

GEOLOGY ALUMNI ENDOWED AWARD



2022-2023 IMPACT REPORT



The Geology Alumni Endowed Award

was established in the School of Sciences and Mathematics in 2016 with gifts from Karen Black '10, Mike Passarello '08, and Emily Sekula '05. The award was established to enable undergraduate Geology and Environmental Geosciences students to participate in hands-on academic opportunities that will facilitate their post-graduate and career goals. The alumni donors aim to motivate others to support the initiative because of their transformational undergraduate experiences at the College.

AREAS OF IMPACT

- **Undergraduate Research**
- **Field Studies**
- **Career Development**

including travel to professional conferences

2023 RECIPIENT

Skylar Pope '23

Hometown:
Ridgeland, SC



Research:
What influences the initial content and retention of mercury levels in rice grains?

Advisor:
Teddy Them

Major: Geology

“

This summer I worked with Dr. Theodore Them to study the effects of location, grain type, and preparation of rice samples from around the American Southeast. The Geology Alumni Endowment allowed me to focus heavily on my research with little worry concerning financial insecurity. I am ever so grateful for both the honor of receiving this award, but also for the security and peace of mind it provided me.

Through this research, I was able to further my skills in the lab as well as develop experimental procedures. I was able to use and become proficient in the specialized DMA-80 software for mercury analysis. This research will help us educate others on mercury sources besides fish, how to better understand how much mercury we consume, and how to possibly mitigate those numbers. This opportunity has given me insight into how I would like to develop my career in geology as well as how to use my education to work towards creating a better, healthier world for us all. The endowment also assisted me in the completion of my research from the Spring 2023 semester analyzing mercury levels in soil samples around South Carolina. Being able to do research focused on my home state has given me a sense of fulfillment. I have been able to see parts of it that I have never seen before and tried to educate residents on environmental issues related to my studies. My love for the subject has only grown with every experience I've had with it, and heading this research project has truly shown me an intense love for sedimentology.

I plan to work with Dr. Them virtually to complete our analysis of our results during my gap year before I pursue my Masters in geology.

”

Skylar Pope

2022 RECIPIENT

Kevin Wright

'23

Hometown:

Mount Pleasant, SC



Research:
What are the causes of poor water quality in floodwaters?

Advisor:
Vijay Vulava

Major: **Geology**

“This summer I worked closely with Geology Professor, Dr. Vijay Vulava to investigate the presence of trace metals, nutrients, and antibiotic-resistant fecal bacteria in urban floodwaters around the Charleston peninsula. The Geology Alumni Endowment allowed me to chase storms this summer, collect samples, and gain invaluable experience while working in a South Carolina DHEC-approved laboratory setting. As a summer research student, I have access to laboratory equipment like ultraviolet-visible spectrophotometers, and a mass spectrophotometer. In the field, we are using Eureka water probe technology to make measurements, as well as GIS applications to record and map our findings. This research will help us better understand the risks to public health that urban floodwaters may pose to Charleston residents and visitors. I have already spoken with a potential future employer who told me that the experience that I am gaining doing this work is invaluable.

This summer I also traveled to Colorado, Utah, and Nevada to study the water quality and geology of the Colorado River Basin. The Colorado River supplies 40 million Americans with drinking water and produces electricity for communities in Utah, Nevada, and California. Water from the river is used to irrigate over 5 million acres of farmland. Twenty years of drought conditions, explosive growth, poor agriculture practices, and the outdated Colorado River Compact have left the river in a crisis condition. The trip culminated in my decision to write a research paper investigating the impacts of climate change on the economy of Moab, Utah, a small town that has an outdoor recreation-based economy.

Funding from the Geology Endowment Award allowed me the opportunity to go on this trip of a lifetime and for that, I will be forever grateful. The research opportunities and field camps that the geology department offers are what make this program stand out. I look forward to when it is my turn to contribute to this award.”

Kevin Wright

2021 RECIPIENT

Kesli Kruzel

'22

Hometown:
Pelham, NH



Research:
What are the unintended consequences of engineered stormwater systems?

