Greeting SSU Geology Alums and returning students! This is the second edition of the revamped *GeoLog*. You may recall that we initially anticipated an annual recurrence interval for this newsletter, but upon consulting with reality, we have decided that a bi-annual distribution seems more feasible. As always, we love hearing from our alumni, and we hope that this newsletter facilitates both communication between the SSU Geology Dept. and our alums as well as you guys keeping in touch with each other. We have added a few new features to the newsletter. We hope that you enjoy them. Either way, drop us a line, and let us know what you think. Take care, all.

Tom Anderson proudly displaying his new WTFC shirt. Those of you who know Tom may remember him uttering this phrase (hint “W” stands for “walk” and “C” stands for contact). You can purchase your own WTFC merchandise at Café Press (just Google Café Press WTFC or search WTFC at the Café Press web site). A small fraction of the proceeds even find their way back to the Geology Club.
Hello geology alumni, students, and friends of SSU Geology.

The biggest news from the department is the graduation of our first students in the new Bachelor of Arts in Earth Science degree in May 2012. The department faculty carefully and thoughtfully designed this new degree as an alternative to the now-eliminated Bachelor of Arts in Geology. Naturally, we still have our Bachelor of Science in Geology degree, which is very similar to the structure of the BS in Geology that our alumni remember. The new BA in Earth Science allows students greater latitude in required and elective courses, and the BS in Geology is a little more structured with prerequisites leading to advanced courses. Our hope is that the new BA in Earth Science will broaden our appeal to students on campus and bring a new group of students into the department. So far this has proven true!

Since the last newsletter issue, Professor Dan Karner retired from SSU, as did our technician Sue Nosker, and Professor Walt Vennum finished the last of his five years in the faculty early retirement program. The core of the department is Matty Mookerjee, Mike Smith, and myself, with up to five part-time faculty joining us each semester to teach either majors core courses or large-lecture General Education courses. In Fall 2012, there will be nearly 600 students taking geology courses in our department!

With the addition of the new BA in Earth Science, we have doubled our number of majors, so we are in good shape in terms of total number of students and our number of majors. The majors are very active with the Geology Club, with events being held throughout the semester both on campus and off campus.

In connection with my ongoing interest in supporting and strengthening our field program, I will be addressing the Heads & Chairs gathering at the upcoming American Geophysical Union annual meeting in San Francisco in early December 2012 on the topics of how various departments across the country organize and pay for field trips. This is a topic of concern to department chairs across the country and I expect both a lively discussion and good feedback that we can use at Sonoma State.

You will hear from the other geology faculty elsewhere in this newsletter about their scholarly activities, and my own work has also progressed. Last year my writing won the 2011 Karl Kortum Award for Maritime History, administered by the San Francisco Maritime Museum Library. This award was for my writing project on the history of the 1905-1906 Galápagos scientific collecting expedition from the California Academy of Sciences. I also gave the 2012 Peter Leveque Natural History Lecture at Santa Rosa Junior College and I have been speaking widely on my research, most recently in Honolulu for the Friends of the Falls of Clyde, a 280-foot, four-masted, iron-hulled ship built in 1878 and berthed in Honolulu Harbor.

I look forward to seeing you in person and online!

Kind regards,
Matt James

Those of you who would like to know more about Matt’s Galápagos writing project, should check out this summer’s SSU Insights alumni magazine (pages 8 &9). Here’s a link: http://www.sonoma.edu/insights/insights_summer12.pdf?ID=10005044_190394
Hello all,

I hope this newsletter finds you all well and that the two years since our last newsletter have treated you all well. Teaching in the Geology Department at SSU is still as exciting and fulfilling as it was my first year. I continue to teach Structural Geology, Structure Field, and Geophysics each year, as well as alternatingly teaching Natural Disaster, Advanced Principles of Geology, Senior Field, Computer Applications in Geology, Our Dynamic Earth, and Geologic Mapping and Report Writing. We all strive to continue the tradition of training our students in the highest level of field work. I am continually gratified by the feedback that we receive about our students’ performance at summer field camp and beyond.

