Sedimentary,

my dear Watson...
The cover drawing is the 2015 Geology T-shirt design by Jayne Pasternak ’15

The Carleton Geology Newsletter is edited by Jonathon Cooper
Layout by Ellen Haberoth

Photo Submissions:
Pictures submitted to the Newsletter can be either in traditional print or electronic formats, but electronic pictures should be medium to high resolution in order to reproduce well on paper. The file size of electronic pictures should be several hundred KB or more.

If you have a change of address or other correction to our address list, you may edit it yourself and make sure your listing is done the way you prefer at http://apps.carleton.edu/alumni/directory/

If you have forgotten your username or password call the Alumni Affairs Office at 1-800-729-2586.

Or

You may notify:
Alumni Records
Carleton College
Northfield, MN 55057
(507) 222-4195
E-mail: addresses@carleton.edu

Geology Department T-Shirts Available

We have a supply of geology T-shirts available that can be purchased by mail. The cost for a current year shirt is $10 plus $4 postage payable to Carleton College, and, as a gift, we will throw a previous years shirt in for free (it’ll be a surprise what shirt from the past you will end up with).

The 2014 –2015 Geology T-shirt features a geo-themed Watson Hall with the local stratigraphy. The shirt is short-sleeved and maroon with light blue text. Sizes XS, S, M, L, and XL are available.

There is also a timeless (and priceless!) special shirt available for families with multiple generations attending Carleton. The shirt features a diagram of the interior of the Earth with the core labeled Carleton Faculty, and the layers going upwards toward the surface being Post Docs, Graduate Students, Seniors, Juniors, and Sophomores; the blebs of magma (which melted off the subducting plate) rising toward the surface are “Children that go to Carleton.” It is a cardinal red with white ink. Sizes available: S, M, and L.

Email Jonathon at jlcooper@carleton.edu, or call at (507) 222-4401 to find out if your size is still in stock.
Dear Friends of the Carleton Geology Department -

I’ve got mostly good news for you about geo-life at Carleton, although the end of this letter has some bittersweet news about Mudd Hall.

This year, we had a very talented group of senior majors whose comps projects spanned the geosciences, from an examination of methane seeps in the Gulf of Mexico to landslide potential in upstate New York to Alaskan tectonics to the possibility of floating-treatment wetlands in our own Lyman Lakes. You can read a full list of their projects later in the newsletter. As usual, please feel free to contact us (especially by flooding the email of incoming chair Clint Cowan) if you have ideas for comps projects or need field assistants etc. We are always looking for interesting opportunities for our students.

The beloved tradition of departmental field trips is alive and well. Lately, we’ve been fortunate to invite alums and others with expertise in relevant areas to come along. In the fall, we visited some new outcrops with George Hudak III ‘83 and Dean Peterson, and logged some core with Kristin Bergman ’04. In the spring, our trip to the St. Francois mountains in Missouri included the ritual paddle down the Black River with Carrie Elliot ’98, and USGS colleague Susannah Erwin.

Visits from alums, both on the long- and short-term, have also been enriching our courses and the department as a whole. Alice Newman ’11 taught Tectonics in the fall and hosted a grad school advice session with Graham Hagen-Peter (who is not an alum, gasp! but who will be teaching two courses for the department in 2015-2016). Ken Tape ’99 taught a novel course on Climate Variability and High Latitude Ecosystems that coincided with his exhibit on changes in the Arctic landscape at the Perlman Teaching Museum. Charlie Andrews ’73 visited Mary’s Hydrogeology course and Willy Guenthner ’07 guest lectured about thermochronology methods in Cam’s Petrology course. Departmental speakers included John Sharry ’73, Jeff Mow ’83, John Feige ’97, James Bishop ’01, and Aleshia Mueller ’01.

