Greetings from the Chair - Brandon Schwab

I am amazed that we are at the end of another academic year and that 12 months ago we were neck-deep in planning our first ever alumni reunion! I think the event was a great time for all (see some pics later in the newsletter) and we look forward to doing it again in the near future.

We have been fortunate this year to have Melanie Michalak on the faculty as a fulltime temporary lecturer. Mel is a great addition to the program and the students love her. She led our GEOL 110 trip to Death Valley over spring break. Check out her GEOL 110 report later in the newsletter. Mel and I will be splitting Field Camp teaching duties this summer and she will be with us fulltime teaching and advising students at least through next year.

This semester marks the last regular semester of teaching for Bud as he finishes his ‘FERP’ (Faculty Early Retirement Program). As I’m sure you can appreciate, this is a big transition time for the department. Bud will still be around working with students and will continue to be a huge recruiter and ambassador for our program.

Some successes that I am particularly gratified by this year include two of my students ‘leaving the nest’ and moving on to graduate programs. The first is Tyler Wickland who completed a Senior Thesis on a project in our ExPet lab investigating the growth of reaction rims on olivine grains at high-temperature and –pressure. Tyler is heading to UNC-Chapel Hill in the fall to pursue his M.S. degree. The second student is Erin Quinn who just defended his Masters on the storage conditions and decompression of the 1050 BP Chaos Crags magma. Erin completed the experiments for his project as a Smithsonian Graduate Fellow in DC last summer. He presented preliminary results at AGU in December and will present at the Goldschmidt conference in June. After that, Erin will be heading ‘over the border’, the other border, to McGill University where he will pursue his Ph.D. Needless to say, I am proud of both of these students and look forward to their continued success!

We would love to hear about your successes! Send us a note (geology@humboldt.edu).
Humboldt Crew at 2013 AGU

Longshore Photomicrograph on display at the reunion

Class of 2013
Hi All,
I am not good at writing [verified by my coworkers, my friends, my relatives, and by newsletter editors!], but especially when it comes to writing about myself. However, I always enjoy reading about other’s activities, so you might appreciate reading some of my thoughts and activities. What finally prompted this short but sincere verbiage? You! I have been blessed through the years to be associated with some of the finest folks on the planet, many since my arrival at HSU in 1979. For the past few years, I haven’t been as active in my professional activities as I had hoped, but I have been awarded so mightily by great memories and your friendships.

A viral attack to my central nervous system paralyzed my lower body in 2005 and I now do wheelchair geology. When possible, I am again attending and enjoying the Friends of the Pleistocene gatherings, GSA meetings, and the Geology Club rock auction. A few years ago I entered the faculty early retirement program which allows me to teach halftime through spring term of 2014. YIKES! That is now and thus the extra prompting of getting a few words into the newsletter 😊. Although not in the classroom, I hope to stay active with the geology students as they pursue research into Soils Geomorphic and other Quaternary issues. It is always a pleasure to see former students, old friends and future colleagues. Many of you have given to funds solicited in my name, for which I am grateful on a daily basis. I get around in a Ford conversion van. I can remotely open the doors, lower a ramp, park my wheelchair behind the steering wheel, and drive myself – now totaling some 40k miles! - thanks to the shocking contributions gathered a few years ago without my knowledge. In addition, a very generous scholarship has been established in my name to support Geomorphic and/or Quaternary research by an HSU student. This scholarship was initially established for 5 years at $5,000 a year and we have just awarded year three. Elsewhere in this newsletter you’ll see how you might contribute to this or the John Longshore Scholarship, or the Geology Department for use as needed. I assure you that the students are greatly appreciative of your support and I furthermore can assure you that they are so very deserving - they remain the heart and soul of a tremendous group of folks.

I wish to say a few words about the HSU students’ attitude toward a handicapped faculty, but that includes society as a whole, most of whom don’t know my profession. Helpful to a fault! The respect, the offers to help, the help, the patience with the patient, the understanding beyond my wildest concepts – these are the actions of folks that do not make the news, yet this is what I experience on a daily basis. It is this gift of a smile and your thoughts from afar that I appreciate most, and in the words of my long deceased Mother – Thank You, Thank You, Thank You!! - she always felt the singular thank you might not express one’s true appreciation 😊.
May, 2014

The secondary effects of paraplegia have greatly hindered my travelling and camping as of late – but with a recent operation, a renewed physical therapy routine, a good attitude, and an entourage of care givers and helpers, I hope to reverse that trend. In addition, I have suffered a bit of withdrawal and almost completely stopped personal communications, especially via the electronic format [I may enter into social media once this whole retirement thing sets in!]. For this, I apologize and I will try to write personal notes to you in the future.