Advisor:
Vijay Vulava

Major: Geology

“Throughout the summer of 2021, I had the great opportunity to do research with one of my Geology professors, Dr. Vijay Vulava. Our research explored how runoff pollutants in our urbanized watershed affect storm water ponds. This is an important topic to study as these polluting nutrients can affect both water quality and sensitive estuary ecosystems. Over 10 weeks, I did many field work outings to four local storm water ponds. Afterwards, I would process these samples in the lab and examine the results. Additionally, I did outside research to enhance my understanding of this complex topic.

This experience would not have been possible without the funding I received from the College of Charleston along with the Geology Alumni Endowed Award. Not only could I be part of something I was interested in and gain lots of experience, but I could do this knowing I was supported by the Geology department and our generous alumni. This funding allowed me to focus completely on my research during the summer of 2021, without the strain of juggling another part-time job to meet living expenses. My love for field work grew exponentially during my research, and encouraged me to apply for field work-based jobs for after graduation.

I will soon be starting an Environmental Geologist position at Arcadis, an environmental consulting company in Philadelphia. I feel both confident in my abilities and excited for this next chapter of my career thanks to the opportunities I was part of throughout my time at the College of Charleston.”

Kesli Kruzel

SUMMER 2023 RECIPIENTS

Kailey Bohan '23

Advisor: Barbara Beckingham

Major: Environmental Geosciences

Hometown: Macon, GA



“This past July, with the help of the Geology Alumni Endowment Award, I got to live a geoscientist’s dream and visit several locations throughout South Africa through the field studies course. I am so grateful for the generous funding that aided in getting me where I needed to be and allowed me to cultivate a toolkit ready for this task.

I purchased field boots, with plenty of time to break them in before taking to the trails of Golden Gate National Park, and a raincoat that came in handy in the rainy West Coast National Park in Langebaan. My field notebooks withstood plenty of wear and tear, documenting all terrains and environments, making maps, and producing stratigraphic columns. My sunburn would have been intense without a trusty field hat, and I was ecstatic to look through binoculars and see an elephant family or a lioness meeting my eye. Through the funding, I came equipped with the tools necessary to arrive, learn, and succeed in experiences beyond my imagination.”

Kailey Bohan

SUMMER 2023 RECIPIENTS

Jack Hornsby '24

Advisor: Tim Callahan

Major: Geology

Hometown: Lexington, SC

"My field studies experience in South Africa this summer was easily the most meaningful experience of my life. Not only was it rewarding to put all of the knowledge and skills I have learned over three years in my Geology courses, but it was also my first time out of the country. Traveling around South Africa in a van, staying in exciting places, meeting locals, learning different dialects, and learning both geologic and anthropological history, was an amazing first international experience. I am forever grateful to my family as well as the alumni who made this experience possible for me, I will forever hold it near to my heart."



McHenry Jackson '23

Advisor: Teddy Them

Major: Geology

Hometown: Charleston, SC

"The South Africa field studies course was an amazing eye-opening experience. We saw so much of the country of South Africa and its incredible geology. The millions and millions of years captured in the rocks were truly spectacular. We also got to experience the vibrant culture and the kindness of the locals!"



Field Studies Support

Field Studies Support

SUMMER 2023 RECIPIENTS

Sean Maloney '23

Advisor: Steve Jaume

Major: Geology

Hometown: Mount Pleasant, SC





I am exceedingly grateful for the CofC Alumni Endowed Award, as without it, this trip would not have been possible at all! I utilized it to pay down the deposit for the course and trip, and I'm glad I did since before this summer, I'd never been this far away from home. It solidified in my brain that my original choice of a geology major was the correct one, and while I'm likely heading for a career in bathymetry and marine geology, the fieldwork aspect was something I had never encountered before. It's much harder to take notes and absorb both detail-level and big-picture information when clambering around on fallen boulders or having hiked for tens of miles in an environment you've never been exposed to before. I had never even been camping before this, and to go from that to sleeping somewhat comfortably in a tent within a week speaks to how excellent and effective these field studies excursions can be at giving students a slice of reality. It shows what it means to be a field geologist, with direct relevance to how the work would be in a real-world context.

We completed a stratigraphic column and several extensive mapping projects in New Mexico, driving to excursions from our wonderful cozy cabin in Angel Fire, and then camped out the remainder of the trip within various National Parks in Utah, where we made more maps. For the final map, we created a stratigraphic column with descriptions using only our brains and the information we recorded in our field notebooks, to accentuate the importance of taking notes.