I hope you get the sense that many things are going well for Carleton Geology, so let’s turn to the bad news. Carleton is planning an integrated science complex linking Olin and Hulings with a new building; to make space for the complex, Mudd Hall will be torn down. In the process of planning for this new building, we have marveled at the flexible and extremely functional design of our spaces in Mudd – the integration of teaching spaces with the museum, the microscope room, the lounge, the dirty work room, and the computer lab is novel especially given the age of the original construction. (Thank you Ed, Eiler, and Shelby.) We are hopeful that the new spaces will be just as wonderful.

Now, don’t despair: you’ve got a few more years to visit Mudd before its destruction. Perhaps this news will be enough to spur you to visit during reunion. We’d love to see you and hear about your adventures past in these great geology spaces in Mudd.

Sarah Titus
FACULTY UPDATE - CLINT COWAN

For some reason, last academic year is a complete blur to me. I know I must have taught some students something, and went in the field places, but all I can conjure up to my mind was that I was the designated drafting person for Geology floor plans as the College moves towards creating a new “Science Complex” (which apparently means tearing down Mudd, and attaching an addition to Hulings/Olin, thus insuring the future destruction of those buildings as well). I guess what makes it a “complex” is that in the new planned Atrium, you’ll be able to see across to other floors in attached buildings, but it will be too complex to actually figure out how to get there. The Geology Faculty collectively have spent much stress capital on this project, and we are overall still rather stressed about the whole process, but we’re keeping our fingers crossed (one might ask why thoughtful well meaning and earnest people feel they have to keep their “fingers crossed” when the College is planning to spend almost 100 million dollars to improve things… one might well ask…).

But the highlights of teaching this year have been in the field and in labs of friends at the University of Minnesota. Amy Myrbo of the U of Minnesota LacCore facility again helped my GEOL 115 class take a lake sediment core (Sharkey Lake, near Elko New Market, MN) in January, and then spend weeks working up that core in their labs as the center piece of studying changing climate during the last de-glaciation (see photos).
DEPARTMENTAL NEWS

CLINT COWAN - con’t

Dan Maxbauer, a grad student at the U, helped us determine local CO2 atm levels by counting the stomatal complexes in local ginkgo leaves under the microscope. Overall it was a very hands-on Paleoclimate class for all of us! I also had fun in the Cannon River Wilderness Park with my Paleo class studying the microbes in the iron springs (photos right). I remember talking to Noah Finnegan ’99 about the CRWP: everything you know about geology can be applied to the Cannon River Wilderness Park… it’s a wonderful local resource.

Thanks to all alums who have generously donated to the Department to allow us to run all of these cool excursions and do all this real science with our classes!

THANK YOU!

FACULTY UPDATE - MARY SAVINA

I continue to work with Nancy Wilkie on the publication for the archaeological survey in Grevena, northern Greece, a project we began in 1987. Nancy has now retired, but is as busy as ever; each year we get 4-6 weeks of solid time to work together on the writing. We’ve been retreating to her home along Lake Superior for a couple of weeks each summer and always get a lot done there, even if we don’t see much of the Lake except out the windows, over our computer monitors. Last year, Jayne Pasternak and Jacob Viesselman did comps projects related to Grevena; Jayne is continuing as an “Educational Associate” (a.k.a. 5th year intern) this academic year. We’re looking forward to making a larger dent on this project!

I’m excited about an exhibition in the Weitz Center, Perlman Teaching Museum, that is up in fall 2015. Victoria Morse (history) and I collaborated with Laurel Bradley, the museum’s curator, on an exhibit called “Mediterranean Rivers Chained and Unchained.” We were able to borrow originals (plus some facsimiles) of Renaissance Italian books and maps about river processes and water, more generally. Several of our classes over the last few years have been involved in putting the exhibit together and students in our fall term classes will be giving tours of the exhibit, of the Cannon River in downtown Northfield and doing demonstrations with a stream table, built by George McAneny as part of his comps project. You can read more about the exhibit at: http://apps.carleton.edu/museum/mediterranean_rivers/ (after November 18, 2015, this site will be linked from the “exhibition archive” page of the Perlman Teaching Museum.