Please keep me in mind if you know of wheelchair accessible field projects! Or if you have a working X-ray Diffraction unit! All my best to all of you – and just for kicks here are a couple of pictures – one is the new dress code I suggested at last year’s reunion [didn’t catch on!]. The second is from a highlight evening of this past term when Gary and Deborah Carver were in town and came to dinner with a colloquium speaker at the Plaza Grill [a local restaurant] – it is always so refreshing to see them and to think of ‘Carver and Burke Days’ at HSU and beyond.

Thanks for a great [and ongoing in a different role] run at HSU, Bud

Ian Pierce, a Bud B.S. student completed his senior thesis on Grizzly Glacier in the Trinity Mountains and will be heading to University of Nevada-Reno for his Master’s degree. Way to go, Ian!

Burke Award!
The second recipient of the Bud Burke Geology Scholarship is Casey Loofbourrow! This Burke scholarship supports one student a year who is working on a geomorphology- or Quaternary geology-related project. The generous donors have committed to funding the scholarship for five years at $5,000 per year! This is currently the largest scholarship on campus. We are looking to build this fund so that we can offer the scholarship long into the future.

Casey Loofbourrow is a MS student working with Eileen on a thesis entitled: “Eastern Gulf of Alaska Holocene Paleoceanography and Paleoclimatology as Determined from Diatom Paleoecology of West Crawfish Inlet, Baranof Island, Alaska”.

Sue Cashman

It was great seeing so many HSU geology alumni at the “first centennial reunion” last May; thanks to so many of you for making the trip to Arcata and joining that gathering!

I’m continuing my research interests in faults and fault rocks, and in structure and tectonics in general. In the past year, I’ve enjoyed working with a couple of senior thesis students who are studying faults; one working in the Goose Lake fault / Warner Mountains area of northeastern California, and another who’s investigating deformation bands near Trinidad, here in Humboldt County. In a more broad-scale study, several colleagues and I are writing up results of a thermochronometry study of the “unroofing” of the Klamath Mountains.
A new kind of teaching opportunity landed on my doorstep this year – I’m a team member for the “Bringing National Science Foundation MARGINS Continental Margins Research into the Undergraduate Curriculum” project. The group includes about 20 geologists from around the U.S., and we’re developing mini-lessons using current data sets and research tools, and focusing on new findings from the MARGINS program. The mini-lessons will be available free, on-line, for faculty members to download and use.

Right now, the mini-lessons are in the field-testing stage, and my structural geology students will be trying out a few of the “Rupturing Continental Lithosphere” lessons.

Don Elder, HSU Alumnus on Sue’s Structure field trip to the La Grange fault

Lori Dengler

No I’m not retired – yet. I’m enjoying the opportunity to teach grads and advanced undergrads. I team taught the SEM class in the fall with grad student Erin Quinn and this semester I’m teaching Applied Geophysics for the first time since 2006. It has taken a little effort to dust off the notes and remember what all those terms mean, but it’s a good group and fun to be pounding the ground with a sledgehammer once again.

My student Amanda Admire finished her Masters last spring (completed in 2.5 years – not too shabby). Last September, Amanda and I attended the 26th International Tsunami Symposium in Turkey. She gave an oral presentation (picture to the right) on her thesis work measuring tsunamis with an Acoustic Doppler Current Profiler (ADCP) in Humboldt Bay and I talked about the Redwood Coast Tsunami Work Group (still going strong after 18 years). We finished the meeting up with an extracurricular week of sail boating along the southern Turkey coast. I was able to support Amanda as a Research Associate this year and she is continuing her ADCP work – we now have an instrument in Crescent City and 4 additional instruments in Humboldt Bay. Amanda has also been heavily involved with outreach along with Kerry Sherrin (some of you may remember as Kerry Pinto, our Dept Coordinator 2010 – 12). Amanda and Kerry were invited participants in two Cascadia EarthScope Earthquake and Tsunami Education Program (CEETEP) workshops in Oregon, and are involved in the early planning stages for a Northern California CEETEP workshop in the summer of 2015. They were also important members of the April 2013 full-
scale Manila tsunami evacuation drill and assisted in a number of Prepare Del Norte activities as part of the 50th anniversary of the 1964 tsunami. Thanks to an anonymous donor who has made this effort possible.

