around the globe and facilitated numerous visits to the lab. TRaIL alumni Jess Stanley (2015), a professor at the University of Idaho, was awarded tenure this year.

Additional 2025-26 TRaIL publications with colleagues are focused on critical mineral deposits, including a contribution on the genesis of iron ore and another on the use of (U-Th)/He magnetite chronometry as a provenance tool in metallogenic terranes.



Dr. Cullen Kortyna hosting Northglenn high school students in TRaIL during acquisition of detrital zircon U-Pb geochronology for the Tava sandstone, a Snowball Earth-aged unit in Colorado. Here Cullen explains the process of setting spots on the zircon for U-Pb dating.



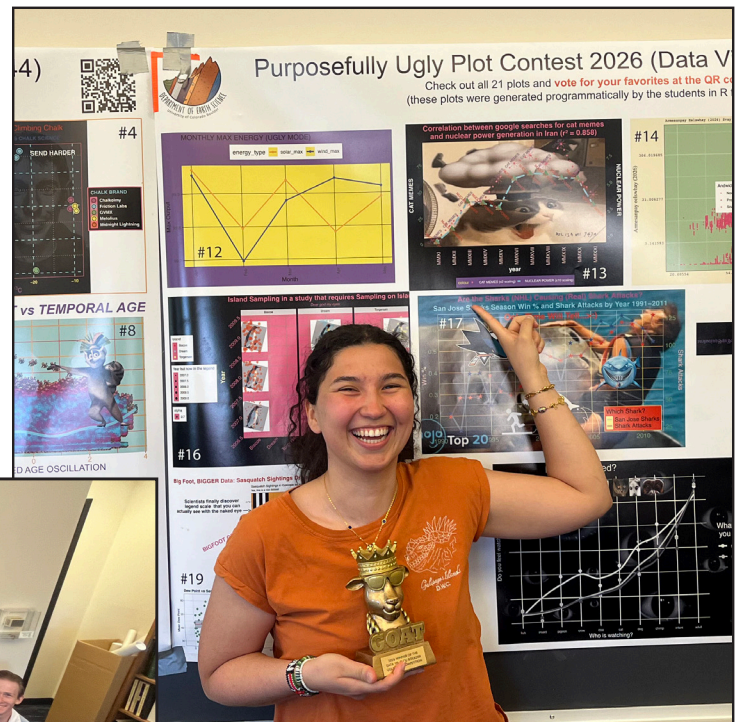
Crafting with the Geological Sciences Graduate Association (GSGA)



Students enjoying a GSGA Craft Night Friday, April 10th, 2026 in Boulder, CO.
photo credit Laurel Bayless

The Geological Sciences Graduate Association (GSGA) at CU Boulder is the official student-led organization representing graduate students in the Geological Sciences Department. It advocates for student needs, builds community, and organizes events like weekly “Grad Talk” lunches and annual retreats.

Thank you to all 21 participants in the **Purposefully Ugly Plot contest 2026** (the students of **GEOL/EBIO 4444/5444: Data Vis**, some pictured with the ugly plot posters below). The plots were terrifically ugly and with 46 votes cast (thank you all for voting!), A shoutout also to very strong runner-up **Paige McDowell** for her **Squirrels in Central Park**.



Students from the **GEOL/EBIO 4444/5444: Data Vis** class posing at the Ugly Plot contest.
photo credit: Seb Kopf



Nadia Alhassani (Ebio) took home the coveted trophy for her masterpiece about **Cat Memes and Nuclear Power**.
photo credit: Seb Kopf

Degrees Awarded

(Fall 2025- Spring 2026)

BA Geology Majors

Rylan Abel
Matthew Akin
Ashley Askins
Nathan Atkinson
Atticus Baker
Jaxon Bartell
Ethan Michael Bleasdale
Morgan Rose Brown
Lex Dembo
Eleanor Downing

Colleen Ewald
Amelia Fonda
Amelia Joan Gandhi
Amber Jansen
Lark Jones
Anya Keena
Madeline Kelly
Emma H Marble
John McHale IV
Danish Aqil Mohd Norhazrin

Kalpana Murugan
Kian Oaklief
Tristen Pennington
Mateo Piza
Taran Luther Cameron Renfrow
Soren Michael Rollin
Nate Solomon
Rachel Drew Underhill

