



News From the Department Chair

Let's ring in the 2022 holiday season with this **30th edition** of the Mylonite newsletter. We in the Geology Department sincerely hope that all of you continue to be healthy and safe as the holidays approach. Please enjoy some well-deserved cheer and quality time with your families. I had planned to write something more elaborate this year but have been derailed for more than a week with the flu, making it difficult to focus. Our deadline is fast approaching so please forgive the brevity of certain segments.

Over the past year Geology Department operations finally transitioned back to face-to-face operations. Spring semester began with another shutdown due to the untimely surge of the Omnicron variant, however Dr. Prothero and I were granted special exceptions to teach our Structural Geology and Paleontology lab classes in person. Our students were the only groups allowed on campus until February 11 when in-person instruction resumed. The University masking mandate was eventually lifted on April 10. Since then, we have been teaching pretty much as before the pandemic, with minor adjustments when various students or faculty become ill. We have all learned to be flexible and adaptable. All told, it has been great to see our students' smiling faces in the classroom and field again, so eager to learn!!

2022 was another good year—mostly positive news to report, with only a couple sad moments. We hope you enjoy reading the descriptions below of our recent endeavors and accomplishments.

One of the high points was our Student Awards picnic held in May at Memorial Park in Claremont. It was fun to see the surprised faces on some of the awardees.

Another major accomplishment was Nick Van Buer's 600-mile winter trek across the Mojave Desert wilderness. I'm sure he will mention it but here is a link to his blog if you would like to see some incredible videos: <https://www.youtube.com/channel/UCHMNjgp97lQEooIjwLbggig/videos>. There have also been several significant news stories. We graduated **12** BS majors over the past year, while we have added **2** MS student theses to our archive. You may view these at: <https://www.cpp.edu/sci/geological-sciences/masters-program/thesis-archive.shtml>. As described in more depth later, our graduated students continue to be in high demand for excellent jobs in the geoscience industries.

The Geology Department website is now completely updated with a new, more secure IT web template. Check us out at: <https://www.cpp.edu/sci/geological-sciences/>. You may notice broken links to the faculty pages for me, Dr. Polet, and Dr. Marshall. The university informed us in September that they would no longer host our personal websites in the format they had hosted for years. It was put on us to convert these sites to the new Cascade web management system. A time-consuming process but we will get it done.

Sadly, we recently lost two of our long-term Department supporters after several months of severe illness. Emeritus Professor Larry Herber and Geology student benefactor Alice (Sally) Lane will be greatly missed. I will write a few more words about them later.

Following the theme of past editions, our first photograph is a group shot of the combined GSC 4910L-GSC 5030L Advanced Geological Mapping classes overlooking a major landslide scar on Wright Mountain. This slope failed during 1941 and 1969, causing a series of mudflows into Wrightwood. Students were tasked to map structures in the Pelona schist bedrock that likely contributed to breakaway of this landslide. We were

lucky again during this Aug 26-28 expedition to experience a rare cool stretch of 75 degree weather in the middle of summer. The group enjoyed a nice, quiet, remote camp at 8250 ft elevation overlooking Wrightwood to the north and the Pine Mountain landslide to the south. Even though no campfires were permitted, this was a great trip to kick off the 2022-23 academic year:



GSC 4910L and GSC 5030L students stand on the west Wright Mountain landslide scar. Notice the adversely dipping Pelona Schist outcrops in the distance.

A Tribute to Larry Herber (1937-2022) (by Jon Nourse)

The Geology Department lost one of its finest a few weeks ago. Dr. Larry Herber, Professor Emeritus, passed away peacefully in his home on Sapphire Street in Alta Loma on October 31. He was 85. Larry had been struggling with a recurrence of cancer over the past several months. Fortunately, his family was able spend quality time with him as he rested at home.

Larry taught 37 years for the Geology Department between the late 1960s and early 2000s. He was hired as a young PhD out of Mackey School of Mines (Reno) after completing an MS from New Mexico Tech in Socorro . In addition to teaching summer Field Geology, his key classes were Optical Mineralogy, Geomorphology, and Engineering Geology. He also taught Mineralogy and Igneous / Metamorphic Petrology before Dave Jessey joined the department. Many of you will remember spending long hours in the laboratory as Larry tried to instill a strong work ethic in his students, teaching by example. Others probably recall him whistling in the hallways. He always seemed so cheerful.

J. David Rogers (BS 1976) shared the photos below of Larry Herber's early years as a junior professor. As you may know, Dave and Larry later coauthored several articles on landslide mechanics in the San Gabriel Mountains. If you would like to read more details about those interesting

times, please check out Dave's memoir at: <https://www.cpp.edu/sci/geological-sciences/docs/NewsArchive/RogersMemoir1974to76optimized.pdf>



Summer Field Geology students at Cal Poly Pomona in August 1974: Front row (left to right) Allen Snyder, Bob Archer, Dave Rogers, and Steve Carpenter. Back row (left to right) Prof. Larry Herber, Hank Brown, Kathy West, Scot Carney, and Rick Gorman.



Professor Larry Herber doing reconnaissance field mapping in the eastern San Gabriel Mountains above his home in Alta Loma/Rancho Cucamonga.



Students and professors discuss geology exposed in a highway cut in Baja California during February 1975 field trip. From left: Scott Carney, Don Tarman, Larry Herber, Bob Archer, and Gary Johnson.



Year-end party for the Geology Department at Gerry Henderson's home in Hacienda Heights, early June 1976. This view shows Professors Larry Herber, Don Tarman and Bernie Lane (Walter Hess is in brown suit bending over, behind Lucy Herber).

Relatively late on the scene, I recall sharing an office with Larry in Building 3 during my first years as a junior faculty member at Cal Poly Pomona (1989-1994). I learned much from him about work ethic, teaching style, and student management practices. It seemed that he was always grading papers in his office. Students commonly complained about the long hours of lab work, but I think they appreciated the time Larry took to evaluate their efforts. Here are a couple of related stories: Before I inherit-

ed his Optical Mineralogy class, I know Larry spent 6 full hours per week working with his students in the lab "introducing the week's topic." Only then would the actual lab work begin, with students completing the assigned work over the next week. Those of you who experienced those many late hours looking down the microscope know what I mean. On other occasions, I recall students visiting Larry in his office to ask about their class standing after doing all that work. He would check his grade book and say "Well, it looks to me like you have a good, solid C. That's a decent grade, you know, although your work can always improve, so don't give up!" The student would leave, shaking his head in bewilderment. Larry was a tough and demanding professor, quite stingy with his A's and B's, but if you ever received one, you knew it was highly deserved!! Even a C+ was worth its weight in gold.

I am also most grateful to Larry for showing me some of his favorite field sites in the San Gabriel Mountains back in 1990-91, shortly after I moved to the Mt. Baldy area. He used to refer to the San Gabriels as "those glorious mountains." Several of the places we visited became important field trip stops in my classes as well as targets for personal research and senior projects. I'm not sure Larry realized it, but he was an inspiration to me in tackling some of the thorny geologic problems that still exist in this fascinating mountain range. His special interests included landslides and the San Antonio Canyon fault, both of which remain dear to the heart of me and my students. I am grateful that Larry encouraged my work in his field area, and spent the time helping my students, even after retirement. For example, I remember Larry taking a long field day to investigate the Brown's Flat landslide with me and undergraduate student Pablo Cortez in 2005. Part of that day was a hike down a side canyon that cut into the roots of the landslide:

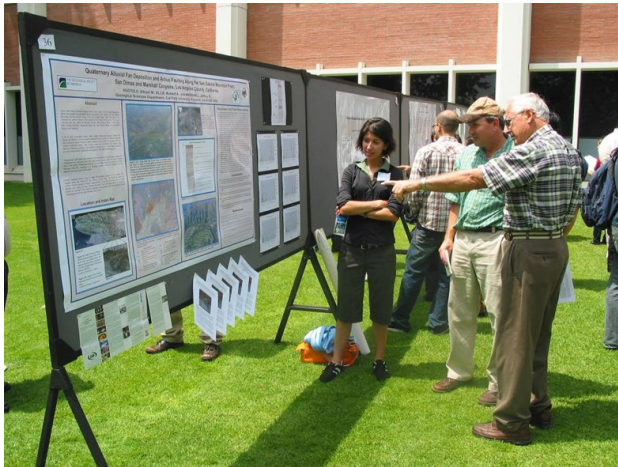


Pablo Cortez and Larry Herber rest along the slip surface of the Brown's Flat landslide in "Alpha Canyon", October 26, 2005.



Larry leads the charge up out of Alpha Canyon at the end of the day. Notice the daylighting foliation planes.

Periodically, Larry would stop by the Science Poster symposium to study the results of students' work. Not sure if our students knew who was providing the feedback:



Larry visits us to view Alison Ruotolo's poster on Alluvial Fan Deposition along the San Gabriel Mountain Front in San Dimas and Marshall Canyons. Rob Ellis was coauthor. Spring of 2008 or 2009.

In more recent years I was fortunate to spend several days in the field with Larry, and we also enjoyed some meals at Brandon's Café and Corky's Kitchen. One memorable trip was a hike up Cucamonga Canyon with Assistant Professor Nick Van Buer and my University of Pittsburgh colleague Tom Anderson. When we hit a rough stretch, Larry told us, "If I should keel over and die, just say a couple of 'Our Fathers' and carry me out of here." We eventually made it to one of his favorite waterfalls.



Three generations of Cal Poly Pomona Geology professors at lower Cucamonga Falls, May 4, 2016. Larry was 79 at the time, I was 55, Nick Van Buer was 33. Photo by Tom Anderson.



Here's a shot that better shows the waterfall, also Tom Anderson, age 74.

Larry continued to take his morning jog and/or hike near the mouth of Cucamonga Canyon until very recently.

We enjoyed another fun day in the field in August of 2019, before the pandemic. As always it was fun to look at the rocks, talk Geology, and discuss politics. A passing hiker took this photo of us, looking northeast from a hairpin in the Sunset Ridge Road:



Larry and I enjoying a day in the San Gabriel Mountains, August 12, 2019. Mount San Antonio, Telegraph Peak, and Icehouse Canyon in the distance.

This area is of course ripe with landslides and earthquake faults. Below are a couple examples, with Larry and Gordie for scale:



Picture bottom Left: Failure surface exposed along the Sunset Ridge Fire Road, August 12, 2019. Logan Wicks mapped this area for his senior project in 2009.



Sunset Ridge fault intersects Glendora Ridge Road, August 12, 2019.

Larry Herber was my friend and mentor throughout my career at Cal Poly Pomona. Many generations of students (and faculty) have benefitted from interactions with Larry. He will be greatly missed. A few of you were able to send Larry memorabilia and notes of encouragement and gratitude during his last days. These were gratefully received. Larry's daughter, Margie, shared this message from October 21:

Dearest Alumni and Colleagues,

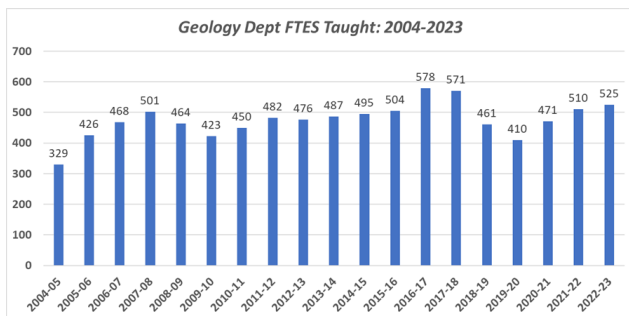
Thank you for your meaningful, blessed, and consoling letters, cards, & pictures. I am overwhelmed with gratitude at your kind words, which have been very uplifting for me and my family.

I am humbled by your generous memories of me and your willingness to share them.