The past two years have been fairly exciting for me. I was honored to be awarded a National Science Foundation grant for an Electron Backscatter Detector for our Scanning Electron Microscope. This detector will give us the ability to measure and map crystallographic fabrics in deformed rocks so that we can characterize the kinematics of highly strained zones. This summer, two groups of students traveled to Montana and the Eastern Sierras with me to collect samples to be analyzed on this new equipment. This NSF grant also included funding for sample preparation equipment to modernize our thin section laboratory. I spend a goodly amount of last semester setting up this equipment and lab space. My other exciting recent news is that I was promoted to Associate Professor and granted tenure this past June.

In addition to the two field projects that I just mentioned, my research students and I have been working on four main projects: 1) a collaboration between computer science students and geology students to create a finite element method (FEM) computer model of the kinematics associated with irregularities along thrust faults, 2) the construction of a “squeezebox” model which could also model the kinematics of fault asperities, 3) mathematically modeling the development of crystallographic fabrics, and 4) the development of a software suite, “Geological Applications in Mathematica.” This last project was done in collaboration with SSU Assistant Professor in the Mathematics Department, Scott Nickleach. This summer I gave a talk and led a short course on this software package at the second annual Structure and Tectonic Forum at Williams College.

That’s all the news from my end. I wish you all the best; please keep in touch.

Matty Mookerjee
Associate Professor
Greetings to alumni and current students,

It is the end of my fifth year teaching sedimentary geology at SSU geology department, and the glorious summer is upon us. Continuing apace is my ongoing adjustment to post-Midwestern life in Sonoma County. I’ve migrated westward to Bodega Bay, and will concur with the widely held conventional wisdom that west county is indeed a different (and windy) place.

To those of you who have taken Seds from me, I will confirm that this last spring’s Sedimentary Geology class received a solid dose of grain size analysis and section measuring over the course of the semester, which culminated in a stratigraphic ascent of the flanks of Mt. Fuzzy in 90+ heat. This next fall, I’ll be leading a group of 20 GEOL 120 students on two epic weekend trips to key spots across California, which should be an exciting break from my duties as chair of the general education subcommittee and constantly being defeated by Matty in chess.

The time interval since the last newsletter has witnessed several exciting sedimentary developments at SSU. Of highest significance is the inception of the “Sedimentary Research Syndicate”, which is a collaborative effort by a group of intrepid student researchers and me. Without revealing our secret handshake of tree-house clubhouse locale, current ongoing projects include studying sand transport in the Bodega Marine Reserve in support of snowy plover restoration efforts, field study and numerical modeling of gravel input to active submarine canyons along the Lost Coast, and a study of the effects of clast durability on modern and ancient alluvial systems across the Rocky Mountains. I’ve also finished a new paper concerning the timescale of Ordovician glaciation and extinction, and am busy this summer on a new manuscript concerning the stratigraphy of the Green River Formation. Hope to see you on campus, in the field, and/or at AGU this fall!

Best to you and yours,

Michael E Smith
John Collins: I graduated in 2002 from SSU with a degree in Applied Physics. As well as being the Geology equipment tech I’ve been running the School of Science and technology Design and Repair Center for five years. The DRC has machining equipment to fabricate just about anything and supports teaching labs, research and student projects.

I have always been interested in the science but my first degree, from UCSC was in fine art Sculpture and painting. At UCSC I worked in the foundry, metal and wood shops as a tech. It was a great place to hone shop skills. After graduation UCSC I went in general contracting in order support my “art” habit. Once I enjoyed a fair amount of success in the art world I went to work in the software industry. While working at Auto Desk I decided to do back to School to get that physics degree I always wanted.

Students should feel free to come in to Darwin 20 for a tour or visit the DRC web site @ http://www.sonoma.edu/scitech/drc/ or our projects site @ http://www.sonoma.edu/users/c/collinjo/.

Ronnie Goodlund, the department technician starting in July of 2011, has been at SSU for six years as staff. This has been a return to the University, having been away since receiving a BA here in 1979 in anthropology and archaeology, with a minor in linguistics. Occupations during the college years and after included owning a music store, working staff jobs in private industry, and government at city, state, and federal levels.

Ronnie received an MA in mediaeval church history from the Graduate Theological Union in Berkeley in 1995, and remained in Berkeley working at UC Berkeley until 2005. The UCB years were mostly taken up with computer programming.