Undergraduates Graduating with honors

	Advisor(s)	Thesis
Rylan Abel summa cum laude	Dr. Bradley Markle	Comparison of the New GISP2 Stable Isotope Ice Core Data: Continuous High-Resolution Water Isotope Data vs Discrete 1997 and 2004 Collection.
Colleen Ewald cum laude	Dr. Alisha Clark	Variations in Density and Water Content During Planetesimals Formation.
Amelia Ghandi summa cum laude (GEOL/ASTR)	Dr. Nick Schneider (APS)	Second-to-Minute Scale Auroral Variability and Pulsating Hot Electron Aurora on Mars.
Lark Jones summa cum laude	Dr. Kevin Mahan	The Potential for Pre-Laramide Fault Inheritance in the Livingston Fault, Boulder County, CO.
Anya Keena summa cum laude	Dr. Katie Snell	Tracking Environmental Shifts in the Great Plains with Stable Isotopes in Sedimentary Archives.
Kalpana Murugan summa cum laude	Dr. Karl Mueller	Evaluating Trishear Growth in a Listric Normal Fault System: A 3D Structural Analysis of the San Diego Basin, California.
Soren Michael Rollin summa cum laude	Dr. Carolyn Crow	Records of Lunar Evolution Across the Meteoritic Sample Suite: 207Pb/206Pb Geochronology and Impact Processing of Lunar Meteorites Northwest Africa 11788 and Northwest Africa 16895.

2026 Graduation Ceremony



Bri Hibner is overjoyed!
photo credit: Leo Dienstfrey



Danish Aqil Mohd Norhazrin
photo credit: Leo Dienstfrey



Kalpana Murugan
photo credit: Leo Dienstfrey



Emma Marble
photo credit: Leo Dienstfrey



2026 Graduation Ceremony

MS Candidates Graduating

	Advisor(s)	Thesis
Wolfgang Lopez	Dr. Karl Mueller	A New Seismotectonic Model for the La Nacion Fault System: Insights from a Historical DEM and 3D Mapping of Deformed Stratigraphy.
Maya McDonough	Dr. Suzanne Anderson	Deciphering rock glacier contributions to streamflow using hydrochemistry and radiocarbon ages.
Spencer Shaw	Dr. Eric Small	Forest–Open Melt Differences Across Headwater Basins: Effects of Interannual Variability in Snow Accumulation.
Amy Vodopyanov	Dr. Shaily Rahman	Impacts of Colorado’s 2020 Cal-Wood Fire on Nutrient Remobilization in Front Range Riparian Ecosystems.
Sierra Weirens	Dr. Shemin Ge	Elevational controls on isotopic composition in a high alpine watershed.

PhD Candidates Graduating

Josephine Li Arcuri	Dr. Irina Overeem	Constraining Models of River Morphodynamics in Arctic Alaska.
Liam Friar	Dr. Boswell Wing	Photosynthesis in the Fern–cyanobacterium Symbiosis, Azolla.
Lindsay Marie Harrison	Dr. Alisha Clark	The influence of volatiles on the elastic and structural properties of melts.
Bri Hibner	Dr. Lizzy Trower	Exploring Holocene sedimentation in carbonate environments: microbial mats, mangroves, and in situ sediment production.
Melia Shyanne Kendall	Dr. Alisha Clark	Dynamic Compression of Heterogeneous Materials with Geophysical Implications.
Kevin Rozmiarek	Dr. Irina Overeem Dr. Tyler Jones	What Boreal Lakes Confess in Carbon: Methane’s Isotopic Fingerprint from Thermokarst Lakes.
Tyler Wickland	Dr. Kevin Mahan	Evolution of the lithosphere using the igneous rock record in southwestern North America.
Spencer D. Zeigler	Dr. Rebecca Flowers	Kimberlites, Cratons, and Chronometers.



Graduating students posing by the globe.
photo credit: Leo Dienstfrey

Jen Stempien, Kara Bajdas, and Brett Bertok pose for the camera after a lot of preparation for the 2026 graduation ceremony. photo credit: Leo Dienstfrey



Alumni News

Emily Fairfax (PhD 2019) served as a scientific consultant on the Disney Pixar film *Hoppers*. Emily is now an Associate Professor at the University of Minnesota.

On November 21, 2025, the **Eric Crail Johnson family** visited the Department alongside representatives from the Office of Advancement and special guests for a luncheon and tour of the Jerry Crail Johnson Earth Sciences & Map Library and the Department's research laboratories. The visit provided an opportunity to showcase the lasting impact of the family's generosity and the innovative teaching and research taking place across the Department.

We extend our sincere gratitude to the Eric Crail Johnson family for their continued support of the Jerry Crail Johnson Earth Sciences & Map Library and the Department. Their generosity plays a vital role in advancing our teaching mission and enriching the educational experience of our students.