Earth history was a major undercurrent in all our lectures since understanding how each formation came to be and what environment they must have formed in was critical to understanding the behaviors they exhibit today. We were trained in the use of Brunton compasses to measure the thickness of layers, as well as taking strikes and dips at fault lines. We also visited several mines, including a perlite mine in New Mexico, and both a pegmatite mine and a shuttered uranium mine in Utah.

I got pins from all the National Parks we went to! I made hopefully lifelong friendships within our group and I learned what geology fieldwork actually feels like. I couldn't have done any of it without the Alumni Endowed Award, and for that, I am truly beyond grateful!

Sean Maloney

SUMMER 2023 RECIPIENTS

Jeremy Miller '24

Advisor: Norm Levine

Major: Environmental Geosciences

Hometown: Charleston, SC



“This summer, with help from the Geology Alumni Endowed Award, I was able to embark on an amazing Field Studies course in the American Southwest led by Dr. John Chadwick. Through this course, I was able to apply concepts in the field learned at the College of Charleston. These concepts included mapping projects and creating stratigraphic columns of the various places we visited. In Angel Fire, NM, we made our way to the Rio Grande Gorge where I, along with my partner, worked together to construct a stratigraphic column of the area. We then moved on to creating topographic maps of Ghost Ranch, NM, and Rattlesnake Canyon, NM which were both challenging and interesting! After these projects, we hit the road and traveled through Utah to gain more knowledge and see some amazing landscapes and National Parks.

The projects were essential in creating a foundation of knowledge for the final project, where we created a large-scale stratigraphic column of the Colorado Plateau. Most of our time in the Southwest was spent camping in various locations such as Abiquiu, NM as well as Moab, UT, and Capitol Reef National Park - all of which made my outdoor enthusiast heart extremely happy. This experience taught me what it feels like to be a field geologist and how to better piece together this puzzle called Earth using what I've learned. Above all else, this experience has further emboldened my desire to pursue a career in geosciences.”

Jeremy Miller

SUMMER 2023 RECIPIENTS

Elle Raftery '25

Advisor: Teddy Them

Major: Environmental Geosciences

Hometown: Kent, CT

"Field studies in South Africa was truly special. One thing that resonated with me the most from the trip was how I got to see the geology that I will be learning about in my next two years at the College. Concepts I had only a general understanding of became clear as we witnessed them right before us. I am incredibly grateful for this award and for everyone who made the trip possible."



Bosie Stalvey '23

Current Position: Hydrographic Survey Tech
Geodynamics
Morehead City, North Carolina

Advisor: Leslie Sautter

Major: Geology

Hometown: Charleston, SC





I had the opportunity to travel to South Africa for Field Studies for the month of July. It was an incredibly enriching experience that broadened my geologic and environmental knowledge in ways I never thought possible.

Under the guidance of Dr. Adem Ali, I was able to explore some of the most stunning geologic landscapes in the world. From Golden Gate National Park to Cape Town, our group traveled throughout South Africa, gaining a deeper understanding of the environmental issues facing the region while experiencing its history, cultures, and wildlife up close.

At each of our stops, I was able to see firsthand the geologic processes that formed these beautiful landscapes and also learn about the biology of South Africa and its rich cultural history. During this time, we were also able to meet with Dr. John Compton, a local professor with extensive knowledge of the geomorphology of South Africa and other insights on South African culture.

One of the highlights of the trip for me was the two-day hike in West Coast National Park in Langebaan, where I was able to apply my knowledge in a real-life scenario. A close second was a day-long safari where we saw all of South Africa's big five: elephants, giraffes, hippos, rhinos, and lions, all of which I had never seen before living in the wild.

I cannot express enough how grateful I am for the Geology Alumni Endowed Award. Without their support, I would not have had the opportunity to gain such a unique and truly international field experience. This experience was unforgettable and enlightening to my understanding of the world around us.

Bosie Stalvey

SUMMER 2023 RECIPIENTS

Miles Thompson '24

Advisor: Scott Harris

Major: Geology

Hometown: Ocean City, MD

Watch a short video of Field Studies in South Africa footage captured by Miles.