I’m also very excited about 2016. Nancy Braker, the Arb Director, and I are planning to take students to Tasmania for two weeks in December 2016. Students in this off-campus program, on conservation, natural history and geology, will take related courses in fall and winter terms, before and after the road trip. To prepare, Nancy and I will be in Tasmania in January 2016 and then I will fly from there to Buenos Aires to be a faculty leader on Carleton’s alumni trip to Antarctica.

With my classes and several comps students each year, I continue to work on projects related to the Cannon River watershed. Some days I feel as if I am traveling between Greece, Italy, Australia, Antarctica and Minnesota – without ever leaving the building.
DEPARTMENTAL NEWS

FACULTY UPDATE - CAMERON DAVIDSON

After a speedy rejection of our manuscript by Nature Geoscience (it was worth a shot), we successfully published a paper this June in the American Journal of Science entitled “Southwestern Laurentian zircon in Upper Cretaceous flysch of the Chugach-Prince William terrane in Alaska.” This paper summarizes much of the work we have done in Alaska over the past three years with an emphasis on the detrital zircon story and what it tells us about Cordilleran terrane translation from the Maastrichtian to present. Spoiler alert: the rocks came from southern California. We also self-published a field guide, and ran a two-day field trip for the GSA Cordilleran section meeting in Anchorage, entitled “New Insights into the Geology of the Chugach-Prince William terrane in the Seward area, Kenai Peninsula, Alaska.” The trip was over-enrolled and a big success, except for the weather. It was gratifying to see that even President Obama took interest in our rocks on his recent trip to Alaska.

Last summer we took six students with us to Alaska including two Carls, Rudy Molinek ’15 and Bill Grimm ’15, where we focused our efforts in eastern Prince William Sound. To learn what they, and the rest of our students discovered, please go to our research web page at: http://minerva.union.edu/garverj/alaska/chugach_Keck.html. Also, please check out a well done video by Kaitlyn Suarez from Union College that shows spectacular Alaska scenery and is a good summary of the student projects: https://youtu.be/1UxiBoWD9yA. You can also search “Keck Alaska 2014” in Youtube to find it.

This fall I’m teaching “Geology in the Field”, then it’s off to New Zealand to teach the South Island part of the program, then back for Petrology in the spring. A big thank you to Willy Guenthner ’07 who came back to Carleton last spring to help me out and teach a week of the Petrology course while I was away. The students loved him, and now I can steal his material for the spring.

Obama Cartoon Credit: Kent Ratajeski, U of Kentucky

Bill Grimm ’15 sampling the biology.

Cam Davidson and John Garver (Union College) enjoying the sun in Seward.

“...and the rocks over there are part of the Paleocene Resurrection Peninsula Ophiolite, a west-dipping sequence of pillow basalts, sheeted dikes, massive and layered gabbrons, and interbedded clastic sediments.”

Alaska stud geologists Rudy Molinek ’15 and John Garver (Union College).
FACULTY UPDATE - BERKET HAILEAB

During June of 2015 I spent three weeks mapping the Tambien Group in Northern Ethiopia with Adam Maloof ‘98 and Nick Swanson-Hysell ‘05. The focus of this research trip is the Samre fold/thrust belt where our team discovered abundant new exposure of the Negash Diamictite which is interpreted to be associated with a snowball event ca. 720 Ma.

In August 2015 I was honored to be a trip leader on a 15-day white water rafting trip in the Grand Canon (picture below). A group of 23 Carleton alumni and friends traveled down the Colorado River in dories and boats. We rode some of the biggest white-water rapids in North America and hiked intriguing side canyons where there was no trail, camped on beaches along the river and had a wonderful time. I learned a lot about the Geology of the Canon and I hope to do this again and to see many of you on the next trip.