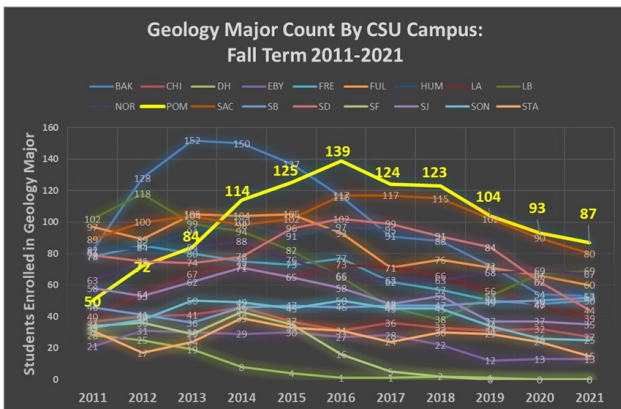
*With love and gratitude,
Larry Herber*

GSC Enrollments Continue to Climb!

It is encouraging to note that our department teaching output as measured by Full time Equivalent Students (FTES) is up for the fourth straight year. Effectively this metric represents how many students enrolled in 15 units are taught each year. The chart below shows the ebb and flow of our FTES since 2000. Notice there was a significant dip during 2018-20 (after conversion from quarters to a semester system) but we have been gaining ground since then. We are above 500 FTES for the second year in a row. These numbers help the College of Science meet enrollment targets and cover various costs.



Also noteworthy is an update of the chart presented last year. The Cal Poly Pomona Geology Department continues to rank at the top of the pack in the CSU system.



Two New Master's Degrees Awarded in 2022

After a flurry of graduations during the pandemic, two more MS students successfully defended their theses in 2022. It was nice to hold both defenses in person, with an optional Zoom link. I thank Drs. Van Buer, Murray, and Osborn for serving on the thesis committees. The Graduate Faculty would like to congratulate **Garrett Stewart** and **Craig Manker** on their milestone achievements!

Below is a list of the new MS theses from 2022, with links to the posted documents:

- [Garrett Stewart "A Structural and Geochemical Characterization of Early Artisanal Gold Mines in the Central and Southwestern Rand Mountains, Mojave Desert, California"](#) (defended May 2022, advisor Dr. Nourse)
- [Stewart Plate 1: Geologic and Structural Map of the East-Central Rand Mountains](#)
- [Craig Manker "Geology, Structure, and Detrital Zircon Geochronology of Central Blue Ridge, San Gabriel Mountains, California"](#)(defended August 2022, advisor Dr. Nourse)
- [Manker Appendices: Plate 1 Geologic and Structural Map of Central Blue Ridge; Plate 2 Geologic Cross Sections; Table 2 U-Pb Geochronology Data](#)

Geology MS Program Invites Applications

Our MS program welcomes applications from Cal Poly Pomona Geology alumni—many have been successful graduate students in the past despite juggling external work and family commitments. It seems that earning a BS degree from CPP Geology Department provides excellent preparation / work ethic for completing a Master's degree. Several recent Geology BS graduates are currently active in our program and making good progress on their theses.

The application deadline for Spring semester (2023) has passed, but the Fall semester 2023 application cycle remains open until **July 1, 2023**. Early application is strongly encouraged to allow time to arrange financial aid and Teaching Associate appointments. Details of the MS program, including admission requirements, curriculum and instructional plan for the next three years may be viewed at: <http://www.cpp.edu/~sci/geological-sciences/masters-program/index.shtml>

Please check out our MS Thesis archive at <http://www.cpp.edu/~sci/geological-sciences/masters-program/thesis-archive.shtml> to access PDFs of all Geology MS theses completed to date.

How to Apply:

Apply online through <https://www2.calstate.edu/apply>

For prompt feedback, also send hard copies (or electronic files) of your application and supporting materials to:

Nicholas Van Buer, Graduate Coordinator;
njvanbuer@cpp.edu
 Department of Geological Sciences
 3801 W. Temple Avenue
 California State Polytechnic University
 Pomona, CA 91768

New Trailer Purchase

Over the summer, we were approved to purchase a new trailer to support Geology Department field trips. This trailer replaces the unit given to us by Biology Department a few years ago. Geotechnician Frank Wille was instrumental in finding us a good deal on this trailer. When Frank is finished with his handiwork the trailer will be outfitted with a complete camp kitchen, including a propane stove, refrigerator-freezer, built-in cabinets, and sink with running hot water. There is also sleeping space for students who need to escape those cold desert winds.



Bringing our new trailer to CPP after a long day at the DMV in Beaumont with Frank Wille.



Lunch break at Oak Grove Campground during our maiden voyage with the trailer.

Cal Poly Pomona Geology Professors Make the News!

Dr. Stephen Osborn was featured by NBC News as a resi-

dent expert on an interview about a proposed Lithium mine in the Salton Sea area. <https://www.nbclosangeles.com/news/national-international/what-is-lithium/2873392/>

.Meanwhile, Dr. Nick Van Buer made several news splashes during and after his winter sabbatical trek across the Mojave desert:

<https://www.youtube.com/watch?v=NQGla53w2C8>

<https://polycentric.cpp.edu/2022/02/video-series-will-feature-rock-star/>

<https://thepolypost.com/news/2022/02/22/geology-professor-embarks-on-500-mile-mojave-desert-hike/>

Below is a photo of Nick presenting a recap of his trip at the Innovation Brewworks “Science on Tap” program last April.



Here the Geology Department presented him a small award:



In Memorium: Sally Lane

We received the sad news last August that Alice (Sally) Lane had passed away after a prolonged illness. Sally was the spouse of one of the Geology Department founders, Bernie Lane, who taught Paleontology during the 1970s and early 1980s. She has been a very generous benefactor to the Department for decades. Through the efforts of

Sally and past Chairman John Klasik, the endowed Bernard O. Lane Paleontology Laboratory was established for the opening of Building 4 in 2000. This endowment allows us to sustain our prized Paleontology collection at Cal Poly Pomona. Several new dinosaur fossil casts been added recently to support instruction of our new Age of Dinosaurs class.

Over the past 15 years, countless Cal Poly Pomona Geology majors and graduate students have benefitted from the Alice Lane Student Support Fund. This account regularly covers costs of student travel to conferences, thin sections, analyses of samples in the laboratory, and field expenses. Students are most grateful for that support. An additional account was established in 2015: the Sally Lane Geology Laboratory Support fund. This provided resources to upgrade our Petrology and Geophysics labs.

I recall several lunches with Sally in Claremont in recent years, hosted by Tony Todellero and later, Dean Baski. She always seemed so lively and spirited. The two of us used to trade stories about our respective cats. We in the Geology Department will miss her greatly.

Personal Notes from Dr. Nourse

Well, it's late on December 3 and I finally feel up to writing again after a miserable week knocked out of commission by a nasty flu bug. Phyllis and I are starting to recover slowly. It was a real shame to miss Larry Herber's memorial service, but we were both too contagious to risk it. The best I could do was walk up a small hill yesterday with Gordie and say a little prayer for Larry with a view of Cucamonga Peak and storm clouds in the background. I think the CDC missed the mark on their flu vaccination this year, as this is the worst bug I have experienced in 15 years.

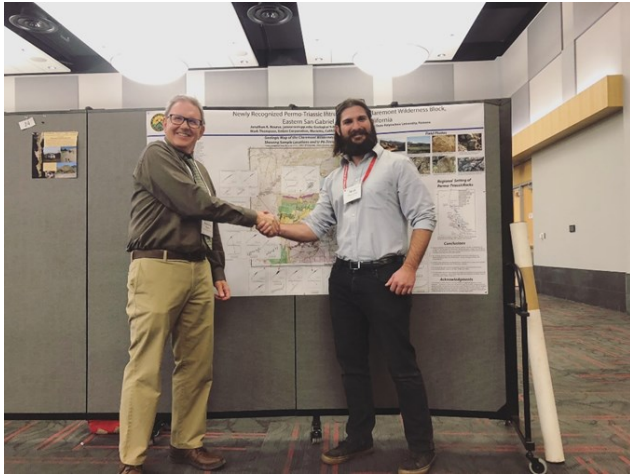
Home life has been good as things returned to normal this year. We managed to keep our back yard alive during the summer drought while still adhering to the Claremont water quota. Gordie the dog is still a fine companion on morning walks and jogs, and he always enjoys doing field work with the students and hanging around camp. My phone (mentioned last year) has been broken a couple times and the camera no longer works because bleach from all the Covid Clorox wipes infiltrated the electronics. Phyllis just bought me a cheap replacement for my birthday. I'm not looking forward to the tedious process of transferring over the data and settings and apps. Wish me luck!



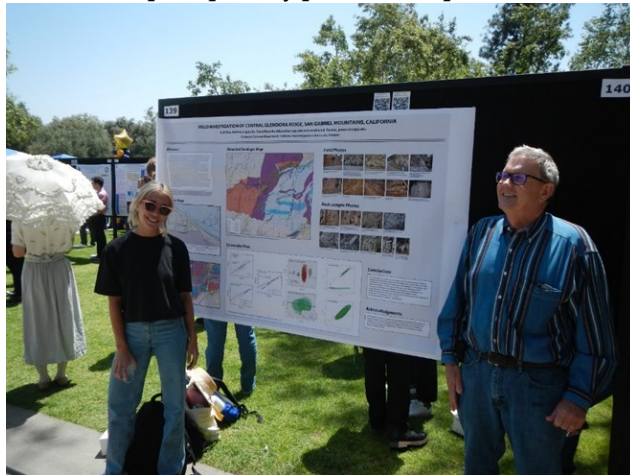
Gordie enjoys French toast on a cold morning in the Rand Mountains.

Academically, 2022 was another productive year for me and my students. Traces of gold keep accumulating as we get better at sampling various mines, and the zircons continue to yield intriguing results. Let's touch on a few highlights:

Two of my undergraduate advisees presented research at the Las Vegas Cordilleran Section GSA conference in March. Mark Thompson's poster summarized our work in the Claremont Wilderness Park, along with some of the new ages described in last year's newsletter. Kelli Woo presented a poster on Proterozoic and Jurassic gneisses of Glendora Ridge. In January, she acquired some new U-Pb zircon results at the CSUN plasma lab. These could not be reported at GSA, but her final writeup is forthcoming.



Mark Thompson proudly presents his poster at GSA.



Kelli Woo presents her senior project poster at the College of Science Symposium. (we didn't get a photo at GSA but this one will suffice).

Two of my graduate students successfully defended their MS theses this year. **Garrett Stewart** finished his Rand Mountains project that describes some interesting correlations between gold mineralization and particular structural trends in the upper plate of the Rand Thrust. **Craig Manker** completed a geologic map of Pelona Schist on central Blue Ridge, along with detailed cross sections and structural analysis. His document includes detrital zircon analyses of six metasandstone samples. Please refer to <https://www.cpp.edu/sci/geological-sciences/masters-program/thesis-archive.shtml> to view their excellent works. Meanwhile, Ryan Thompson is making progress on his Timber Mountain thesis, described last year.

After Garrett Stewart defended his thesis, we revisited the Rand Mountains with Ben Rucker on a hot weekend in May to do some follow-up work. Significant gold was encountered, including one sample that ran **23.9 ppm Au**. We

also gained access to the Kelly property and collected some samples for $^{40}\text{Ar}/^{39}\text{Ar}$ dating. Below are some shots of Garrett and Ben in their element:



Garrett Stewart and Ben Rucker, after a hike into the Yellow Aster pit.



Sampling for gold in the Baltic pit.

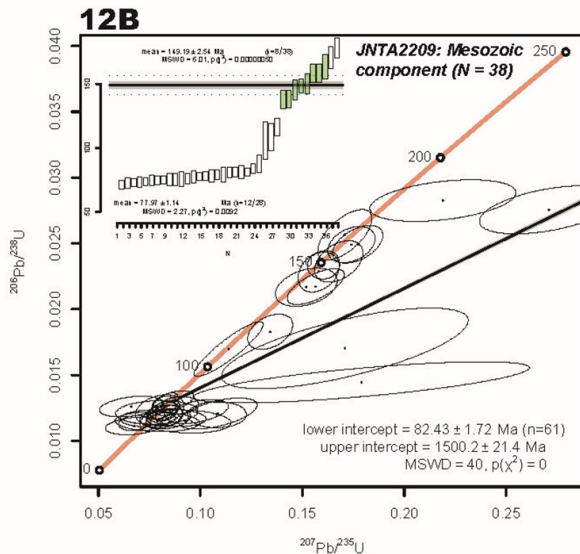


Garrett Stewart sampling for silver and gold on the Kelly Mine workings.