[A Roadtrip through South Africa: College of Charleston: Geology Field Studies \(2023\)](#)



“The South Africa field studies course with the College of Charleston Geology Department was the best adventure of my life thus far. The opportunity to explore such a geologically and culturally diverse country with the school was a no brainer for my field studies requirement. It was extremely well organized, and I felt that it boosted my travel confidence ten times beyond what it was. Dr. Ali led the trip in such a way that there was always something new and exciting to see. I am glad I brought a journal or else I may have forgotten some of the things we did! The geology I learned in the field clicked with me much easier as I was able to get a real hands-on lesson and see the science in person. I couldn't imagine a better place to study geology while also learning so much more about the world.”

Miles Thompson

SUMMER 2022 RECIPIENTS

Jade Benson '22

Current Position: Program Assistant
Advanced Technology International

Advisor: John Chadwick

Major: Geology

Hometown: Knoxville, TN

"I will be using this award to help pay for my field studies airfare and equipment costs. Aside from the airfare I hope to fund some required field equipment that myself and my classmates can benefit from."



Bella Fleck '23

Current Position: Junior Geologist
RESPEC

Advisor: John Chadwick

Major: Geology

Hometown: Littleton, CO





“This summer with the help of the Geology Alumni Endowed Award, I have been provided with tremendous opportunities to get my boots dirty and dive further into my passion of Geology. I packed my bags in May, flew to New Mexico, and completed a three-week Field Studies course. This was facilitated by professors Dr. John Chadwick and Caitlin Bierce. I was able to apply classroom concepts to large scale mapping projects, stratigraphic columns, and field work. With a partner, I constructed topographic maps of Ghost Ranch, NM and Rattlesnake Canyon, NM as well as a stratigraphic column of the Rio Grande Gorge. We then hit the road for Utah, Colorado, and Arizona in order to build a large stratigraphic column of the Colorado Plateau. To complete each project, knowledge about geologic structures, mineralogy, petrology, and stratigraphy were applied. I learned what it feels like to be a geologist in the field and tie pieces of learned information together to tell a geologic story of a given area. Not only did this experience prepare me to enter the workforce, but it grew my love for Geology.

Upon return from Field Studies, I have been working on a research project with Dr. Chadwick and another peer. We are working in the geochemistry lab to study potential magma mixing at Lassen Volcanic National Park, California, and its surrounding areas. We believe that the magmas erupted here are a result of two different tectonic processes, subduction and basin and range extensional faulting. We have observed chemical and mineralogical compositions of two distinct magmas (Calc-Alkaline and Tholeiitic) within the samples from Lassen. These samples contain minerals and elements that are typically not found together. In the lab, we have been preparing samples for ICP-MS and XRF analysis, which will provide more insight to the trace and major elements within the magma. This is all evidence that the magmas from each tectonic source are mixing and erupting as a hybrid magma. We have just returned from a trip to Lassen, CA where we were able to collect more samples for continued research. This has been another unforgettable experience that has allowed me to learn more lab techniques, build on existing knowledge and overall grow as a geology student. I could not be more grateful for this summer of opportunities, and I am excited to apply everything I've learned as I enter my senior year and the post graduate world.

Bella Fleck

SUMMER 2022 RECIPIENTS

Nathan Linder '22

Advisor: Scott Harris

Major: Geology

Hometown: Hanahan, SC

"This award will allow me to get all of the equipment needed so that I can have a fulfilling field studies course, as well as help me to afford the flight."



Corinne Luksch '22

Advisor: Teddy Them

Major: Geology

Hometown: Fort Mill, SC

"Thank you so much for the support! I will use this award to purchase necessary equipment and fund the expenses needed to complete this research. This award will help me to obtain the goals I have set for myself and my education."



SUMMER 2022 RECIPIENTS

Camille Sullivan '22

Current Position: Ph.D. student,
Oceanography, University of New
Hampshire

Advisor: Adem Ali

Major: Geology

Hometown: Cassatt, SC



“During this past summer, I was given the amazing opportunity to learn new field skills and apply what I have learned during my time as a Geology major through a Field Studies class. I traveled to the southwest, along with 12 fellow Geology students and two professors from the College of Charleston, and participated in a three week long course based in Taos, New Mexico. After completing intensive mapping projects in New Mexico, we traveled to Colorado, Utah, and Arizona to visit several national parks and explore their fascinating geology. Since I have not traveled or explored much in the past few years due to COVID restrictions, I was extremely grateful for the opportunity to complete a Field Studies course in person and travel to different states and national parks.