Tsunamis continue to surprise and shift my activities into areas I never thought possible. The latest twist came in the form of a 20 foot Panga fishing boat that beached in Crescent City on April 7, 2013. I was part of the “expert” group that examined the boat the next day. The Japanese registration stickers identified its origin as Iwate Prefecture and hand written lettering on the side linked it to Takata High School in the City of Rikuzentakata. I had visited Rikuzentakata during my post tsunami reconnaissance trip in April – May 2011 and had taken photos of the damaged high school, never realizing at the time I would be reconnected two years later in a very different way. The boat lead me to the Japanese Consulate, to friendships with Rikuzentakata staff, and involvement with an amazing group of Del Norte High School students whose hard work (and the work of many others) led to the return of the boat to Japan last October. Thanks to the Tomodachi Foundation, five students visited Japan this February. Their visit concluded with a formal reception at US Ambassador Caroline Kennedy’s residence. They presented Ambassador Kennedy with the rope from the boat that we had saved during its initial cleaning a year ago. Facebook played a role too – check out the “Facebook Story” - [http://www.facebookstories.com/stories/61397/recovering-hope](http://www.facebookstories.com/stories/61397/recovering-hope). Next step is a possible children’s book. I’m working with Amya Miller of Rikuzentakata on developing a preschool-kindergarten level book in English and Japanese.

Lori with the ‘tsunami boat’ in Crescent City & Rikuzentakata, Japan.

**Eileen Hemphill-Haley**

Eileen has been working up and down the coast looking for evidence of paleotsunamis and advising multiple students in the department. She also attended the SSA meeting in Anchorage associated with the anniversary of the 1964 Great Alaska Earthquake.
It has been a very busy year. My graduate student, Paul Sundberg, completed his MS thesis working on a portion of the Trinidad fault in the Fieldbrook Valley and hills between McKinleyville and Fieldbrook. We were granted access to Green Diamond Resources land and LiDAR for which we are extremely grateful. He did a great job and is now gainfully employed at SHN Consultants in Eureka. Melanie Stevens will be defending her MS thesis pertaining to using InSAR imagery in the Trinity Mountains to detect slope movement.

I have three active masters’ students now. All are HSU grads! Jessie Vermeer is working on analyzing the portion of the coast that was uplifted near Petrolia during the 1992 M 7.1 earthquake. Gary Carver and alumnus Angela Jayko have provided field notes, photographs and memories of their post-seismic investigation. Jessie will look at what has happened to the vertical uplift in the 22 years since the earthquake. It may give some insight into the lithospheric response along the southern end of Cascadia. Jessie was the 2014 recipient of the McCrone Graduate Fellowship Award for outstanding first year student. She has also received a GSA Graduate Research grant.

Sylvia Nicovich is well into her field investigation of the transition from San Andreas style transform faulting Cascadia style fold and thrust deformation east of the Mendocino Triple Junction. She has been using LiDAR provided graciously from Humboldt Redwoods Company. She has been working with alumni Tom Leroy, John Oswald and Shane Beach. Sylvia has received a GSA Graduate Research grant.

Michelle Robinson (in photo above) has just started her research in the headwaters of the Matolle River. She is mapping a suite of broad strath terraces in the upper reaches of the watershed (if you recall your fluvial geomorphology this is strange). She will be trying to assess if the unusual fluvial architecture of the river is related to passage of the Mendocino Triple Junction. She is working with alumnus Sam Flanagan who is a BLM geologist in the area. Michelle has received funding through the BLM for her research.

All three graduate students presented their research at AGU in San Francisco this past December.

I’ve also had the pleasure of working with some great senior thesis students this past year. The research has been diverse, enlightening and, of course, enthusiastic!

Brandon, Steve, and I taught field camp in the Roberts Mountains, NV last summer. It was my first time to teach there and I sure do love carbonates more than ever now.