Tom Anderson, my colleague from Pennsylvania, visited in May to attend a memorial service for our old Caltech mentor, Lee Silver. We enjoyed 2 fine days of field work in Placerita Canyon and Claremont Wilderness. Below is a shot of one of the key samples we collected:



Tom Anderson points out isoclinally folded amphibolite layer (Sample JNTA 2209) in the Placerita Formation.



U-Pb zircon results from Sample JNTA2209. This folded amphibolite appears to be a Late Jurassic intrusion affected by Late Cretaceous metamorphic overprint.

Teaching also continues to be fun. Spring semester began with some Covid restrictions, but thanks to a successful “Special Exception” proposal my GSC 3330L students were allowed to work together outside on the first day of class. Eventually the virtual lectures transitioned to in-person.



GSC 3330L students Frank Vitiello and Kelly Scott practice Brunton compass measurement techniques outside Building 8, January 28, 2021.



Demonstrating how to take a Strike and Dip.

Fall semester brought a bit more freedom, as my advanced mapping classes (GSC 4910L and GSC 5030L) enjoyed productive weekend expeditions to Wright Mountain (pictured earlier), Coachwhip Canyon, and the Rand Mountains. Below is a photo from Coachwhip:



Thrust fault cuts through the hinge of a syncline in Pleistocene fanglomerate strata of Coachwhip Canyon.

So, it's great to report that all is well in my world of Geology. I want to wish all a very Merry Christmas, with excellent health and prosperity for the New Year!

Student Successes

Dean's List, 2021-22

We just updated our list of Geology majors who made the Dean's list from Fall 2021 through Spring semester 2022. These students earned a GPA of 3.5 or better in their course work. Congratulations to the following hard-working students for their academic excellence!

Fall Semester, 2021:

- Jason Bragg
- Isabella Caceras
- Amanda Gomez
- Emiliano Gonzalez
- Bryan Guardado

- Karissa Hernandez
- Ricardo Hernandez
- Nicholas Madera
- Leighton Ong Yiu
- Dominick Sterling

Spring Semester, 2022:

- Robert Armenta
- Jason Bragg
- Kevin Diller
- Emiliano Gonzalez
- Bryan Guardado
- Karissa Hernandez
- Ricardo Hernandez
- Tram Huynh
- Shawn Lee
- Matthew Machuca
- Nicholas David Madera
- Maronne Salunson
- Eitan Shmagin
- Andrew Trujillo

Student Awards Bar-B-Q at Memorial Park

To close out Spring semester we hosted a Bar-B-Q in Claremont on May 6. This was the first such event in three years due to a long Covid hiatus. About 35 students, family members and faculty attended. It was nice to visit with Alumni **Scott Zylstra**, **Ken Craig** and **Ben Rucker**. **Aly Young** and **Eitan Shmagin** shopped for the food at Costco. **Phyllis Hosey**, **Stephanie Young** and **Stephen Osborn** assisted with the setup. Geology Club members **Eitan Shmagin**, **Vinnie Ruiz**, **Emiliano Gonzalez**, and **Nicholas Madera** took charge of the grill. As always, it was great to interact socially!



Part of the group enjoying lunch at Memorial Park.



Emiliano Gonzalez receives the Margaret Van Buskirk Memorial Scholarship.



We thank Eitan, Nicholas, Emiliano, and Vinnie (to the far left) for grilling the burgers and hot dogs.



Drs Nourse and Polet present the Valles-Henderson Academic Scholarship to Nicholas Madera.



Kelli Woo receives the Ernest Prete Jr. Environmental Geology Scholarship.



Vinnie Ruiz was this year's Brunton Compass Field Geology Awardee. He received a vintage Brunton contributed by Geology Alumnus Deborah Cranswick (1978).



Eitan Shmagin receives a student appreciation award.



A close-up picture of all the awardees.



Ashley Rivera and Aly Young receive a gift to express our appreciation for young Faculty.

Graduation 2022

Cal Poly Pomona returned to its traditional in-person spring graduation ceremony on May 22. We are very proud of our graduating majors, pictured below! Congratulations to Joanna Alen-Bella who achieved the highest GPA. Graduates who attended the ceremony were shown a collage of videos created by the department chairs in College of Science. We were each allowed about 15 seconds. Please click the link below to see our products. Check out the Geology excerpt.



Matt Carillo receives the other student appreciation award.



The 2022 graduating group. Joanna Alen-Bella carried the banner as the top grade-earner in Geology.



After the ceremony, most of us gathered on the grass outside Building 8.

The list below (compiled by Monica Baez) shows names of students who received their BS degrees during the 2021-22 academic year:

2021-22 Geology BS Degree Postings:

- Johanna Alen-Bella
- Kevin Diller
- Savannah Dokich
- Emily Duran
- Michelle Esparza
- Amanda Gomez
- Ricardo Hernandez
- Nicholas Madera
- Jonathon Martinez
- Ben Rucker
- Shawn Lee
- Marcela Villatoro

We are very proud of our graduating Geology majors and wish them success in their geoscience careers! Below is a link to a congratulatory video created by College of Science. Each department was allowed only 15 seconds. I hope you enjoy the Geology segment:
<https://www.youtube.com/watch?v=HM5V8LLT30Y>

Orientation Video

Recently I worked with the College of Science Advising Center staff to create a video for our incoming freshman and transfer students. Click on the link below to learn more about our Geology Department:
<https://www.youtube.com/watch?v=I9ITGLYzWfA>

Mining Companies Are Hiring Again!

I am very pleased to report the gainful employment of five recent Geology graduates in the mining industry. Business is booming due to recent demand for metals needed to sustain our green technologies.

Garrett Stewart (MS 2022) landed a job as Exploration Geologist with Freeport McMoRan, Inc. in Tucson, Arizona. After just six weeks of training, he is managing a drilling operation at their porphyry copper mine in Stafford. Garrett commented “I’m not sure why they thought I was ready for the task, but I couldn’t say no.” In a fortunate stroke of serendipity, **Ben Rucker (BS 2021)** was hired on the spot when we encountered a consulting geologist last May at the Kelly Mine near Red Mountain. This person was laying groundwork to start up a diamond-drilling operation, and he needed a competent field assistant. Ben spent the summer logging core and driving samples back and forth to Reno. In Ben’s words: “I’m finally making good money. They started me at \$35/hr plus generous per diem and a company truck. I live out of a hotel in Ridgecrest and get to see some amazing minerals in the drill core. This sure beats working for a food delivery service, where I had to pay my own gas expenses!” The latest word is that a Phase 2 drill program was approved so Ben’s job will continue for several more months.



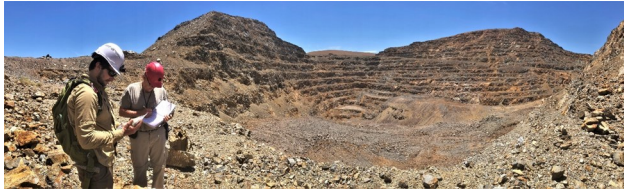
Ben on the job out in the Mojave .

Ben Rucker (BS 2021)

Here's an update to what I am doing out in the Mojave. That picture is from today, It's chilly in the wind on some days. Core logging is interesting as its quite like how I look for minerals while hiking, and sometimes I take the role as the ranking geologist out in the field when the boss isn't in town. All the field classes, especially the ones in the Rands, have been critical experiences for the job. Working with Garrett also proved to be a great experience specifically for

this job! Also, I finally am making enough to buy my own Brunton. The two-month job has turned into 9 months, and it might even be extended into an infill program. That could keep me employed out here for another year. So far, it's been a great experience and I'm glad I took the job. I think I can make mining geology a career.

The 20 day on, 10 day off work schedule works better than expected, but lately it's been more like 23-24 days and 5 off. One of these days I plan to stop by your office and talk to you about some of the stuff!



Garrett Stewart and Jon Nourse getting oriented at the Yellow Aster pit, Rand Mountains.

Alex Razo (BS 2021) was hired as an exploration geologist with Coeur Mining company at their Kensington Mine out of Juneau, Alaska. Last summer he enlisted **Kristin Kulikoff (BS 2020)** and **Darrin Williams (BS 2020)** to assist with an ongoing core logging operation. Below is a picture showing the daily boat ride out to the property:

All of these are well-paying, demanding jobs that require strong field skills, background in hard rock geology, and perseverance. The work is tough but our students are well trained for that! Congratulations!



View of Lynn Canal from boat on way out to work at the Kensington Mine, Alaska.

2022 News, Updates and Photos from Alumni and Friends

Mathew Davis (BS 2019)

(E-Mail update w/Monica Baez)

Hi Monica,
I hope the staff, current students, and alumni are doing well. Definitely miss my time at CPP, I often reflect on the friends made and great field trips.

Doing good here, finishing up grad. School this May, received a reservoir engineering offer from Chevron upon graduation. Hope to catch up with the department at the next alumni reunion/student award ceremony.

Best, Mat Davis

Brianna House (MS 2021)

Brianna House here! I have had the chance to do some pretty amazing things since graduating.

I lost my Staff Geologist job during the pandemic, allowing me to focus and finish school.

Since then I have branched out professionally into various job opportunities!



The pandemic brought me to working at SoFi Stadium in Inglewood as the Geology, Engineering, and Architecture Tour Guide for the stadium. Come February 2021, I got to assist in Super Bowl LVI!

When I am not assisting the NFL, I am a traveling Environmental and Archeo/Paleo Monitor! Within the last year I have worked on projects in Utah, Colorado and Wyoming searching for dinosaur bones; I have walked from Victorville to Henderson across the Mojave Desert mapping drainages for LADWP; Plus many animal and plant

surveys including desert tortoises and Joshua Trees on Edwards Air Force Base.

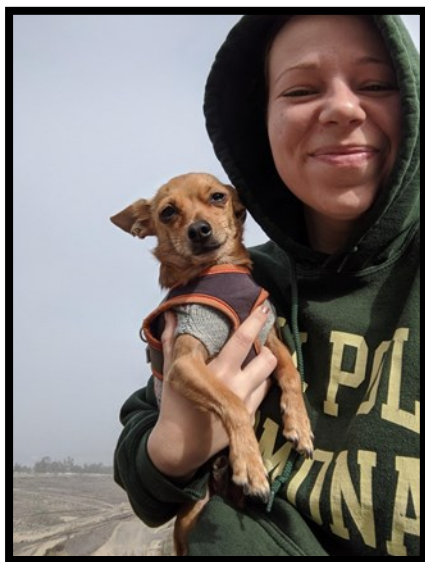


Fieldwork offseason allows me to focus on other priorities, including my educator duties as the Girls in STEM Coordinator at a NASA/JPL facility in Downey!

When my busy life stabilizes, I am found exploring outside or being cozy on my couch with all of my pets.

Including my favorite addition from my Cal Poly adventures, Mr. Rudy! He is all smiles these days! :)

Brianna House



Scott McKeag (BS 1982)

2022, I continue working as a senior exploration geologist for Alpha Exploration in Eritrea, east Africa. Eritrea is a challenging jurisdiction. Our work in the Gash Barka region just north of the Tigray province of Ethiopia is routinely interrupted by the warlord fighting in that province. It is an eerie feeling to eat breakfast at field camp to the sounds of artillery fire in the distance. But overall, my experience here in Eritrea has been positive. It is hard for my family to understand how constant power interruptions, lack of internet, frequent water supply interruptions and ongoing war can equate to a positive experience but somehow these things become minor when you truly enjoy what you do and are surrounded by wonderful people of like mind.

Eritrea is a wonderful little country full of opportunity. It was colonized by the Italians who constructed an Art Deco paradise on the edge of the Red Sea. The streets are full of small cafes offering pizza and cappuccino. The country and her people have suffered greatly since WW2 and the ensuing years of fighting for independence. But as a UNESCO world heritage site, Asmara (the Capital in the Clouds) is bound to one day be on everyone's must visit list!