If you are teaching mineralogy/petrology visit http://www.people.carleton.edu/~bhaileab/Petrology/BH250Slides/ThinSection.html to see a small but growing collection of digitized images of common minerals. This website is work in progress and was recently updated with the help of Leah Sacks class of 2017.

BH250-67c
Schist collected in the Black Hills
Cross Polarized Light

BH250-67d
Schist collected in the Black Hills
Plane Polarized Light
FACULTY UPDATE - SARAH TITUS

I have taught many first-year students this past year, in both a freshman A&I course in the fall and a regular Introductory Geology course in the spring, which happened to have 32 first-year students. In between these two courses, I taught Structural Geology to a crop of great geo majors. The highlight for this advanced course is always our mapping trip to the Salton Trough; we were lucky that our visiting instructor Alice Newman ‘11 was able to join us for this trip.

On the research side of things, I’ve been working with students of all ages over the past year on projects that were both local and far-flung. I went to California in December with two young’uns, Peter Lindquist ‘18 and Erin Young-Dahl ‘17, and also an old’un, Alice Newman ‘11. It was fitting for Alice to come along; her comps was about some of the same rocks that we looked at this past year. I went to Iceland with Will Chapman ‘16 last summer, which is a truly beautiful place with not especially beautiful or reliable weather. I co-advised Emily Houlihan ‘15 on her comps project about mid-continent rift sediments in Minnesota. Emily will be continuing to work on this project in the next year as a fifth-year intern at Carleton.

I’ve also just finished running GALS for the second time, a week-long program for local middle-school-age girls focused on outdoor, experiential learning. I had wonderful counselors again this year, including Lydia Auner ‘15, Emily Houlihan ‘15, and Katherine McLellan ‘15, and Sally Donovan’16. For this camp, we are able to repackage labs from Introductory Geology, like the classic visit to Little Chicago gravel pit. Add some chocolate-related activities, coloring, play-doh, and the joy of girls who still play outside, and it makes for a pretty fun week.

Students watch a re-enactment of an angular unconformity in Box Canyon, CA. Alice Newman directs Bill Grimm ’15 and Emma Schneider ’15

Structure students swarm an outcrop with deformation
Will Chapman ’16 (in red) and Andrew Horst (in blue), an Oberlin professor, cling to a steep slope to prepare to drill samples on a pretty good-weather day in Iceland.

The GALS participants at Little Chicago gravel pit.

The whole GALS 2015 crew.
VISITING FACULTY UPDATE - ALICE NEWMAN ’11

It was a treat to be back at Carleton last fall, teaching Tectonics and tromping around Mudd once again. Not surprisingly, I was impressed by both the diligence and good humor of my students (at least one student laughed at my jokes…I suppose that isn’t saying much). Highlights of the course included many hours honing our geologic map-reading skills together, learning the characteristics of different plate boundary types, and peer-editing weekly blog posts on various plate boundaries around the world. Also, with the help and expertise of Mark Zach, our shop technician, students designed and built original devices that illustrated a concept of tectonics we learned during the term. Students spent multiple lab sessions downstairs in the shop, using power tools and even the new 3D printer to build their projects.

I also enjoyed reconnecting with the department, which welcomed me back warmly and enthusiastically. Cam Davidson graciously lent me his office space while he was away in Italy. During the term, I accompanied Sarah Titus and her freshman A&I class on a field trip to Morton, MN, where we treated ourselves to igneous and metamorphic rocks, for a change. Shortly after the end of the term, I spent a week in the field with Sarah Titus, Erin Young-Dahl ’17, and Peter Lindquist ’18, collecting deformation band and fault data in southern California. In February, I joined Sarah’s structural geology trip to the Salton Sea and Mecca Hills. It was fun to see some of my students again and to revisit the site where I had mapped just years before.

I am happy to say that I will be returning to Carleton in the fall of 2015 to teach Tectonics again. I look forward to connecting with the current crop of geology students, both inside and outside of class. I am grateful for yet another opportunity to be involved with the department and with Carleton altogether.