It was phenomenal getting to reconnect with folks at the 1st annual, centennial HSU geology reunion and celebration last year. Everyone looked great, nobody looked a day older! It is always great to reconnect with former students and classmates and colleagues. Thank you for all you do to help us keep HSU Geology one of the best in the US.

Harvey Kelsey – New GSA Fellow!

Last December Jay Padgett completed his Masters thesis research on soil development and Quaternary deformation of marine terraces in the Trinidad area. It was both great fun and intellectually stimulating working with him - he took advantage of lidar made available by Green Diamond Resource Company in order to provide substantial additional insight into this fascinating area.
which was first investigated by Gary Carver and colleagues three decades ago.

Jay is the 33rd graduate student I have had the pleasure of working with on a thesis research topic, the last 18 of which have been HSU graduate students. Mentoring and collaborating with graduate students is the single most valuable means by which I have kept abreast of the changing directions of geology in my chosen areas of interest, so..., thanks to you all (and you know who you are..!)

Melanie Michalak

I am very happy to have joined the HSU Geology department last Fall, as a full-time temporary lecturer. It has been a whirlwind of a year, and I’m deeply appreciative of all of the support from students, staff and faculty I have received while starting out. Many of you immediately stepped up to help me with my large intro classes. I’m extremely impressed with the Geology department’s dedication to the undergraduate learning experience, with a deep emphasis on field work, field trips and research. I have thoroughly enjoyed teaching Earthquake Country, General Geology, Field Methods and Geology 110 this past academic year, and interacting with students from a broad cross-section of majors and backgrounds. I am especially looking forward to co-teaching Field Camp this summer with a great team of instructors.

I came from UC-Santa Cruz, where I defended my PhD dissertation about four days before I started teaching last Fall at HSU. My dissertation work investigated rock uplift and exhumation signals and rates in the Peruvian Andes, using mineral chronometers. For my Masters work, also at UC-Santa Cruz, I looked at mineral provenance in fluvial terraces within a large Himalayan river system, to characterize spatio-temporal shifts in erosional patterns on the landscape. While the Andes and Himalayas are unparalleled places to work, I am excited about the prospect of doing more field work in local mountain ranges and rivers. There is nothing better than being able to get up in the morning and drive to your field site without being questioned by the Indian military.

It has been fairly easy to adjust to Arcata after living in Santa Cruz for seven years (the mild winter didn’t hurt), and every day I marvel at the amount of open space to explore. Thanks to everyone for your warm welcoming, kindness, and patience as you got me through this year; I look forward to another!
William Miller

William continues to teach the department’s Paleontology and Sedimentary Geology courses. He will be offering a Paleoecology course in the fall.

He continues to pursue those “weird trace fossils” in the Paleozoic succession of the Valley and Ridge Province, primarily in southwestern Virginia and will be spending time in Italy this summer as a Visiting Researcher at the University of Padua.

Steve Tillinghast

Steve (hobnobbing with President Richmond) received a much-deserved Staff Recognition Award this year. He continues to keep everything running in the department and will be working another stint as Field Camp TA this summer.

Colin Wingfield

Colin continues to be our fearless field camp and stockroom manager. Colin says to all you bicyclists...“wear your helmet”!

Laurie Marx

Greetings! Another year has flown by, (I don’t think it’s my imagination that they’re getting busier) and I’m once again anticipating how much I will miss the graduating students. The only consolation is that there are more great students working their way through program and I’ll be able to see them this fall. For those of you that were able to attend the Geology Reunion last year, here’s a big THANK YOU for making it a successful and majorly fun event. If you weren’t able to attend, keep me posted with your contact information for the 2018 reunion! (lm1713@humboldt.edu or geology@humboldt.edu) Also, if you would like to receive the Geology Colloquium flyers throughout the next academic year, I will be happy to add you to the distribution list. We love hearing from our alumni....please keep us posted on your doings!
Thanks to all the faculty, staff, and students that keep me sane during the school year. It’s something special to be able to laugh and, occasionally gripe with friendly faces when I emerge from beneath piles of paper. This is the best department on campus!

Laurie receiving a Longshore photomicrograph as a gift from Geology Club President, Nate Graham.

Other staff news.

Andre Lehre is in his third year of the Faculty Early Retirement Program (FERP) and is teaching spring semester. Ken Aalto recently gave a talk in the department on Clarence King. Don Garlick frequents the colloquium series and student thesis presentations. Bob McPherson has retired from teaching, but still working with students.