Below are a few pictures of the drilling at Aburna and some of the local Sheppard boys that follow us around in the field wondering what these strange-looking people are doing.





Sheppard boys that follow Scott and his crew.



Scott's drilling site in Eritrea.

Steve Mulqueen (BS 1978)

(Steve sent this during Christmas of 2021)

The Christmas Season 2021 was another great time to be with close friends. The year 2021 went well for me with no major health issues. I send good wishes for all of you to remain healthy as we forge ahead into the New Year.

I began the year 2021 attending the large mineral show in Quartzsite, AZ during mid- January. For the last 10+ years, I camp with friends at a remote site located on public land several miles west of Quartzsite. During the day, members of my group venture into town to see the huge variety of rocks, minerals and fossils that are available from the thousands of mineral dealers throughout the community.

During March, I attended the 82nd field trip of the APRG-Pacific Desert Rats as we explored the unusual geology within the Shadow Mountains of the Mojave Desert near Adelanto, CA. The Desert Rats have been conducting geologic field trips since its first expedition in January 1988.

I continue to be busy hosting friends that visit southwestern Utah and remain active leading field trips, writing articles and conducting PowerPoint lectures on subjects related to geology, mining history, petroleum history, desert history and paleontology. During March 2021, I led a group of retired geologists to dinosaur trackway sites near St. George and to an ammonite fossil locality at a remote area 88 miles west of Delta, UT.

The year 2021 was another productive time to be with friends and to explore the remote reaches of our world. May you look forward to a productive year during 2022. Continue to apply safety precautions as we try to resume productive lives with the numerous threats that confront our wellbeing. (I am positive Steve sends his best for everyone for 2023 as well!).

Alex Mundo (BS 2015)

Hey family!

I took an adventure this year to Europe's longest glacier during my summer trip to Switzerland. To get there I took a train from the railroad station at Jungfrauoch, which is the highest in Europe, and it's likely that Eispalast is the highest-altitude ice palace in the world. Being at that ice palace hit different, as I was literally in a frosty world—inside the glacier!

It was awesome because the mountain guides created the aisles and halls in the 1930s with picks and saws in the middle of the Jungfrauirm. Today, artists create the ice – with a great deal of flair. On a mirror-smooth tour through a frosty world, everyone can discover their works of art in nooks and crannies. An eagle, penguin or bear, as though they had just turned to ice, appear quite natural. Even at minus three Celsius, they are melting!

A fun fact was that I didn't take a hoodie there because it was summer and it was a last-minute decision due to weather, so I had to buy one at the local store and it was the most expensive hoodie I've ever bought. At least it kept me warm on Top of Europe and ended up being a souvenir, ha! By the way, the geolo-

gy of the Alps was astonishing! I even went skydiving near the Alps on my birthday, how cool is that?

Also, this year I continued to work at the NASA Goddard Institute for Space Studies on a climate change research project. This project focuses on using remote sensing applications, including satellites in order to analyze the heat and inundation aspects to inform urban planning efforts to promote resiliency against climate change impacts. During this year I did research in New York City and partnered with a local organization to map ambient air temperatures across the city to gather data and create high-resolution descriptions of ambient heat at the human level.

A highlight from this year was that I was featured at a NASA's article recognizing me as an educator for bringing the excitement of space and aeronautics to the next generation of explorers. It was such a great experience for me and I'm glad to see that the impact I've been doing locally with underrepresented students of color is being recognized nationally and through a NASA article.

I want to wish everyone a Merry Christmas and wishing that this upcoming 2023 is full of happiness, health and accomplishments for all! Hugs to you and your family from New York City!

Alex Mundo



Alex featured on NASA for Launching Students Love of Space and Science.



Alex in Jungfraufirn, Alps.

Jeff Pepin (BS 2011)

I hope everyone has had a wonderful year. This year has brought a lot of change for me. I married my grad school sweetheart, Carolyn, in June in Tijeras, New Mexico. We then moved to Denver in July so that we could be closer to family. We're still settling in, as we ended up traveling a lot soon thereafter to attend several weddings.

One wedding was in Scotland, so we made a 10-day trip out of that to see some of the country. We got to spend time touring some of the country's castles, along with one of their national parks.

As part of the move to Denver, I've now transferred as a Hydrologist to the USGS Colorado Water Science Center at Denver Federal Center. It's given me an opportunity to shift gears a bit from doing a lot of groundwater research to being more balanced between groundwater and surface water. Half of my time is spent doing geothermal research by assessing thermal energy storage potential in the country, whereas the other half is spent on data collection and analysis within the Upper Colorado River Basin. Overall, I'm very grateful for such a great year and I'm excited to see what this new chapter brings. Looking forward to reading how y'all are doing. Wishing everyone a great 2023!

I've also attached a photo of my wife and I hiking in Staunton State Park in Colorado from Nov. 2022.

Cheers! Jeff Pepin



Morton Prince (BS 1999)

Greetings to All! I will admit I feel ashamed that I have never submitted an update to the Mylonite despite having graduated from Cal Poly Pomona Geology in 1999. I am taking this request for submissions to the Mylonite as a chance to correct that.

Since obtaining my undergraduate degree from Cal Poly, I have spent the bulk of my career with the City of Los Angeles Geotechnical Engineering Division where I have had the opportunity to continue learning about landslide investigation and mitigation, underground construction and tunneling, environmental site investigation and cleanup (the fun stuff!) and more recently, the more administrative and contractual end of the business (admittedly, while a crucial part of any field, these are not my favorite components). I have learned much over the years from the various public and private geologists, engineers, contractors and even politicians and legal folks (never turn down an opportunity to try and learn something from someone).

I have been able to apply these elements of my education and work experience to continue my studies in geology and professional licensure eventually earning a graduate degree in geology (somewhat old news) and earning a Certified Hydrogeologist Certification (somewhat newer news despite finally just getting around to taking the CHG exam).

On the personal side of life, my wife (Kathy) and I had our first child in 2009 (Joseph – an aspiring architect who will soon tower over me). Our little family of three has recently grown to a family of four with the recent adoption of our 12-year-old daughter from Colombia (Luna, possible aspiring fashion designer or pediatrician,

however a keen negotiating skill set of hers may indicate other, more fitting fields). We met our daughter last year when she came to stay the summer of 2021 with us via a hosting program through Kidsave after Joseph finally resorted to the tactic of disclosing his birthday wish in early 2021 that he's always wanted a sibling (in his defense, we tried adoption domestically a few years back and it unfortunately did not pan out after deciding as a family to stop due to the emotional challenges involved). After Luna returned to Colombia, we worked on processing the required paperwork to complete the adoption and finally traveled to Colombia this summer to bring her back.

We are profoundly sorry to hear of the loss of Dr. Larry Herber. Larry was my senior project advisor and I recall taking Optical Mineralogy and Geomorphology (or Geomorphology as he would affectionately refer to it) with him. I hold a very high regard for those who impart knowledge onto others, of which Larry very much enjoyed sharing his geologic knowledge with others. We will miss him and Lucy.

Sincerely,
Morty, Kat, Joseph and Luna



Alejandro Razo (BS 2021)

For the past year and a half I have been working for Coeur Alaska at the Kensington gold mine just outside of Juneau. I started in August 2021 as a core logging geologist, then received a promotion to a salary position as an exploration geologist in July of this year.

Since getting hired, I was able to bring two other CPP alumni on to our team as geologists. One more is on the way in January. My colleagues have been impressed with the work ethic and knowledge us Broncos have brought to the table.

Here are a few photos (below and to the right) showing what the job has been like scouting for surface drill pad location for our diamond drill stations, over seeing and assisting in the demobilization of those pads, and a few photos from underground.

I hope that in the future we could set up some sort of presentation to bring awareness to jobs in economic geology. I would love to bring more Broncos onto the team and/or share my experience with them.

Best regards, Alex Razo





J. David Rogers (BS 1976)

(This is a write-up from Campus news at Missouri University of Science & Technology in Rolla, MO).

J. David Rogers of Missouri S&T wins Schuster Medal

ROLLA, Mo.—Dr. J. David Rogers' expertise and teaching in geohazards such as landslides, floods and earthquakes has gained an international reputation and garnered several awards. Most recently, Rogers received the [Schuster Medal](#) from the Canadian Geotechnical Society (CGS) and the Association of Environmental and Engineering Geologists (AEG). The award is named for CGS and AEG member Dr. Robert Schuster, whose career was related primarily to geohazards.

"Robert Schuster inspired me to deepen my involvement in the field," says Rogers, the Karl F. Hasselmann Missouri Chair in Geological Engineering at S&T. "I want to help the world define problems and find creative solutions."

Rogers is most known for his work on regional landslide hazard evaluations and recognition of prehistoric landslide dams on five continents, where he supervised landslide reconnaissance studies of 180,000 square miles. In 2006, he received a presidential citation from the Association of Environmental and Engineering Geologists for his work with the U.S. Geological Survey, the National Science Foundation and the National Academy of Engineering to investigate levee failures that occurred during Hurricane Katrina.

Rogers has served as a media source for U.S. and international documentaries about the 2005 Upper Taum Sauk Reservoir failure in Missouri and the 1928 St. Francis Dam collapse in California. Rogers has also contributed to programs about construction of the first transcontinental railroad, Chicago Sanitary & Ship Canal, Panama Canal, Los Angeles Aqueduct, Hoover Dam, Tennessee Valley Authority, the Alaska Highway, Chicago's O'Hare Airport and Hurricane Katrina.

Rogers earned a bachelor's degree in geology from California State Polytechnic University in Pomona (1976) and a master's degree (1979) and Ph.D. (1982) from the University of California, Berkeley. He founded consulting firms with offices in California and Hawaii and served on Berkeley's civil engineering faculty before joining Missouri S&T in 2001. Rogers is a fellow of the Geological Society of America and the American Society of the Civil Engineers and is a life member of the U.S. Society on Dams.

The Schuster Medal recognizes outstanding contributions by a geologist or geotechnical engineer to the study, teaching, research and remediation of geologic hazards. AEG and CGS award the medal on alternate years to Canadian and American nominees.



J. David Rogers Schuster Medal with Marie Garsjo.
Bottom: J. David Rogers holding Schuster Medal.



J. David Rogers with Larry Gurrola.
Bottom: close up of Schuster Medal.



J. David Rogers (BS 1976)

Tribute to Dr. Larry Herber (Written on Dr. Rogers Letterhead)



MISSOURI UNIVERSITY
OF SCIENCE & TECH-
NOLOGY

Department of Geosciences and Geological and Petroleum Engineering
J. David Rogers, Karl F. Hasselmann Chair
in Geological Engineering

Tues Nov 22, 2022

A small glimpse of a giant man; and the legacy of a humble god-fearing geologist, scientist and teacher named Lawrence J. Herber, Ph.D., P.G. (1937-2022).

It has been said that "Each person's life is an accidental memoir named history." My life path crossed Larry Herber's as the fledgling earth science program was slowly and carefully birthed from the Department of Physics and Earth Sciences. Larry and I found ourselves on parallel tracks between mid-June 1974 and mid-June 1976, but we clicked as "iron sharpens iron."

The summer of 1974 was only 15 to 18 months after the United States withdrew our ground forces from Vietnam, and the number of veterans attending local colleges enjoyed a noticeable growth that lasted about a decade.

Summer Field Geology is the capstone test of every undergraduate geology program in the United States and represented a significant milestone in the faculty's dream of establishing and sustaining a year-round program of geologic study a few miles from the impressive erosional escarpments formed by the San Jose Hills, Santa Ana, San Gabriel, San Bernardino, and San Jacinto Mountains.

In the summer of 1973 Larry succeeded in selling himself as a summer field geology instructor, using the rocky outcrops of lower Cucamonga Creek as their teaching lab, a few hundred yards from the National Forest boundary. The students from Mackay School of Mines in Reno lived

in small tents and sleeping bags behind the Herber's modest home at 5292 Sapphire St. in what later became Rancho Cucamonga.