Alumnus **Christina Lipper** (GEOL BA '25) wanted to share some exciting news; She has accepted her first full-time job after graduating as a Lab Technician at Paterson & Cooke in Golden, CO.

Paterson & Cooke is an engineering consulting company that works with the mining industry, specializing in slurry pipeline systems and mine backfill technology. They combine engineering design with laboratory testing to develop systems that safely transport and manage mining materials.

Her role as a Lab Tech will include sample management and preparation, and metallurgical test work, such as particle size analysis, thickening, filtration, and rheology test work for mine tailings samples.

Christina is excited to get started and begin this next chapter. She states that she "wouldn't have the experience required for this role without all the opportunities given her during her undergrad. Thank you so much for the support, encouragement, and advice given to her along the way- it truly means a lot."

Alumni **Zach Mahaffey** (BA '15), **Brandon Chase** (BA '16), and **Aaron Hantsche** (MS '15), all with Equity Exploration, during a gravity survey in Alaska.



We want to hear
from you too...
@

GeoAlum@Colorado.EDU



In Remembrance

Ronald A. Labrecque

Ronald A. Labrecque, 98, of Cheyenne, Wyoming, passed away peacefully on August 4, 2025. Born in 1927 in Manchester, New Hampshire, he grew up in a French-speaking household and later developed a lifelong appreciation for different perspectives.

A passionate aviator from childhood, Ron became a licensed pilot and co-owned a single-engine plane. He flew for search and rescue and often took friends up to share the view from above.

Ron served in the U.S. Army during World War II and was stationed in Germany after the war. He earned a geology degree from the University of Colorado in 1953 and spent much of his career with state highway departments, known for his expertise in landslides and freeze-thaw cycles. He also taught university courses and was admired for his practical knowledge and enthusiasm.

He enjoyed humorous poetry, storytelling, and cheering on the Denver Broncos. Though he never married, Ron cherished companionship and was a beloved presence in the Cheyenne community.

He is survived by his sisters, Elinore Dunham and Madeleine Pearson, as well as several nieces, nephews, and friends.

A celebration of life was held Friday, September 26, 2025, at the Unitarian Universalist Church of Cheyenne, followed by interment with Military Honors at Cheyenne National Cemetery.

Joseph R. Smyth (CU Emeritus Professor)

Professor Joseph (Joe) R. Smyth, a pioneering mineralogist and founding figure in mineral physics, passed away in January 2026 in Boulder, Colorado. He is best known for predicting in 1987 that the mineral wadsleyite could store vast amounts of water within Earth's mantle transition zone, a discovery that transformed understanding of Earth's deep-water cycle and inspired decades of research.

Smyth earned a geology degree from Virginia Tech (1966) and a PhD from the University of Chicago (1970), where he developed innovative high-temperature crystallography techniques and explored crystal chemistry concepts that later informed his groundbreaking work on wadsleyite. After research and teaching positions at Harvard, the Lunar Science Institute, and the University of Cape Town, he joined Los Alamos National Laboratory (1976–1984). There, he studied zeolites and nuclear waste storage, while



Joe Smyth was a true outdoorsman with a passion for whitewater rafting.

also contributing to lunar mineralogy through research on Apollo samples and the discovery of a new lunar mineral polymorph.

In 1983, Smyth joined the University of Colorado Boulder, where he spent the remainder of his academic career, becoming a full professor in 1989 and emeritus professor in 2018. At CU Boulder, he made his landmark prediction that hydrogen could be incorporated into wadsleyite's crystal structure, suggesting that Earth's mantle transition zone may contain the planet's largest water reservoir. This idea was experimentally confirmed in the early 1990s and remains one of the most influential contributions to mantle mineralogy.

Beyond science, Smyth was an avid outdoorsman who enjoyed whitewater rafting, skiing, snowboarding, and mountain adventures. He received numerous honors, including the Alexander von Humboldt Foundation Senior Research Award, election as a Fellow of the American Geophysical Union, and the Abraham Gottlob Werner Medal for his contributions to mantle mineralogy.

More than for his scientific achievements, Smyth is remembered for his kindness, humility, and exceptional mentorship. He inspired generations of scientists to connect crystal chemistry with major geological questions, encouraged international

travel and cultural understanding, and remained a supportive mentor well into retirement. Colleagues and students alike remember him as a generous scholar, caring friend, and influential educator whose legacy extends far beyond his research.

Modified from *Elements Heritage* article by Steven D. Jacobsen

The Department greatly appreciates Joe Smyth and Ronald Labrecque's generous gifts through their estate plans.