In 2005, Ronnie was hired in the SST Dean’s Office as Dean’s Assistant, and later also AC in the Engineering Science Department. Currently, the Geology technician and ES AC positions are both half time. Working closely with faculty and students, Ronnie helps keep equipment and supplies in stock and organized.

Ronnie has been building a jewelry business for some six years, working in silver fabrication and semi-precious stone. An abiding interest in minerals, stone, and metals makes the learning opportunities at Geology most welcome.
Alumni Notes

We, in the Geology Department, love to hear from our alumni. Please send us a note if you have any new (or even old) news in your life. I’m sure that the rest of the alums would love to hear from you. Also, feel free to include a picture of yourself, your family, and/or something geological. E-mail your notes/photos to matty.mookerjee@sonoma.edu

Deborah Klaisle

I graduated from SSU 1980. I never worked in geology but it has been of major interest to me. I did travel to Denver with the idea of attending the School of Mines but ended up going to medical school at the University of Colorado in Denver. Now I am retired and living in Fair Oaks CA near another alumnus Elise Mattison. We have a mini reunion first annual last year and I call us the geogirls. I wonder what happened to other alumni and think this is a great idea.

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Hilary Van de Pol

Hi Everybody! Greetings from the Central Valley! Not too hot here yet, thankfully. But summertime in the valley means fresh fruit everywhere! I've managed to start a flower garden and vegetable garden despite the crazy wind. I am looking forward to enjoying tomatoes, jalapenos, cantaloupe, watermelon (first year with that one, hope it works), spinach, lettuce, and cucumbers. My husband built me a raised garden so I don't have to worry about the dogs destroying everything. I am enjoying raising my two girls, Olivia (3) and Emily (1) on the dairy. We take walks and visit the cows, and if the tractors are available they like those too.

As for work, I am still dealing with dairy compliance for my husband's family's dairy. Family business has interesting dynamics. My geology background has helped in understanding certain aspects of my job. I keep track of information for the Regional Water Quality Control Board, San Joaquin Valley Air Pollution Control District and the Ag Commissioner. Also anything else my father-in-law doesn't want to deal with. We live on the dairy so commute time is great :) And I don't put in too many hours so I can raise my girls. Life is busy. I've also walked my first two 5Ks! I'm working up to running them next time around.

My cousin got married in Mammoth Lakes last year and it took me back. I tried explaining to my girls about what I used to do with Sonoma State but they didn't quite understand yet. Hoping to enjoy some rock hunting, vacations, and barbeques this summer, oh yes and blueberry picking! I am looking forward to hearing what everybody else is up to and hope you are all doing good :) Have a great summer!
Kristen Scheller

Howdy all y’all,
Since I find myself every once in awhile wondering what my fellow SSU classmates are doing, where they are and what kind of lives they’re leading, I thought I’d contribute a little bit about myself since leaving SSU in December 1989. I met my husband on a bike ride in 1994 and bicycling remains one of our main hobbies. Last summer we even met two other former geology SSUers for a bike tour in Colorado. Chris works in the oil & gas industry and after leaving California we have now lived in Illinois (near St. Louis, MO), Houston, TX, Bismarck, ND, and we now live out in the country near San Antonio, TX. We also had a two year stint with a lot of back-and-forth work travel between Texas and St. Croix, USVI. Life has been a fulfilling adventure. I’ve been working as an environmental geologist all that time. Life is good and I hope my former fellow classmates and instructors are all well.

David Bush- SSU Geology 2007

So I have a few tidbits of information that I'd like to share. Of course my kids. Lucas is now 2 1/2, and Clairia was born April 28, 2012. But of note for the department, I wish to give thanks to all of the faculty for providing an excellent foundation in Geology! I received my degree from SSU in 2007 after working in the environmental geology field for seven years. But when I graduated, the State Board for Geology determined that prior experience before obtaining a geology degree would not count towards attempting the Professional Geologist examinations. So I had to wait another three and a half years to attempt the exams. Well, the wait is over. I successfully passed the exams in March 2012, and will soon be receiving my Professional Geologist licensing! I could not have done it without the teachings, ramblings and vacations provided by Anderson, Erickson, James, Joy, Karner, Mookerjee, and Vennum! Cheers.