Longshore Field Geology Endowment

Thanks to the generous donations of alumni and friends of the Geology Department, we have established the “Longshore Field Geology Endowment” to honor John’s dedication to fieldwork and undergraduate geology education at HSU. The fund will support field and capstone experiences for students within the Geology programs at HSU. It was fantastic to have Judy and the Longshore family at the reunion last year and to celebrate John’s life and legacy.

Thank you for your support and please contact Brandon or Laurie to learn more about contributing to this endowment honoring John and supporting students.
Alumni News

The reunion was a great success. Let us know your thoughts about the next one, continue to send us updates, and pictures!

Department Mystery

Today's students want to know - what's the story behind the art work on the clock in the structure lab?

The first one to tell us the (verifiable) origin story will get a GeoClub t-shirt!

Want your update included next year? Send us a note!
We’d love to hear from you and if you are willing we’d like to share your news in the next installment of the HSU Geology Newsletter.
2014 GEOL 110 Spring Break Trip: Death Valley, CA

While Spring Break might be a good time to take an exotic vacation, catch up on work, or do some spring cleaning at home, to the HSU Geology Department, it means one thing: Geology 110, a one unit course field trip to a geologically-inspiring place in the Western US. For 2014, Brandon Schwab, Melanie Michalak, Steve Tillinghast and Colin Wingfield, accompanied by TAs Sylvia Nicovich and Michele Robinson, led a group of 24 students down to Death Valley, CA. The group of students included everyone from the department “veterans,” students who will be graduating this year and completing Field Camp, “newbies” to the department, many Geoscience majors in the midst of their college careers, and a few Geology minors. The appeal of Geology 110 is that students get a 100% immersed, hands-on learning experience, by spending every waking moment surrounded by the desert landscape, inviting curiosity, awe and lectures with no powerpoint slides!

We started our trip by heading east, up and over the Cascades, down through the Basin and Range province of western Nevada, and down to a little known National Wildlife Refuge, Ash Meadows, which is host to the endangered pupfish, and unique native flora and fauna. The Refuge is newly renovated, with multiple viewing sites, and is definitely worth a stop if you find yourself traveling south on Hwy 95. We then journeyed into the Black Mountains from the east, examining a plethora of tertiary volcanic rocks, which was deeply exciting to the students currently in Brandon’s optical petrology

Kellie Larson poses for scale with a massive dolomite boudin in Mosaic Canyon.

Group shot on the Badwater Playa, with the Panamints in the background. Photo by Steve Tillinghast. (Missing: Steve Tillinghast, Colin Wingfield, Michelle Robinson and Sylvia Nicovich, who were investigating the Precambrian gneisses of the Black Mountains during the photoshoot).

“Amazing trip! Couldn’t have been more stoked on this spring break. I learned so much, and had even more fun!” -Geology 110 student
May, 2014

I even heard a few of them say, “if only I could go back to the lab and look at this rock in thin section!” Next, we ventured into Death Valley proper, descending across the valley and into Warm Springs, climbing around an old Talc mine and visiting Butte Valley, one of the most isolated parts of Death Valley. Later that evening, we would endure the harshest desert windstorm that anyone on the trip had ever experienced. Luckily, nobody blew away, and we shook out the sand from our ears and loaded out the next morning toward Furnace Creek, stopping to admire the Black Mountain “turtlebacks,” the Badwater playa and recent fault scarps in alluvial fans.

The last few days of the trip were spent doing some hiking and driving through three of the most spectacular canyons of the Death Valley region: Mosaic canyon, Monarch Canyon, and Titus Canyon. These deep canyons literally provide a window into the crust, and were able to observe the mylonitized, sheared Noonday dolomite of Mosaic Canyon, high-grade gneisses and migmatites in Monarch Canyon, and the enigmatic megabreccia of Titus Canyon. Features of structural geology, mineralogy and geomorphology that a student typically only sees in a textbook were right in front of us, sparking deep appreciation and wonderment by all. We look forward to Spring 2015!

-MJM

Final Note
The greatest part of working in the Geology Department at HSU continues to be our students and alumni. Thanks for being part of our lives and keep in touch. Without your support, we could not do what we do. Thanks for everything!

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