Duncan Stewart Fellows for 2014-15

Each year, the geology faculty faces the difficult task of selecting a few students to be Duncan Stewart Fellows. The Duncan Stewart Fellowship was established in 1976 by Daniel Gainey, class of 1949, in honor of Duncan Stewart, professor of geology at Carleton for nearly 25 years.

We select the Stewart Fellows based on a combination of excellence in scholarship, a high level of intellectual curiosity, potential for scientific growth, and involvement in departmental activities. As we make this selection, we realize how fortunate we are to have so many talented, interesting, and impressive students within the department.

We are very pleased to announce that Noah Anderson ‘16, Sally Donovan ‘16, and Will Chapman ‘16 have been named Duncan Stewart Fellows, extending the number of Stewart Fellows over the years to 109. Congratulations and keep up the great work!
Senior Projects - 2015
Graduating senior geology majors, their hometown and titles of integrative exercise (“comps”) projects:

**Lydia Auner, Madison, WI,** “Evaluation of acoustic seep detection methods and analysis of methane seep spatial distribution in the Gulf of Mexico”

**Anders Berglund, Minneapolis, MN,** “Examining Possible Source Calderas for the Arikareean Tuffs of Western Nebraska Using Major Element Biotite Geochemistry”

**Leah Cromer, Cincinnati, OH,** “Triggering mechanisms of rotational earth slumps in glacial lake clays in Albany County, New York”

**Luke Fairchild, Wausau, WI,** “High temperature emplacement of clastic breccia dikes and implications for the development and magnetization of impact craters”

**William “Bill” Grimm, Hinsdale, IL,** “A tectonic and provenance study of the Chuggach-Prince William terrane, Alaska, with specific focus on the Paleogene Orca Group, using U-Pb dating of detrital zircons”

**Emily Houlihan, Boulder, CO,** “Age constraints of Mid-Continent Rift sediments in Northern Minnesota using paleomagnetic analysis”

**Jabari Coleman Jones, Minneapolis, MN,** “Assessing the role of turbulent fluctuations in sediment entrainment”

**Charles “Omar” Kaufmann, Winnetka, IL,** “Effects of burn severity on hill-slope soils and local variation four years after the Fourmile Fire, Boulder County, CO”

**Callum McCulloch, Woodside, CA,** “Timing of Proterozoic deformation of the Needle Mountains, Colorado: Using U-Pb isotope geochronology to unravel the Yavapai Orogeny”


**Frank “Rudy” Molinek, Davidson, NC,** “Detrital zircon U/Pb ages and provenance study of the Paleocene to Miocene Tofino basin sedimentary sequence, Olympic Peninsula, WA”

**Leah Nelson, Altamont, NY,** “Evaluating a method of thermal infrared remote sensing of sub-debris ice ablation: Emmons Glacier, Mount Rainier, Washington”

**Jayne Pasternak, Short Hills, NJ,** “Geophysical explorations: a case study of two archaeological sites in Grevena, Greece: Aghios Giorgio Aghia Varvara and Itea Panaghia/Profitis Ilias”

**Jeremy Randolph-Flagg, Kappa, HI,** “Remote Sensing of Water Isotopes to Detect Transpiration: An Initial Investigation in the Amazon and Central Siberia”

**Ian Reeves, Berkeley, CA,** “Assessment of two stormwater retention ponds in the Spring Creek Watershed, Northfield, MN: Flood mitigation capabilities and sedimentological history”

**Julia Reich, Marine on St Croix, MN,** “Microbial response to nitrogen deposition, invasive species presence, and flooding in the upper Mississippi River floodplain, La Crosse, WI”

**Lauren Salberg, Longview, WA,** “Assessing floating treatment wetlands as a best management practice to reduce nitrates in Lyman Lakes, Northfield, MN”

**Emma Schneider, St. Paul, Minnesota,** “Constraining the crystallization and cooling history of the Sanak-Baranof Belt Plutons of southwest Alaska using (U-Th)/He and U-Pb geochronology”