Chris Olson

I graduated from SS College in 1977. My how the years have flown! My daughter, Emma, is graduating from high school this weekend and she’ll be going to Providence College in Rhode Island in the fall. She has informed me that she will not be studying geology, or any science for that matter; we’ll see. My husband, Per, received a Fulbright Scholarship to work in Finland starting in late summer, so we’re moving to Helsinki for awhile. He’ll work, and I’m signed up for art classes at the university (free use of the saunas). I’m hoping we’ll see some rocks before it starts snowing!
Alumni Notes

Keil A. Albert

I’ve been working for 18 years at Geoconsultants, Inc. in San Jose, CA (www.geo-consultants.com) in the groundwater industry locating and designing water wells, mainly for new production wells for agriculture and municipalities. It has been fun. Here is a photo from a recent pump test in the Mojave desert. I miss SSU and look forward to visiting the campus soon for some of the Geology Club lectures.

Kristin Jacob

Tom Anderson just informed us, here in the SSU Geology Dept., that Kristin and her work in the Never Summer Range are featured on the cover of the University of Colorado, Geology Department’s newsletter. Congratulations Kristin! We hope your thesis is going well.

Please keep those Alumni Notes coming!
Geological Terms X-Word Puzzle

Across
1. sediment or rock that transmits water easily
2. an elongate wedge of sediment formed by the overlap of several alluvial fans
3. a tectonic unit that has been transported far from its source of origin
4. a large flat-topped hill
5. the color of the powder produced by pulverizing a mineral on an unglazed ceramic plate
6. compacted granular ice that forms when snow is deeply buried
7. the line of maximum curvature on a folded surface
8. permanently frozen ground
9. fold whose inner and outer arcs have exactly the same shape, i.e. Class 2 fold
10. a desert rock whose surface has been faceted by the wind
11. a compositionally banded metamorphic rock typically composed of alternating dark- and light-colored layers
12. a mixture of unsorted mud, sand, pebbles, and larger rocks deposited by glaciers
13. a large crystal surrounded by a finer grained matrix in an igneous rock
14. the horizontal component to the dip separation on a fault
15. a supercontinent that assembled at the end of the Paleozoic Era
16. a naturally occurring aggregate of minerals
17. a fault bounded block

Down
1. the reflectivity of a surface
2. molten rock beneath the Earth’s surface
3. a low tone
4. an exposure of bedrock
5. force divided by area
6. a reflect of wall rock surrounded by intrusive rock when the intrusive rock freezes
7. a nearly horizontal tabular intrusion
8. compressional seismic waves that travel through the interior of the Earth
9. the original rock from which a metamorphic rock formed
10. a long-lived block of durable continental crust commonly found in the stable interior of a continent
11. the side of a fold, showing less curvature than at the hinge
12. an especially low tide that occurs when the angle between the direction of the Moon and the direction of the Sun in ninety degrees
13. a pair of thin layers of glacial lake bed sediment
14. a man-made wall that protects the entrance to a harbor
15. the dense iron-rich center of the Earth
16. a thick slurry formed when volcanic ash and debris mix with water on the flank of a volcano
17. open holes in igneous rock formed by the preservation of bubbles in magma
Mike Smith and students at the Lost Coast
Lost Coast field work
Matt James and students in Canada
Students at Athabasca Glacier
Matty Mookerjee with students on Senior Field
Research students in the Eastern Sierras
GEOL304 at Emigrant Pass

Matt James and students in Canada

Structure Field students

GEOL304 at Emigrant Pass

Paleo Field at Kelso Dunes

Students on Seds trip
Geology Club trip to Goat Rock

Nicole hanging around at Goat Rock

Matty hanging around at Goat Rock

Goat Rock Fun!

Goat Rock Fun!

Dan is actually doing research here
Students at Marin Headlands

Scotty and Jason “heart” you!

Senior Field crew, 2011

Senior Field crew, 2012

This year’s graduates. Congrats!!!