In mid-June 1974 he got an opportunity to teach summer field geology to students at Cal Poly for the first time. The catch was that he needed eight students to sign up for the new course, which promised to be challenging! But Seven students had signed up, and one re-enrolled in the geology program and another took leave from his full-time job with the State. The badly needed student #8 was myself, having just graduated from Mt. San Antonio Community College a few hours before the group met at parking lot on campus and headed for Via Verde Drive in San Dimas for our initial field study. There was a sense of heading off to make history. I was no more qualified to be taking a senior level capstone course than to be piloting an airplane.

Pattie Rose (Stephens)

Hello from Arizona,

The past year has been a busy one! Last fall, my husband had a minor heart problem, but has since recovered. Doctors think it could have been the later result of asymptomatic COVID-19, a breakthrough case as he had been vaccinated. It was a weird AFIB that thankfully came and went after a few months. Another crewmember from our Top Fuel Dragster Team (Gregory Carrillo Racing) got a mild case of COVID-19 also shortly after we ran his boss's car at the NHRA U.S. Nationals in Indianapolis, Indiana in early September 2021, so we surmised that Robert may have gotten it there also.

This didn't keep me from working with the Tucson Gem and Mineral Society and the Fluorescent Mineral Society to put together docent training materials, advertisements on numerous Rock Hound Face Book sites and create a colorful slideshow of facts about and specimens of fluorescent minerals for the 2022 "Show That Glows" here in Tucson. I got to work with several Ph.D.s, a senior member of the U.S. Geological Survey and two museum curators on this project. This was a wonderful learning opportunity and the friends I have made are invaluable.

Don't worry I have not become a total "Fluoresophile;" I still indulge in finding great non-fluorescent mineral species and fossils. However, a recent purchase I made of a fluorescent Wollastonite with Calcite specimen from the White Knob Quarry, Lucerne Valley, San Bernardino Co, CA. reminded me of my past. It's brightly glowing reds, oranges and yellow brought back

great memories of visiting that area on a field trip with Dr. Donald Tarman back in 1985. (He was interested in the new Toyota 4-Runner I was driving as a possible replacement for the old pick-up the school had given him, which had a leaky gas tank for that field trip. We all made sure he didn't run out of gas. Such was my good fortune of working for a defense contractor while attending college). Dr. Tarman took us to the Blackhawk Landslide and I still have my specimens from the toe of the slide.

I was also able to obtain an interesting Caliche, Hyalite, & Scheelite from the Princess Pat Mine, from near Adelanto, California, also my old stomping grounds. (I used to ride around on my dirt bike with a backpack, picking up rocks as I went along). The specimen fluoresces orange (Calcite in caliche), bright green (Hyalite) and blue-white (Scheelite). Dr. Tarman had also taken us here to examine Black Mountain just south of the dry lake. (Mesozoic Fairview Valley Formation – metamorphosed sedimentary units cut by dikes of the Sidewinder Volcanics.) He showed us the dikes and the trace of the Helendale Fault in the area. I am surprised I remember all this, but my collection still includes a xenolith shaped like an owl I collected from this location, one of two found lying at the base of the hill that day. Dr. Tarman got the other larger one shaped like a large wine glass. I also still have some “Graphic Granite,” collected off HWY 395 from that trip. That location just past Four-Corners, is now buried by a solar farm.

Other activities this year include a trip to Dinosaur Ridge on the Dakota Hogback near Denver, Colorado. We have been going to the neighboring Bandimere Raceway to run the Top Fuel Dragster at the NHRA Mile High Nationals for years, so this year I made a point of going. I enjoyed the visit and had a great time with two paleontology doctorate students who are working with Dr. Martin Lockley. One student is working on the footprints I discovered back in 2018 near Moab, Utah. (I still have the original photo in my phone, so she was happy to meet the finder.) I gave her my email, so hopefully she will remember to send me a copy of her work on the specimen. She called Dr. Lockley and I was able to chat with him for a few minutes. The scientific community is always grateful when an amateur like me does the right thing and reports their finds so the specimens can be preserved and studied in depth.

My husband, Robert, loves trains. We recently went to Royal Gorge Bridge and when we saw the train slowly climbing up the gorge below, we decided to take a ride. So after a stop at a local rock shop, (always a temptation), we purchased tickets in one of the dome cars and boarded the train. This ride provided a great opportunity for examining

the geology of the gorge and to see the 100 plus years of activity that had taken place in there. Many old gold mining workings were evident. On the riverbank, a sluice with a double trammel was still present, as the metal trammels were still in place below a dilapidated wooden shaker deck and the divided wooden spillway into the trammels. The sluices below the trammels were extremely dilapidated, but I liked the overall design for a small operation.

We were also able to see a few nesting spots for Golden Eagles. The birds had already fledged and flown away, but the conductor told me that the same nests are used every spring between April and late June. There were many ravens and hawks seen flying in and over the gorge, so there must be a healthy rodent population, LOL.

At the opening of the gorge at the western extreme of the rail line, is a campground featuring “Yurts,” for rent, river rafting adventures (we saw rafters on the train's return route), and a spur rail, which the trains use at night to take ore from a quarry further to the west. The conductor said it takes about 2 hours to switch the cars in and out every evening and early morning. The passenger trains run 3 times a day between 9:00 am, and 5:00 pm. (We were on the 12:30 train). The quarry ships various stone products used for construction and counter tops. Mostly granite, but the beautiful solid pink and red rose quartz and contrasting white quartzite that was used for the entrance ways to the bridge we had seen lining the pathways at the Royal Gorge Bridge Park is also still quarried. (There were some smaller pieces of the rose quartz at the rock shop, but I already have many self-collected specimens in my collection).

What did I find at the rock shop? I try to purchase good examples from the area around the shops I visit. I purchased a beautiful Sphalerite, Galena and Quartz specimen from the Keystone Mine, Silver Cliff District, Custer County, Colorado. This is just to the southwest of where we were in Canon City. The specimen has great crystallization of each mineral present, and as an added bonus, the Sphalerite fluoresces bright red on one face of the specimen and yellow on other clusters on the top due to differing activator impurities. The quartz fluoresces light purple. (LWUV). So I got “2 for the price of one,” as the woman working the rock shop that day, didn't know the items would fluoresce until after I purchased one of the specimens. (I always travel with my hardness test kit, loupe and longwave / shortwave UV lights in the car.) I was impressed with the shop however, as every item for sale had a good “pedigree card” with mineral identification and original source and date of collection. This improves the value of a specimen. Many friends and acquaintances bring me “rocks,” but they don't know what they are or where they

came from. So, I take the opportunity to sit with them to teach them how to figure out what a mineral is or what minerals a rock is composed of by teaching and testing for the basic properties of minerals, using the tools I have. (Hardness test kit with streak plate, magnets, UV lights, binocular microscope, specific gravity gage, diluted acid/vinegar and hand-held Geiger counter if they tell me they were up by Mexican Hat, Utah). Then, we try to determine an approximate location using Mindat, based on any minerals assembled together or if they can remember where they picked up the rock.

I credit my geologic education at Cal Poly Pomona, for my ability to help average “Rock Hounds,” and the encouragement I give to current High School and University of Arizona students to pursue careers in Geology. Joining the Tucson Gem and Mineral Society has also been a boost to keep me current on many geologic topics via their monthly lectures by experts in many fields. I also still try to read as much as possible! I enjoy articles and textbooks on Geomorphology, Seismology and Volcanology just as much as those on Mineralogy, Petrology and Paleontology. Guess I will always be a nut for this stuff. LOL. Who says you can’t teach us old timers new tricks; at 65 I never cease to be amazed and encouraged to learn more about our beautiful world.

Well wishes to everyone for another great and safe year!

Pattie Rose

Attended Cal Poly Pomona 1984 – 1986,
Transferred to Cal State San Bernardino 1986,
Graduated in 1989, Bachelor of Science – Business Admin.,
w/Minor in Geology. Retired in 2016 from Raytheon Missile Systems after 38 years.
Past president of Raytheon Rock Hounds Club & Field Trip Coordinator
Current Patron Member of The Fluorescent Minerals Society
Current Member of the Tucson Gem and Mineral Society



Dinosaur Ridge.



**Royal Gorge Bridge.
Below: Train Ride.**



Marian Rudnyk (BS 1983)

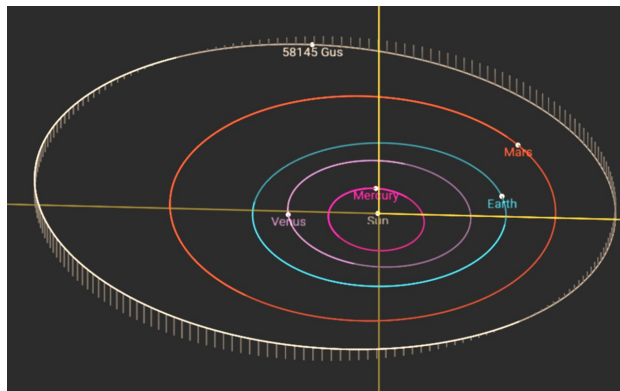
Alumni Marian Rudnyk Names Another Asteroid!

Cal Poly Pomona Alumni Marian Rudnyk just named another one of his asteroids. The large rocky object was originally discovered by Rudnyk on August 1, 1986 while he was working as an asteroid hunting JPL/NASA astronomer at Palomar Observatory. The asteroid was originally designated as simply object 1986 PT1. Once additional observations locked in its orbit, it became asteroid number 58,145 and awaited Rudnyk's naming decision. Having named his previous asteroid in honor of his mon (Asteroid 4601 Ludkewycz), he decided to name this object "Gus" in honor of his dad Augustin "Gus" Rudnyk.



Augustin J. "Gus" Rudnyk in the 1940's. He endured Nazi oppression, escaped from Auschwitz, and somehow survived a Nazi slave labor camp, which he also ultimately, also escaped. As a CIC agent for the U.S. Army during World War 2 he hunted Nazi spies and Communist collaborators. As you can see by those cold steely eyes, this would not be an operative you would want to tangle with. After the war he went on to work as a concert violinist and then settled into a highly successful career in the aerospace and space defense industries. ©2019 Marian Rudnyk.

Asteroid 58,145 Gus is classified as a Main Belt asteroid – meaning its orbit lies between the orbits of the planet Mars and Jupiter within the mysterious Asteroid Belt, whose origin still is scientifically debated. It orbits at an average distance of about 234.3 million miles from the Sun, putting it on the inner edge of the Asteroid Belt.



This NASA graphic shows the recent position of Asteroid 58,145 Gus on October 10, 2022. Gus is a large object that orbits on the very inner edge of the Asteroid Belt. Its orbit can be seen to be inclined as it dips both above and below the ecliptic plane.

A single orbit around the Sun, in other words a single year on Gus, takes about 3.5 Earth years to complete. Gus is a slow spinning object, so a single day on Gus takes about 3.3 Earth days. Although Gus has an impressive size of over 2.53 miles in diameter, it is a dim asteroid and needs a telescope to be seen.

Asteroid Gus is listed in NASA's website JPL Small-Body Database and the official citation appears in the August 15, 2022 edition (Volume 2, #11) of the IAU's (International Astronomical Union) WGSBN Bulletin, and reads as:

(58154) Gus = 1986 PT1

Discovery: 1986-08-01 / M. Rudnyk / Palomar / 675

The discoverer's father Augustin J. "Gus" Rudnyk (1927- 2011) always encouraged his son in science and art. A WW2 veteran (US Army/Counter Intelligence Corps), he also worked on: communications systems for the Lunar Excursion Module for NASA's Apollo lunar program; Space Shuttle data systems; and numerous US Defense intelligence satellite programs.