**Erica Sheline, Atlanta, GA,** “Examining phosphate precipitation: Impact of biological nucleation sites on the precipitation of fluorapatite crystals”

**Jackson Van Fleet, San Francisco, CA,** “Plant Dynamics and Soils Influencing Ecological Restoration: Rancho Corral de Tierra, Golden Gate National Recreation Area”

**Jacob Viesselman, San Tan Valley, AZ** “Chemical and Mineralogical Analysis of Bronze Age Pottery Sherds from Grevena, Greece”
DEPARTMENTAL NEWS

2015 Awards

Distinction in Geology Comps
Lydia Auner ’15
Luke Fairchild ’15
Emily Houlihan ‘15
Jabari Coleman Jones ’15
Katherine Chandler McLellan ’15
Leah McErlean Nelson ’15
Ian Robert Blau Reeves ’15
Julia Ann Reich ’15
Erica Kimberly Sheline ’15
Jackson Vanfleet Brown ’15

Mortar Board
Erica Kimberly Sheline ’15

Phi Beta Kappa
Lydia Claire Auner ’15
Julia Ann Reich ’15

Sigma Xi
Lydia Claire Auner ’15
Luke McCoy Fairchild ’15
William Edward Grimm ’15
Charles Omar Kaufman ’15
Katherine Chandler McLellan ’15
Frank Rudolph Molinek III ’15
Leah McErlean Nelson ’15
Jayne Herta Pasternak ’15
Jeremy Spencer Randolph-Flagg ’15
Lauren Michele Salberg ’15
Emma Lincoln Schneider ’15
Erica Kimberly Sheline ’15
Jackson Vanfleet Brown ’15
Caroline Anna Lauth ’16

Laurence McKinley Gould Prize in Natural Science
Ian Robert Blau Reeves ’15

Honors in Independent Study
Ian Robert Blau Reeves ’15

Jean Schmidt Prize
Jayne Herta Pasternak ’15

Independent Research Fellowship
Sara “Sally” Margaret Donovan ’16

Kolenkow Reitz Fund for Undergraduate Research
Jahari Coleman Jones ’15
Zachary Daniel Mitchell ’17
Jeffrey David Rosen ’16

Mellon Mays Undergraduate Fellowship
Shanti B. Penprase ‘16

Class of 2016

Noah Anderson, Olympia, WA
Nelson Bandy, Loudonville, OH
Charlotte Beal, Cambridge, MA
William Chapman, Saint Paul, MN
Ilana Crankshaw, Menlo Park, CA
Elizabeth Davis, Buffalo, MN
Sally Donovan, Minneapolis, MN
Sarah Jordan, West Bath, ME
Caroline Lauth, Minneapolis, MN
Max Longchamp, Cornwall, VT
Philip-Peter Maxeiner, Bronxville, NY
George McAneny, Santa Cruz, CA
Shanti Prenprase, Claremont, CA
Elaine Rock, Minneapolis, MN
Jeff Rosen, Arlington, MA
Forrest Williams, Manton, MI

Class of 2017

Josie Arcuri, Bloomington, IN
Peter Barron, Montgomery, NY
Sam Blackburn, Ann Arbor, MI
Pete Boerma, Watertown, SD
Kyra Bornong, Minneapolis, MN
Willie Freimuth, Waunakee, WI
Andrew Keene, Simsbury, CT
Evan Lahr, Monticello, MN
Mara MacDonell, Grand Marais, MN
Rebecca McGehee, Denver, CO
Spencer O’Bryan, Cooperstown, NY
Haley Olson, Weybridge, VT
Erin Patrick, Harleysville, PA
Stefan Payne-Wardenaar, Northfield, MN
Emily Ross, Niwot, CO
Chloe Rouhandeh, New York, NY
Jesse Rubin, Stevenson, MD
Leah Sacks, Oak Park, IL
Aaron Schwab, Elk River, MN
Perrin Stein, Newton, MA
Anna Thompson, Eugene, OR
Erin Young-Dahl, Wayne, PA
Departmental Field Trips 2014 - 2015

This past year we had a fantastic set of fieldtrips with more than 60 unique student participants between the two trips. We travelled to Northern Minnesota for the October midterm break trip and then south over the Spring term break to Missouri’s St. Francis Mountain region.