This experience provided me with a new perspective, as I can fully appreciate the effort it takes to hike and map a large area of geological importance after doing so myself during the course. I was challenged, both mentally and physically, and developed my field skills in order to successfully complete our mapping projects. Part of this skill development was learning how to properly utilize equipment such as a rock hammer and field notebook. With the support of the Geology Alumni Endowed Award (GAEA), I was able to purchase these valuable tools without financial stress, allowing me to fully focus on the Field Studies course without being distracted by monetary needs. I am grateful to be a recipient of this award and extremely appreciative of the generosity shown by College of Charleston alumni.”

Camille Sullivan

SUMMER 2022 RECIPIENTS

Summer Research Augment

Roxanne Buck '22

Current Position: M.S. Geosciences student, Western Michigan University

Project title: Mercury Geochemistry of a Terrestrial Transect Across the End-Cretaceous Mass Extinction

Advisor: Teddy Them

Major: Geology

Hometown: Coeur D'Alene, ID



Samantha Czwalina '21

Current Position: Hydrographer eTrac, Gig Harbor, Washington

Project title: Identification, Anatomy, and Relationships of a New Basilosaurid Whale from Harleyville, SC

Advisor: Robert Boessenecker

Major: Geology

Hometown: Pelzer, SC

Summer Research Augment

PREVIOUS AWARD RECIPIENTS

Emanuel "Manny" Byas '19

Current Position: STEM Teacher at Starfford MSD
Houston, Texas



Emma Collins '18

Current Position: Hydrologist
National Weather Service, Peachtree City, Georgia



Michael Shahin '18

Current Position: Glaciologist



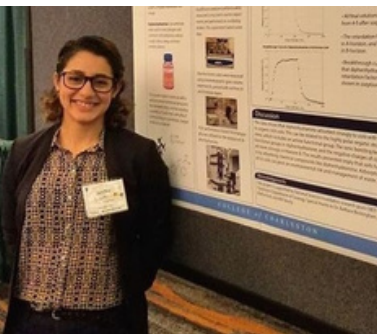
Hana Mintz '18

Current Position: Administrative Assistant, Trident
Technical College, North Charleston, South Carolina



Jeniffer Soto Perez '18

Current Position: Hydrology Technician
U.S. Geological Survey, Sacramento, California



G. Brad Thompson '18

Current Position: Adjunct Instructor,
College of Charleston



2018

2017

FINANCIAL OVERVIEW

Fund goal
by 2021

\$300,000

\$352,520

Fund balance
as of August 2023

\$14,200

Projected annual spending allocation
from \$350,000 endowment balance

THANK YOU

Since the fund was established in 2016, more than 40 faculty, parents, friends, and alumni donors from 11 states have made gifts to support the Geology Alumni Endowed Award. Thank you for supporting Geology & Environmental Geosciences at the College of Charleston!

Individual Donors

Morgan Annab '13
Pamela Bergstrand '83
Paul Bergstrand '85
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Karen Black '10
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Kristen L. White '12
Peter Zink

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Geology & Environmental Geosciences graduates at Spring 2023 Commencement

"I am truly inspired by the Geology Alumni Endowed Award's incredible evolution from concept to a thriving fund, thanks to the support of Alumni and Friends of the Department. Your understanding of the impact that research and field study opportunities play in shaping young geoscientists made this initiative a resounding success. Heartfelt thanks to all donors for your contributions, ensuring the perpetual support of future geoscientists. I'm amazed by the number of students who received support this summer due to your generosity and am excited to watch the ongoing impact of this legacy.

It's an honor to serve as the Geology Board of Advocates chair. The Board strives to serve our alumni, the department, and current students. Feel free to contact us, geologyboardofadvocates-group@cofc.edu, or [update your information](#) to receive regular communications."

Karen Black '10, Geology Board of Advocates Chair