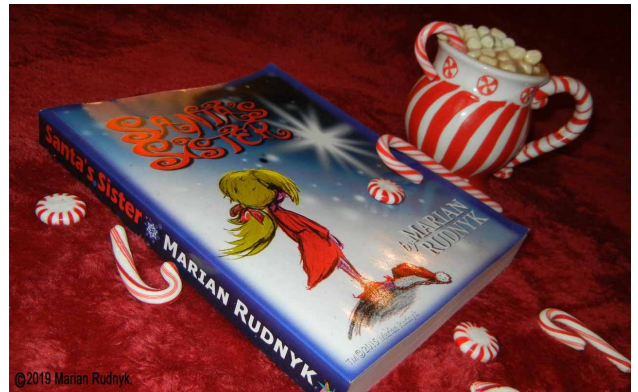
Marian Rudnyk is from the Class of 1983 and got his B.S. in Earth Science/Geology. He worked in many positions during his time with NASA. He has mapped lava flows of Mars, mapped ice fractures on Jupiter's icy moon Europa, and also been on the Imaging Science Team for the Voyager 2 mission to Neptune, Magellan mission at Venus,

etc. He has also managed the Regional Planetary Image Facility at NASA's JPL (Jet Propulsion Laboratory) that archived all of NASA's planetary imagery. As an astronomer he was part of PCAS (Palomar Planet-Crossing Asteroid Survey), INAS (International Near-Earth Asteroid Survey), the International Halley Watch (for Halley's Comet), etc. - and discovered nearly 200 asteroids.



Marian Rudnyk working at the massive Palomar 48" Schmidt telescope.
©1985 Marian Rudnyk.

Since that time he shifted gears and worked in Hollywood doing visual effects at such notable studios as Disney Feature Animation and Digital Domain. He has numerous feature film credits on such blockbuster movies as "Matrix-3: Revolutions", "Star Trek 9: Insurrection", "Unbreakable", etc and was on the Academy Award Winning visual effects teams on such movies as "Titanic" and "Lord Of The Rings: Fellowship of the Ring".



Seen here is the large deluxe version of Marian Rudnyk's epic feel-good wondrous Christmas fantasy novel "Santa's Sister". It is the story of little girl who discovers that Santa Claus has a mysterious long-lost sister at the South Pole and decides to seek her out.
©2019 Marian Rudnyk.

He now works as an author and his books include a book about UFOs and a Christmas fantasy epic called "Santa's Sister" which he is particularly proud of. All his books are available through Amazon as both eBooks and paperbacks. Rudnyk says he will be naming more of his asteroids in the near future - and that more books are also coming soon...

Gary Thompson (BS 1990)

Hello to the Cal Poly Geology Department staff and alumni,

This year's theme seemed to be change. Our family (and the U. K.) navigated extremes in weather, politics and national events. New Year's Day in the U. K. was the warmest on record, followed by Storm Eunice, which brought the Southwest U. K. 122 mph winds. Our summer was very hot (90-100 F) which created a drought. The Queen's Platinum Jubilee brought much the pomp and pageantry but the Queen's death brought a swift change in mood, as well as new Monarch. We also had very turbulent year in the U. K. government, bringing three separate Prime Ministers! After managing to avoid COVID-19 for most of the Pandemic, we all came down with it after a trip to London, but we recovered quickly.

However, we did have some great moments this year. Our son, Gianpaolo received a Computer Science Award and the Prize for Innovative Thought from the Arthur C. Clark Foundation, as a result of his college studies. In Bristol, Gianpaolo took the opportunity to watch the filming for episodes of *Doctor Who* and *The Outlaws* which took place nearby his flat in Bristol. He is currently in his second year at the University of Bristol. We visited Los

Angeles in the summer, taking in Santa Barbara, San Diego and Las Vegas (which brought back memories of Geology field trips). Some highlights of our trip were getting a guided tour of the Huntington Library, seeing John Williams concert at the Hollywood Bowl, attending Jimmy Kimmel Live! show and seeing Harrison Ford at the D23 Convention.

Best wishes to all, Gary Thompson ('90)



Megan Ward-Baranyay (BS 2021)

I am full of gratitude for the opportunities this year has presented. As I pursue my Master's at CSULB, I am developing a hydromechanical model to assist the design of periodic hydraulic tests to be conducted at the Utah Frontier Observatory For Research In Geothermal Energy. Over the summer, a few CSULB graduate students and I assisted Professors Matt Becker and Ben Hagedorn with groundwater research in French Polynesia. To study the interaction between groundwater discharge and reefs, we conducted radon and electrical resistivity surveys and collected water samples and reef cores. This was an extraordinary and unforgettable experience!



Marine electrical resistivity survey on Moorea.



Collecting water samples on Reiono motu of Tetiaroa atoll.

2022 Alumni Notes

Below are a few more brief Alumni Updates to report via the Department Chair, Dr. Nourse. These were pieced together from fragments of emails, various phone calls and LinkedIn updates received over the past year. We are pleased to hear about all the successes!

Randal Burns (BS 2006) has been staying busy with Lithium Americas Corporation in Reno, Nevada, where he has been Vice President of Exploration for 4 years. He has been there for 6 years now. Business is good these days. Below is a note from Randal, describing his career path:

I graduated from California Polytechnical State University - Pomona in 2006 during my internship as a production geologist at the Robinson Nevada Mining Company (RNMC) in Ruth, Nevada. RNMC hired me on full time as a staff mine geologist where my skill set was challenged and improved over several aspects of mine geology, ore control, ground water, metallurgy, project management and an basic understanding of mine planning and mining economics. On the merits of my work and work ethic I was promoted to head of the Mine Geology Department where I successfully managed the department until an opportunity to place me outside my comfort zone opened up to lead the RNMC Exploration Department. After three and a half years of heading the Exploration Department, and one economic downturn, I was put back in charge of the Mine Geology Department. I have since moved on to lithium!

It was nice to chat on the phone with **Tom Deane (BS 1986)** in October. He is still working in the Hydrogeology business after moving to the Carson City-Reno area.

Here is a note from **Michelle Esparza (BS 2021)**:

*Hi Dr. Nourse,
I hope you are well. I graduated last summer of 2021 and I just wanted to thank you for being patient and understanding of my circumstances throughout the years. It would almost feel impossible at times with all my responsibilities at home but I appreciate the encouragement I received at Cal Poly Pomona to accomplish my goal. I wanted to give you a quick update. I started applying to jobs last month and received my first offer letter this week from Southern California Geotechnical in Yorba Linda, so I should be starting work soon in the geotechnical/consulting field. Also my younger sibling who I've helped to raise since she was 8 years old is now a student at Cal Poly Pomona in the Geology department. Her name is Natalie Esparza, she's developed an interest in paleontology so I'm hoping she continues to do well and pursue her career. Thank you and hope you have a great day!
-Michelle Esparza*

Jacob Kays (BS 2020), GIT is working full time as a Staff Geologist at Universal Engineering Sciences while concurrently making great progress toward his MS degree at Cal Poly Pomona.

Here's a note from **Morty Price (BS 1999)**(Also featured in Alumni News):

Our family is doing well, our Joey is now in the 7th grade, my wife Kat has been busy with her work and my work is always busy. I've taken on a broader role of geotech and environmental geology with additional managerial responsibilities (not as fun as the other technical stuff) but the variety is good.

We are in the final process of adopting a 12 year old that came to spend part of the summer with us last year, so our family has been pretty busy with that. Hopefully we will be traveling to Colombia in the next month or so to bring her back!

*By for now and say hello to all on our behalf!
Morty*

This note from **Ben Rucker (BS 2021)** after he started his job in Ransburg area last June:

The project in Ransburg is going well, we have 3 holes finished out of 16, so it looks like they will have me busy here for at least several months more. It's turned from a 2-month job to probably 4. Right now, It's just me and Greg so we're busy with drilling and the creation of new drill sites. All the work I have done in the rands has been fruitful for this project.

I'd love to do that underground geology position, -after this job finishes up. It looks like that will likely be in September and there are still positions, I will apply to those! I do remember Shane and I recall Mark Thompson telling me something about him doing work in Nevada.

Also, there is an older hard rock miner guy by the name of 'Sparrow' that lives in the Kelly Mine offices on Kelly Road in Red Mountain. It seems he has had access into the old mine workings at some point and might be able to get you access for samples. I when I have some free time, I'd like to talk to him more and see if he still has access.

Benjamin Rucker

Charles Dang (BS 2018) posted this message along with a picture from his work as geologist at Kleinfelder:

It's rare to see more than one professional in the field, but we had 4 last week! Geotechnical drilling, test pits excavation, and infiltration testing all in one day.



Tony LeBeau (BS 2018), GIT, is currently a Staff Groundwater Geologist at RICHARD C. SLADE & ASSOCIATES LLC

Celia Pazos (MS 2014) Is still doing well as Engineering Geologist at California Regional Water Quality Control Board.

Logan Wicks (MS 2014) posted this great news pertaining to a recently approved Desalination plant that his company (Geoscience Support Services) is involved with:

After more than 18 years of research, due diligence studies, outreach, and development, the South Coast Water District received unanimous approval for the Coastal Development Permit for the Doheny Ocean Desalination Project. Commission Chair Brownsey with “wholehearted support” gave the District the ultimate compliment in stating that she sees “this project as the model that I hope all applicants will aspire to.”

Learn more at [SCWD.org/DohenyDesal](https://www.scwd.org/DohenyDesal)

Here's a recent note from **James Allbritten (BS 2020)** who is doing great at his new job with Tetra Tech:

Hi Dr. Nourse,

I hope you are doing well. Tetra Tech is looking to fill an entry level position as soon as a good candidate is found. If you know anyone who may be interested, please let them know. The link is in this email I am forwarding to you. Feel free to circulate the link among your colleagues in case they may know someone interested as well. Thank you so much for everything you did in instructing me while I was attending Cal Poly. I am grateful to all the staff in the Geological Sciences department for your careful instruction during my time there as a student.

Best,

James (Bill) Allbritten

Deborah Cranswick (BS Earth Science, 1979) –Just wanted you to know that your recently donated Brunton compass was awarded to Vincent Ruiz at our May ceremony in Claremont. Please see previous picture from this event. Many thanks, Deborah!!

Congratulations to Riley Brown (BS 2018) for starting a new position as Geologist at Southwest Geotechnical

Congratulations to Veronica Hernandez (BS 2019) for starting a new position as Staff Geologist at NV5

Congratulations to Brianda Hernandez Rosales (BS 2019) for starting a new position as Water Quality Program Coordinator at BISHOP PAIUTE TRIBE

Congratulations to Shaun Wilkins (BS 2006), CEG for 3 years at Langan Engineering & Environmental Services

Congratulations to Shane Bonanno (BS 2019) GIT for starting a new position as Geologist 1 at Nevada Gold Mines. He is involved with the Barrick Cortez mine

Congratulations to Christina Bloom (BS 2012) for being promoted to Specialist (Freshwater & Geology / Natural Features) at Auckland Council.

Notable Mention—Current GSC Major: Sunshyne Santos

Here is a write up in our College of Science Newsletter featuring undergrad Sunshyne Santos on her research presentation at GSA in Denver this year; <https://www.cpp.edu/sci/newsletter/student-gains-a-brighter-future-by-studying-the-past.shtml>

Sunshyne also co-authored a publication with Dr. Prothero and K. Marriott regarding the Stasis in the extinct La Brea fragile eagle (*buteogallus fragilis*) in response to climate change. *Geological Society of America Abstracts with Programs*: <https://doi.org/10.1130/abs/2022am-379721>

Emeritus Faculty News

John Klasik (Emeritus Faculty)

Greetings to all you fine alumni!

Current students and recent graduates did not know Dr. Larry Herber. However, you are all beneficiaries of his in-class teaching coupled with a strong field emphasis. I, like every member of the Cal Poly Pomona Geoscience community, was saddened to learn of the passing of Dr. Larry Herber. Larry was a friend, a mentor and a teacher who exhibited, and expected from his students, the highest of standards. We all recognize how amazing a teacher he was. Despite his classroom prowess, Herber lacked technical expertise. He did not use a computer. He did not use email. No doubt, Rosalie Giroux remembers Herber submitting handwritten exams for her to “type”.

Aside from academics, Dr. Herber was passionate about maintaining alumni relations. These efforts are, to this day, especially noteworthy. The Mylonite, a newsletter for alumni, was founded by Herber. The name “Mylonite” was his idea. It has been printed annually for thirty years. You are reading this article in the 30th edition of the Mylonite. Dr. Herber was also instrumental in the establishment of the Department’s annual alumni reunions. He has made an indelible mark on the Department. It has been a very quiet, uneventful, 2022. That means there is not too much to report in this article. Jerry and I remain safe and covid free. We have not resumed organized travel. Just like 2021, we have mostly stayed close to home.