This year’s graduates with distinction
Mike with 304 students at Rainbow Basin

Jamie and Alexa in Montana

Chess in the field

Nicole shooting Dave Fowler’s potatoes gun

Tracie in Yosemite

In Canada

Ryan covered in Burgess Shale Fossils
Geology Jokes

Please e-mail us your favorite (potentially corny) geology jokes, to be included in future newsletters (to matty.mookerjee@sonoma.edu).

Rebekah Cesmat: How fast does a thrust fault move?  
Answer: a mylonite!!!

Matty Mookerjee’s favorite joke: What’s in the middle of an atoll?  
Answer: Nothing at-all!!!

xkcd

From Death Valley Bulletin Board

X-Word Solution:

aquifer
bajada
allochthon
gneiss
arme
mite
vortex
phenocryst
basalt
similar
permifrost
line
let
horse
bed
pangaean
heave
rock
Thank you, Dave Fowler (aka, Super Dave)!

Dave generously donated a brand new Pomeroy rock coring drill and orienting device.

Ways to Donate:

You can, like Dave, directly donate geologic equipment in consultation with the Geology Dept. However, we also have two funds that can be donated to: 1) the Alumni Field Geology Fund, and 2) the Woodard Scholarship Fund. The first helps support student research projects, and the second helps offset the cost of summer field camp. As you can see in the graphic to the left, we have lost some money from the Woodard Fund with the latest recession. These scholarships are awarded on a competitive basis where the amount awarded is based on the accrued interest from the previous fiscal year.
Photos From Way Back When...

Here are a couple of photographs from the early days of our department.

Woody in the snow

Tom and Woody in the field

Please send us some of your old photos from your time at SSU (send photos to matty.mookerjee@sonoma.edu).
Department News

Congratulations to the 2011 graduates:

Geology BA
Jennifer Urrea

Geology BS
Matthew Cruz
Marlin dal Pozzo
Christopher Davidson
Russell Di Fiori
Trevor George

Erin Hoxsie
Kalia Knoll
Scott Lawyer
William Orr

Graduates with Distinction:
Christopher Davidson
Scott Lawyer

Woodward Scholarship Awardees:
Trevor George
Jamie Bywater

Will Withrow
Russell Di Fiori

Christopher Davidson
Erin Hoxsie

Outstanding Student Award from the Association of Women in Geoscientists: Erin Hoxsie

Graduate School:
Trevor George—Western Washington University
Russell Di Fiori—University of Nevada, Reno
Matthew Cruz—South Dakota School of Mines
Department News

Congratulations to the 2012 graduates:

Geology BS
- Nicole Aldrete
- Jamie Bywater
- Sarah Looney
- Ian Penn
- Tracie Riedel
- Ryan Wanamaker
- Will Withrow

Earth Science BA
- Michael Nicolos
- Kelly Nobienski
- Joseph Rotstein

Graduates with Distinction:
- Jamie Bywater
- Joseph Rotstein
- Ryan Wanamaker

Woodard Scholarship Awardees:
- Rebekah Cesmat
- Ian Penn
- Tracie Riedel

Outstanding Student Award from the Association of Women in Geoscientists: Jamie Bywater

Graduate School:
- Ian Penn—Boise State University

Students Presenting at the National GSA meeting in Minneapolis, MN:
- Christopher Davidson
- Russell Di Fiori

Each of these students were partially funded through internal SSU grants; however they paid for some of the meeting fees out of their own pockets. Please think about donating to the Geology Dept. so that we can keep getting our students into the field.
Happy Retirement!

The Geology Department would like to wish Dan Karner and Sue Nosker each a happy retirement. Dan started at SSU in 2003. In the photo to the left, one can see Dan in the field with our 102 students. Dan took great pains in making the Kehoe Beach trip a great experience and recruiting tool for our major.

Sue joined our department in 2005 and quickly made herself a vital part of its operation. She made field trips a delight and worked well with the majors both in the field and training them to make thin sections.

Thank you both for your service, and we hope that you have an enjoyable retirement!
We hope to hear from you soon...

Let us know if you enjoyed the newsletter or if you have any suggestion for our next addition. Please do send us your alumni notes, photographs, and your geology jokes. E-mail your responses to matty.mookerjee@sonoma.edu. And do consider donating to the department. Take care, everyone!