In Memoriam

Libby Leonard Ericson (Geol '50)

Ronald A. Labrecque (Geol '53)

Joseph R. Smyth (Geol Faculty '83-'18)

David R. Zimbelman (MGeol '84; PhD'96)

Steve Jacobsen, Kristy Tiampo, Alexis Templeton, Lizzy Trower, Irina Overeem, Carolyn Crow, Suzanne Anderson, Shaily Rahman, Katie Snell, Seb Kopf, Alisha Clark, Becky Flowers, Karen Chin, Kathryn Materna, Jen Stempien, Anne Marie Summers, Anne Sheehan, Brian Hynek, Bob Anderson, Tom Marchitto, Lon Abbott, Boz Wing, Brad Markle, Greg Tucker, Kevin Mahan, Aaron Bell, Shemin Ge, and Craig Jones at the Fall 2025 Department faculty retreat.



Earth Science Faculty and Staff, 2025 - 2026

<https://www.colorado.edu/earthscience/people/>

Faculty

Lon Abbott

Teaching Professor of Distinction
PhD, University of California, 1993
Earth Science Education

Robert Anderson

Distinguished Professor
PhD, University of Washington, 1986
Geomorphology and Cryosphere

Suzanne Anderson

Professor
PhD, University of California, Berkeley, 1995
Geomorphology and Cryosphere

Leilani Arthurs

Associate Professor
PhD, University of Notre Dame, 2007
Earth Science Education

Aaron Bell

Assistant Research Professor
PhD, University of Nevada, Las Vegas, 2010
Petrology, Microanalytical techniques

Karen Chin

Professor
PhD, University of California at Santa Barbara, 1996
Paleontology and Paleobiology

Alisha Clark

Assistant Professor
PhD, University of California, Davis, 2012
Petrology & Mineralogy

Carolyn Crow

Assistant Professor
PhD, University of California, Los Angeles, 2015
Cosmochemistry & Planetary Geology

Jaelyn Eberle

Professor
PhD, University of Wyoming, 1996
Paleontology and Paleobiology

Bethany Ehlmann

Professor and Director of LASP
PhD, Brown University, 2010
Planetary Science

G. Lang Farmer

Professor
PhD, University of California, Los Angeles, 1983
Isotope geochemistry

Rebecca Flowers

Professor
PhD, Massachusetts Institute of Technology, 2005
Geochronology, Structure and Tectonics

Shemin Ge

Distinguished Professor
PhD, The Johns Hopkins University, 1990
Hydrogeology, Economic and Energy Resources

Brian Hynek

Professor
PhD, Washington University, 2003
Cosmochemistry & Planetary Geology

Steve Jacobsen

Professor
PhD, University of Colorado Boulder, 2001
Mineralogy, Earth & Planetary Materials

Craig Jones

Professor
PhD, Massachusetts Institute of Technology, 1987
Tectonics, Geophysics

Sebastian Kopf

Associate Professor
PhD, California Institute of Technology, 2014
Geobiology, Geochemistry

Kevin Mahan

Professor • Associate Chair of Graduate Studies
PhD, University of Massachusetts at Amherst, 2005
Structure and Tectonics

Tom Marchitto

Professor
PhD, MIT-Woods Hole Oceanographic Institution
Joint Program, 1999
Paleoclimate and Paleoceanography

Bradley Markle

Assistant Professor
PhD, The University of Washington, 2017
Climate Indicators, Cryosphere, Paleoclimate

Kathryn Materna

Assistant Professor
PhD, University of California, Berkeley, 2019
Geodynamics, Geophysics, and Remote Sensing

Karl Mueller

Professor
PhD, University of Wyoming, 1992
Structure & Tectonics, Natural Hazards

Irina Overeem

Professor
PhD, Delft University of Technology, 2002
Geomorphology and Cryosphere

Shaily Rahman

Assistant Professor
PhD, Stony Brook University, 2016
Biogeochemist and chemical oceanographer

Vera Schulte-Pelkum

Associate Research Professor
PhD, University of California San Diego, Scripps
Institution of Oceanography, 2001
Structure, deformation, rheology

Julio Sepúlveda

Associate Professor
PhD, Univ. Bremen, Germany, 2008
Geochemistry, Paleoclimate and Paleoceanography

Anne Sheehan

Professor • Department Chair
PhD, Massachusetts Institute of Technology, 1991
Geodynamics, Geophysics

Carl Simpson

Associate Professor
PhD, University of Chicago, 2006
Paleontology and Paleobiology