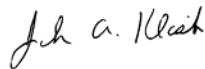
Those of you who live in southern California will remember the horrendous windstorm of late January, 2022. I do not recall winds ever being that strong. Trees all over Claremont were uprooted. Fortunately, our big pine did not fall, but it did spread branches and needles all

over the southerly part of our street. A few streets over, wind blew a huge pine tree into a high voltage power line. Our house was without power for 41 hours. With no heat or electricity, the experience turned into “indoor camping”. We BBQ’ed. We cranked up the Coleman stove. We did crossword puzzles by candlelight. Fortunately, late January was not too cold. Our house only got into the upper sixties. We survived.

Our only foray of the year was in mid-June. We went to the Outer Banks of North Carolina for our annual family reunion. This year we stayed in Corolla, about ten miles further north than Duck, last year’s reunion site. The beach was nicer. The house was in a pine forested part of the complex. The setting did not make the house seem like a “beach house”. There is only one main road on the island. The traffic is thus horrendous. Traffic, for almost 20 miles was stop and stop (I do mean that). I moved less than a car length each time we started up. It took several hours to arrive at our beach house.

While we were on the Outer Banks, we lost power in our Claremont house. A rare lightning strike to a nearby transformer caused a power surge. When we came home, we discovered just about every device that was either on, like our modem and phone, or on standby, like our TV were “fried”. We had to purchase all new stuff. We were intermittently without internet for almost a month. Plus, our air conditioning did not work. That was not the lightning strike’s fault. The compressor had failed. Of course, the first few days after our return, were up around 100 degrees. The inside of our house got up to 92 degrees. Those meager paragraphs above about sums up our 2022 life. We hope to resume travels in 2023. Sorry, no pictures from 2022.

Best regards,



Faculty News

Jeff Marshall

Howdy folks! Season’s Greetings! Last year, I was at AGU when Mylonite was due and I didn’t write much. This time, I’ll thrill you with two years of updates! Whoot! Mostly, it’s been a very boring story of gradually emerging from pandemic lockdowns and step-by-step getting back to life in-person. I even got a haircut after two years of growing a pandemic ponytail!

Way back in Fall 2020, we were fully remote online. Through our Blackboard Learning Management System (LMS), I taught Geomorphology, Natural Disasters, a Field Module, and the Grad Seminar. This required recording video lectures in my impromptu living-room studio (grungy

laptop, dusty desk lamp, wobbly TV tray), then uploading these brilliant and compelling videos to the LMS, along with homework assignments, and other, miscellaneous crud. The online Field Module was an intriguing challenge. I reworked my usual marine terrace field exercises into an online format, and then I filmed virtual field trips flying around the Santa Cruz, Morro Bay, and San Clemente Island field sites in Google Earth. With beer in hand, that was kind of fun. Less successfully, I also tried recording some cell phone videos during a live summer trip to Montaña de Oro, but they suffered a tad from wind noise and a shaky hand. Not bad though, for a first attempt at selfie field filming, I’ll use a GoPro and a tripod next time. Van Buer is way better at this stuff.

Spring 2021 was also totally online. I taught Principles of Geology, Natural Disasters, Watershed Restoration, and our new Geoscience Presentation, Writing, and Research Skills course. This involved more lecture recordings and Zoom class meetings, now in an upgraded bedroom studio (some better lights, a neutral background, and a more stable table). The synchronous Presentation class was fun, with students pulling off some great virtual talks and poster presentations. The asynchronous Watershed class, however, was a little awkward, with student project teams recording choppy Zoom video check-ins and disjointed final project presentations. At the end of Spring, I chaired the Undergraduate Research Poster Session for the GSA Cordilleran Section Meeting. Like everything else, the meeting was held fully online, and the students gave short, precisely timed virtual tours of their posters, requiring some rapid-fire online management on my part.

One bright note of Spring 2021, is that grad student Anselm Krause applied for and was awarded a GSA AGeS2 Student Geochronology Grant for his research on New Zealand marine and fluvial terrace luminescence age dating. As you may recall, Anselm and I were prevented from traveling to New Zealand for fieldwork in 2020 due to the COVID lockdowns. We decided that his best option was to work on age dating of previously collected terrace sediment cores from Cape Kidnappers and Riversdale Beach. With funding from AGeS2, Anselm was able to travel to the Desert Research Institute Luminescence Lab (DRILL) in Reno, Nevada to learn the techniques of IRSL dating and to help process our samples. He presented preliminary results of this work at the 2022 GSA Annual Meeting in Denver.

Meanwhile, throughout 2020-21, my son Kyle was home full time, navigating his way through a virtual online senior year in high school, including Zoom classes, online college applications, and virtual AP exams. Whew, let’s not do that again. Despite the daily dreariness of virtual life and

learning, there were indeed a few bright spots. His Physics teacher was pretty hilarious online (sometimes involving his dogs in demonstrations), and his Psychology teacher was pretty upbeat. For Theatre, Kyle performed in several online productions, one of which was selected as a virtual “Mainstage Performance” for the online 2021 International Thespian Festival. He also served as a director for younger students doing online one-act plays. Thankfully, just at the end of the school year, there was a COVID lull and the kids returned to school for their final few weeks. They were thrilled to have a live, in-person grad night, prom, and graduation ceremony. It was a proud moment to see him cross that stage and get his diploma (with a 4.2 GPA). Despite pandemic chaos with college applications, Kyle got several CSU and UC acceptances. In the end, he chose to attend Cal Poly San Luis Obispo – Go Mustangs! He started as a Physics major, but changed to Aerospace Engineering in his second quarter.

In Summer 2021, CPP switched us to a new LMS called Canvas. This involved more online training, and additional workload converting our courses from Blackboard. Ugh. The rest of summer was devoted to getting Kyle ready for college, a quick getaway with Ann to Morro Bay, and a visit with my mom and brother in San Diego. In September, I drove to SLO with Kyle for dorm move-in and the start of his freshman year. This was a huge transition for all of us.

Fall 2021 marked my 20th year with CPP. They gave me a cool little pin with a fake glass diamond. Go Broncos! For Fall semester, the admin permitted us to teach some labs and field courses in person. I taught Natural Disasters, Geomorphology, Quaternary Geology, and Grad Seminar. While Disasters was still fully asynchronous online, Geomorph had online lectures and in-person labs. Quaternary and Seminar were both fully face-to-face. Despite the required masks, it was great to be teaching in the classroom and field again. With the Quat class, we did our usual Etiwanda fault scarp field exercise and the always fun behind-the-scenes tour at La Brea Tar Pits. Due to COVID resurgence, we skipped a long weekend field trip. Also during Fall, I met frequently by Zoom with Emmons McKinney as she powered through the final drafts of her MS thesis on coastal uplift and faulting at Cape Kidnappers, New Zealand. She successfully defended at the end of Fall term.

In December 2021, I traveled with Kyle to AGU in New Orleans. We were joined by my friend and Computer Science colleague, Amar Raheja, and his daughter who grew up with Kyle. Amar and I presented a poster on a proposed project using drone-based LiDAR to study coastal cliff erosion. We all had a blast attending the conference, visiting some great museums, and enjoying awesome Cajun food and live jazz. We also cruised the bayou on a small

boat tour to see alligators and other cool critters. This was the first long-distance travel for any of us since the pandemic began. Also in December, Kyle and I celebrated birthdays, and traveled to San Diego for Christmas at my mom’s house.

With the new year, I drove Kyle back to SLO and visited an old UCSB geology friend in Morro Bay. Ann and her daughter joined us for a few days of R&R. Then..., soon after we returned home, the dreaded corona struck. Despite reasonable precautions, it broke through. With vaccines, however, the illness was mild. While CPSLO jumped right into the Winter quarter in-person, CPP switched back to online for the first month of Spring semester, then eventually opened up face-to-face. In Spring 2022, I taught Earth Science Education, Watershed Restoration, and a Field Module. I hadn’t done the Education class in many years, so it was fun to revive some basic hands-on teaching activities in the classroom, such as Earthquake Shake and Watershed in a Box. With the Restoration course, we resumed our usual field-based Stream Team Research Projects in local watersheds. For the Field Module, we returned to weekend field trips mapping and surveying marine terraces at Crystal Cove near Laguna Beach and Montaña de Oro near Morro Bay. The camping weekend at Montaña de Oro was great fun as always, with student teams surveying marine terrace profiles, mapping coastal cliff stratigraphy, exploring Pleistocene dunes, and visiting the volcanic plug at Morro Rock. We also enjoyed our evening campfires, a pizza dinner in Los Osos, and a farewell tri-tip lunch at Firestone Grill in SLO (Kyle joined us!). Finally, it felt like the lockdowns were over.

During the Field Module, three of the students, Alexis Ruiz, Evan Kuo, and Vinny Ruiz, developed an interest in the Nine Sisters volcanic chain that includes Morro Rock. They decided to do a senior research project with me investigating the geomorphology and petrology of these remnant volcanic plugs. They applied for funding and were awarded grants from the CSU COAST Program to support fieldwork during the summer to collect samples from each of the Nine Sisters. They cut thin sections for petrographic study and produced fused glass beads for future XRF work. They each presented posters with preliminary results at the Fall 2022 Southern California Conference on Undergraduate Research at Pepperdine University. Alexis and Evan will graduate this Fall, and Vinny will continue working on this project in the Spring for his senior thesis.

Another cool bit of Spring 2022, was a trip to Hawaii for the NSF GeoPRISMS Program Structure and Deformation at Plate Boundaries Synthesis Workshop. I traveled there with Ann, her daughter, and granddaughter. Despite some initial COVID lockdown issues in Honolulu, we eventually had a great time. The workshop was held at Uni-

iversity of Hawaii at Manoa, and involved two days of presentations and break-out sessions discussing the past decade of subduction zone science. I served as a break-out leader and presented a poster on my Costa Rica and New Zealand research with Cal Poly Pomona students. It was great to spend time with many of my long-time colleagues, and to finally reach a realization that I am no longer a spring chicken. I was definitely among the oldest 5% of participants. Much poke and many beers were enjoyed. From Honolulu, Ann, the girls, and I, flew on to the Big Island. We visited Halemaumau crater on Kilauea Volcano, Kilauea Iki Crater, and Nahuku lava tube. It was impressive to see the changes since the 2016 eruption. We also visited Rainbow Falls, the Pacific Tsunami Museum, and went snorkeling at Lele'iwi Beach.

With 2022, a new phase of life began with frequent trips to San Diego to help care for my mom. She is 94 and Alzheimer's is impacting her memory. These are sweet visits with lots of car rides around the city and short walks at Shelter Island. My brother is her live-in caretaker, but he needs breaks on occasion. In between these trips, I often drove up to SLO to visit my son and transport him home for school breaks. It's felt like a constant back and forth – living on the road, my friend.

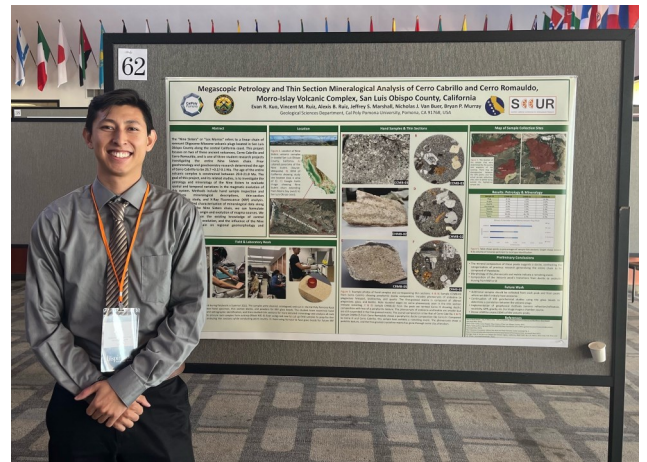
Summer 2022 began with the Council on Undergraduate Research (CUR) virtual Annual Business Meeting – another online slog. But, then we broke free. Ann, her girls, and I headed up to the Live Oak Music Festival at El Chorro Regional Park in San Luis Obispo. We were joined by my UCSB geology chum Dave O for 3 nights of camping and live music. The premiere acts were Los Lobos, Third World, and Robert Earl Keen. A good time was had by all. Later in the summer, I attended the ESRI GIS User Conference in San Diego. Kyle was home for the summer and got his first job as stage crew for the Claremont Midsummer Shakespeare Festival. As summer came to a close, we renewed our lease, and Ann moved into the house with two of her kids. We are now one big happy family experiment.