Eric Small Tilton

Professor
PhD, University of California Santa Cruz, 1998
Hydrology, Geodynamics

Katie Snell

Associate Professor
PhD, University of California Santa Cruz, 2011
Paleoclimate & Paleoceanography

Jennifer Stempien

Teaching Associate Professor • Associate Chair of
Undergraduate Studies
PhD, Virginia Tech, 2006
Earth Science Education

Alexis Templeton

Professor
PhD, Stanford University 2002
Geobiology & Astrobiology

Kristy Tiampo

Professor
PhD, University of Colorado Boulder, 2000
Geodynamics, Geophysics

Lizzy Trower

Associate Professor
PhD, Stanford, 2014
Sedimentology & Stratigraphy

Greg Tucker

Professor
PhD, Penn State University, 1996
Geomorphology and Cryosphere

Boswell Wing

Associate Professor
PhD, Johns Hopkins, 2005
Geobiology & Astrobiology

Support Team

Ali Boden

Finance and Business Manager

Marilynn Bender

Accounting Technician

Brett Bertok

Undergraduate Program Administrator

Dan Mitchell

IT and Building Proctor

Research Associates, Postdocs and Lecturers

Tamara Aránguiz, Kimes Postdoc

Jeffrey Benowitz, Research Associate

Valentine Combaudon, Postdoctoral Associate

Carson Cucarola, Professional Research Assistant

Eric Ellison, Senior Research Associate

Jessica Hankins, Sr. Professional Research Assistant

Lindsay Harrison, Postdoc

Alta Howells, Visiting Research Scientist

Aaron Hurst, Lecturer

Srishti Kashyap, Postdoctoral Associate

Cullen Kortyna, Research Associate

Alan Lester, Lecturer

Ashley Maloney, Research Associate

Lisa Mayhew, Research Associate

Gordon McCurry, Lecturer

Flemming Mengel, Lecturer

James Metcalf, Research Associate

Lexie Millikin, Postdoctoral Associate

Elliott Mueller, Postdoc

Sonia Nagorski, Lecturer

Cajetan Neubauer, Research Associate

Maxwell Pommer, Lecturer

Pamela Stephens, Lecturer

Adam Younkin, Professional Research Assistant

Emeritus Professors

John Andrews

William Atkinson, Jr.

Roger Bilham

David Budd

Bruce Jakosky

Mary Kraus

Giff Miller

Stephen Mojzsis

Don Runnels

Hartmut Spetzler

Charles Stern

Jaia Syvitski

Paul Weimer

James White

The Department of Earth Science is grateful for the generous support of its donors. Philanthropic gifts help fund research, teaching, and learning opportunities for students and faculty.

Endowed gifts support PhD and undergraduate fellowships, visiting scholars, public lectures, events, and other programs. Current-use gifts supplement the Department's annual budget.

Thank you for your generous support of the Department of Earth Science!

Thank you Donors

Learn more here →



Peter Molnar Endowed scholarship
Fund is used to provide undergraduate scholarship awards for transfer students.

Bill Bradley Endowed Geology Support Fund

Designed to provide flexible support for the most urgent and impactful needs within the department.

Mary Oswald Griffiths Endowed Graduate Memorial Scholarship

To provide annual graduate scholarship awards, which may include research-related expenses and field work, for students enrolled in the Department of Earth Science.

Thank you for your support!

Gift Information

Check, Credit Card or Cash

Amt. \$ _____

Credit Card

Type & # _____

Exp Date: ____ / ____ / ____

Phone: _____

Cardholder signature

Please distribute this gift to: read more about these funds or donate online @ cuearthsci.com/alumni/make-gift

Peter Birkeland Geological Sciences Graduate Scholarship Fund

Amt: \$ _____

Geological Sciences Department Fund

Amt: \$ _____

Mary Oswald Griffiths Endowed Graduate Memorial Scholarship

Amt: \$ _____

Bill Bradley Endowed Geology Support Fund

Amt: \$ _____

Bill Atkinson Graduate Fellowship Fund

Amt: \$ _____

Peter H. Molnar Endowed Geology Scholarship

Amt: \$ _____

Earth Science Sample Preparation Lab and Educational

(SamPLE) Facility Fund

Amt: \$ _____

TOTAL: \$ _____

Additional Gift Information:

This gift is in memory of _____

This gift is in honor of _____



Have you considered leaving a legacy with a "Planned Gift"
read more at <https://giftplanning.cu.edu/>

*Checks should be made payable to:

*Please mail all donations to

University of Colorado Foundation

Earth Science

University of Colorado Boulder

399 UCB

Boulder, CO 80309-0399



All gifts are tax-deductible