So now, we've come back around to Fall 2022. We are teaching again fully face-to-face, but masks are still recommended. I'm teaching Geomorphology, Natural Disasters, and Grad Seminar, with some units bought-out by the Teacher-Scholar Program. In October, I traveled to Denver for the GSA Annual Meeting, where Anselm Krause presented his poster on our New Zealand luminescence ages. I also participated in the NSF SZ4D Field Deployment Workshop, Council on Undergraduate Research Geosciences Division Meeting, and the GSA Quaternary Geology and Geomorphology Division Awards Banquet. It's great now to be in finals week again and ready to close out the Fall semester.

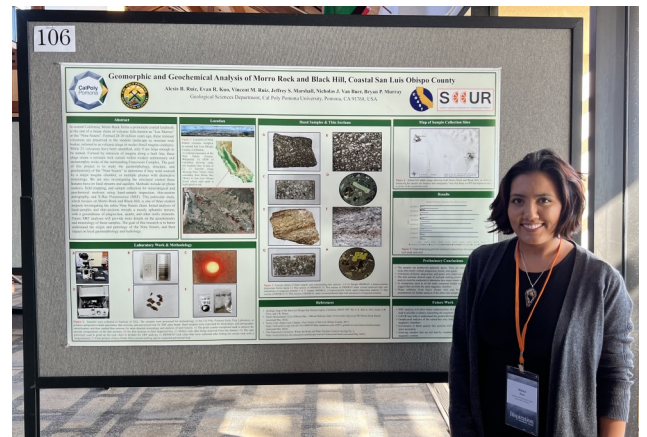
Rock on and happy holidays!



UG Evan Kuo presenting their poster at SCCUR to Astronaut Jose Hernandez.



UG Evan Kuo and their poster presentation at SCCUR.



UG Alexis Ruiz and their poster presentation at SCCUR.



UG Vinny Ruiz and their poster presentation at SCCUR.



Marshall Spring '22 Field Module Montaña de Oro State Park, Morro Bay. Top and bottom pictures.



Marshall Spring '22 Field Module Montaña de Oro State Park, Morro Bay.





Marshall Spring '22 Field Module Montaña de Oro State Park, Morro Bay. Top, Middle, Bottom & Top Right Photo.



Bryan Murray

Season's Greetings CPP GSC alumni & friends!

I hope this year finds you happy and healthy! While our post-pandemic world isn't a complete return to reality, I'm extremely grateful to finally be back to in-person classes with my Geological Sciences students. 2022 has been a good year – I started out with postponed field classes due to Omicron surge this past winter, but when we were finally able to come back in-person I returned to the Marble Mountains with my Field Methods class and we endured a very windy weekend mapping the Cambrian stratigraphic units. I took my 4910L Field Module class to the Soledad Rojo basin in SE CA near the Colorado River and to the Calico Mountains near Barstow to map mid-Tertiary syn-extensional volcanic & sedimentary deposits. In March I presented my Calico Mountains research at the GSA Cordilleran Section meeting in Las Vegas, which was productive but a little weird as it was the first conference I attended since the 2020 shutdowns. After a busy summer break filled with lots of fun times spent at the beach and camping with my kids and pup, I was looking forward to the return to classes in the Fall. Once again, our Field Methods

class went to the Marble Mountains in mid-October and had windy conditions; however, this time we took out our fancy new department trailer on its inaugural trip, which provided much needed shelter from the elements for cooking and lodging for a few students. I'm looking forward to the trailer's camp kitchen overhaul that Frank Wille is working on for use on our future field trips. In late November, my Sedimentary Geology class went on a field trip to Soledad & Ridge basins in the San Gabriel Mountains to examine tectonic-sedimentary relationships in southern California, with stops at Vasquez Rocks, Templin Hwy, and Piru Gorge. In October, I was invited by my former PhD advisor Cathy Busby to present a talk on our Sierra Madre Occidental research at a session honoring her career contributions to field-based volcanology, sedimentology, structural geology, and tectonics at the GSA Connects 2022 meeting in Denver, CO - it was nice to revisit my past research efforts and I'm planning on writing an invited chapter based on this work for a related GSA special publication this Spring.

My upcoming year should be very fruitful as well, as I will be on sabbatical this upcoming Spring 2023 semester. While I won't be doing any epic VB-style hiking across the southern CA deserts—I highly recommend watching Van Buer's YouTube trip videos if you haven't—I do plan on continuing my research work on the mid-Cenozoic alluvial basins in the Colorado River area of SE CA while the weather isn't in the triple digits this winter (some of you may remember melting during my infamous Spring 2018 Blythe Field Module). I previously had two graduate students (A. Al-Kaabi & B. House) complete sed-strat MS projects in the Soledad Rojo basin in the western Palo Verde Mountains; my sabbatical research work will expand upon their research efforts to include additional regional sedimentary-volcanic units to assess proposed stratigraphic correlations and potential post-depositional strike-slip offsets of the deposits. In addition to working on this project, I'm also planning on spending some time investigating new research opportunities in Baja California and the western Transverse Ranges.

I wish everyone has a wonderful New Year and please keep in touch! Also, check out our department's new Instagram account https://instagram.com/cpp_geological_sciences?igshid=N2ZiY2E3YmU= (or if on the app Instagram itself search **@cpp_geological_sciences**), where we'll regularly post field trip and around-the-department pictures. Cheers,
Bryan P. Murray



Fall 2022 GSC 4230/L Sedimentary Geology field trip to Vasquez Rocks.



Camping out in the Marble Mountains for Fall 2022 Field Methods class, with our shiny new trailer!



Spring 2022 Field Methods class, ready to head home.



Taking advantage of the shelter provided by our new trailer to bake some yummy field pizzas out of the wind (Fall 2022 GSC 2550L Field Methods).



Beautiful starlit night in the Marble Mountains, Fall 2022.



My family and I (Coral [10], Pearl [5]) visiting Yosemite Valley in Spring 2022.



My dog Zuma for scale on a rounded welded ignimbrite boulder clast in the Soledad Rojo basin during the spring Field Module trip, one of the areas where I'll be working during my sabbatical.

Stephen Osborn

Dr. Osborn wishes everyone a wonderful Holiday and New Year and hopes to have an update on his endeavors for Mylonite #31.

Jascha Polet

This year we were able to add several UAV to the geophysics equipment arsenal. Although the learning curve is quite steep, after a few tutorials the Phantom 4 RTK was used for photogrammetry at the Blackhawk landslide for the GSC4340 class as well as Ashley Rivera's MSc thesis. Hopefully we will be able to take out the Matrice 300 soon for some airborne magnetic measurements. Jascha



Nicholas Van Buer

Hi everybody!

This has been an eventful year for me. I started out my year on sabbatical, completing a 530-mile hike across the California desert between late January and early March. The goal was to get from the Mexican border near Yuma to the Sierra Nevada Mountains near Owens Lake while keeping most of my route within wilderness areas and filming an educational YouTube series. My retired parents were my support crew, dropping off food and other supplies when needed, although I mostly tried to get water from natural sources. Attempting to save pack space like the pioneers of old did, I carried a sack of flour, and my main food staple was bread baked in the campfire coals each night (except in the national parks . . .). But since I needed to carry water for up to three days (16 L = 35 lbs), my pack still weighed up to 70 lbs at times.

Highlights from the trek include swimming the Colorado Rive twice, crawling my way through the giant reeds along its banks, digging for water, crossing about 16 mountain ranges off trail, frequent moonlight hikes, crossing 31 miles of Death Valley in a single day, and stumbling across an unexpected desert waterfall. It was a dry winter, so I didn't see a huge number of animals, but I did see several burros and coyotes, a few deer, a fox, and a lot of rodents and lizards. The snakes, fortunately, were all hibernating. Geological attractions along the way included dune fields, volcano remnants, exposures of ptymatically folded middle crust in metamorphic core complexes, glacial rocks from the ca. 635 Ma Snowball Earth event in Death Valley, countless faults and unconformities, and . . . miles and miles of alluvium. I even picked up a few rock samples for later study.

After completing my trek, but before the swelling in my feet had even died down, it was time to finish organizing a 3-day field trip (and editing the field trip guide . . .) associated with the GSA Cordilleran Section meeting in Las Vegas this March. My co-leaders Rita Economos (Southern Methodist University), Calvin Miller (Vanderbilt University), Keith Howard and Dave Miller (USGS) and I led a group of 18 participants to Cretaceous plutonic outcrops across the Mojave Desert, including in the Teutonia batholith, the Rand Mountains, and the Old Woman Mountains. After many fruitful discussions on and off the outcrop with Basil Tikoff, among others, I'm now starting to think that maybe the Baja-B.C. hit-and-run model of terrane collision is the right idea after all—that is, the widespread and voluminous 100-75 Ma magmatism in the Mojave and along the whole Pacific Crest may not actually be arc magmatism as commonly assumed, but slab-failure

magmatism following the Insular Superterrane plate collision

The remainder of my sabbatical and most of the summer were dedicated to video editing, turning the terabyte of video I collected into a series of 13 nearly hour-long YouTube episodes (available here: <https://www.youtube.com/channel/UCHMNjgp97lQEooIJwLbggig> or via www.acrossthemojave.com). If you're interested in hearing more about my trek or the geology of the Mojave, check them out! In the last year they've attracted roughly 28,000 views, 4000 hours of viewing, and 800 subscribers, as well as mentions in the L.A. Times and the Backpacker Radio podcast.

Fall term has been relatively low-key, getting back into the swing of teaching and refilling the student research pipeline. One highlight, as always, was the Mineralogy field trip. This year saw some delays due to Route 66 road closures and a crane set up smack in the middle of a one-lane dirt road, but, on the plus side, recent earth moving at Bristol playa exposed a trove of fresh halite, with several students nabbing 4–6 inch crystals this year. Now I'm looking forward to five or six weekend field trips next semester!

Happy holidays,

-Nick Van Buer



Along the banks of the Amargosa River, Death Valley, Mojave Trek day 25.



Joshua Tree National Park, Mojave Trek Day 13—
Photo Credit Darrel Van Buer.



GSA field trip participants on the Wild Horse megacrystic monzogranite, Mojave National Preserve.



Mineralogy field trip. Halite champions at Bristol playa!

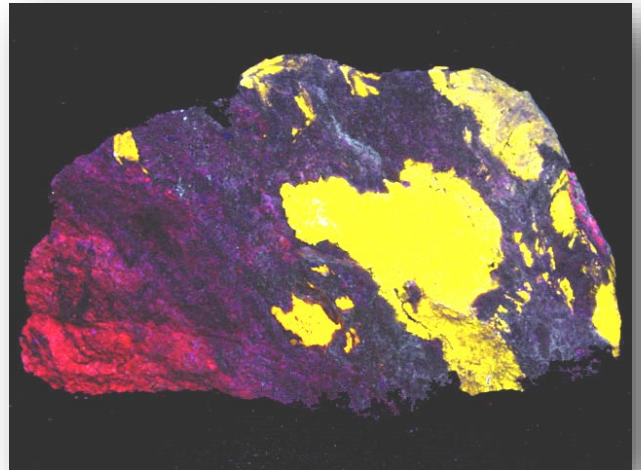
Check our CPP Webpage and Social Media:



(GSC webpage, Facebook page, Instagram and Geology Club Facebook page)



635 Ma glacial-origin Wildrose diamictite, Panamint Range. Note that the marble clasts are seriously flattened, whereas the granite clasts are relatively unaffected, suggesting a deformation temperature of about 350 C. Mojave Trek day 30.



Picture by Patti Rose: Calcite & Wollastonite LWUV. Top under blacklight.



Waking up in the Chuckwalla Mountains, Mojave Trek day 8.