The October field trip was a great success as our group was joined in the field by George Hudak III ‘84 and Dean Peterson from University of Minnesota Duluth Precambrian Research Center, as well as Kristin Bergmann ‘04 from Harvard/MIT. We had 4 days of cool fall weather, which gave the group the perfect opportunity to explore the amazing geology found along the shores of Lake Superior, and the geology of the Vermillion district.

Kristin and Bereket with the help of a number of student “experts” walked the group through the geology and events associated with the mid-continent rift.

George and Dean led the group on a whirlwind tour though a succession of Archean and Precambrian geology and associated mineral deposits that lasted a whole day and into some of the night. Some of the classic geology outcrops we visited were the Archean turbidites, banded iron of the Soudan formation.

We also had a pleasurable visit to the Thunderbird Mine (Cliffs Mining) in Eveleth, MN. The company geologist Jakob Wartman (Macalster ‘07 grad) gave a fantastic tour of the Biwabik Iron Formation.
The annual spring mid-term break trip travelled to the St. Francois Mountains of Missouri in 2015. While there, we first stopped at a roadside outcrop of rhyolitic ignimbrite that was intruded by a basaltic dike, as well as at a roadside exposure of plutonic rhyolite. The second day of the trip we visited the Taum Sauk Mountain, which is the highest point in Missouri. There we saw and explored the scour left by the failure of the reservoir located at the peak of the Taum Sauk Mountain, which fully exposed the underlying Precambrian igneous rocks of the St. Francois Mountains. On the final day of the trip, we went on a ~15 mile canoe trip and conducted a brief pebble count at our lunch stop to look at the relationship between pebble size relative to location in the river. Although it rained briefly, the weather was great for the rest of the trip.

Written by,
Nelson Bandy ‘16

Thanks to all the alums who make these trips wonderful teaching and learning opportunities for this generation of students. We would like to say thank you all the alums who make these trips with their time and support, as well as to Chris Rautman ‘72 for his continued generosity.
DEPARTMENTAL NEWS

Professional Talks Given in the Geology Department This Year

Kristin Bergmann ’04 – Harvard/MIT: The Ediacaran environment prior to the rise of animals: Insights from the Sultanate of Oman

Graham Hagen-Peter – UC Santa Barbara: Insights into the early stages of a convergent margin through garnet Lu-Hf and Monazite U-Th-Pb petrochronology: the premagmatic history of the Ross orogeny, Antarctica

Career Panel in the Geo Department with John Fiege ’97 & Aleshia Mueller ’01

“Above All Else” Screening Q & A after with Director John Fiege ’97

John Sharry ’73 – “Which Came First? The San Andreas Fault or the Pelona Schist”

Charles Andrews ’73 – S.S. Papadopolos & Associates - Bernstein Geology in Residence:

“What Happens to Science in the Courtroom – Perspective from a Groundwater Expert” & “A Career as a Professional Geologist”


Jeff Mow ’81 – Superintendent Glacier National Park - Bernstein Friday Speaker: Navigating an Uncertain Future: The Role of National Parks and Protected Areas in an Era of Climate Change”

Carleton People Present Papers at Annual Meetings

The following Carleton Geology Department people presented papers in technical sessions at the meeting of the Geological Society of America in Charlotte, North Carolina; as well as regional meetings of Geological Society of America. The Carleton folks are indicated in bold face type, and students and alums are indicated with their class years. The presentations listed are only those which involved a current Carleton student or employee; many other Carleton alums, too many to list here, also presented papers at the meetings.

Geological Society of America

Lawrence, Ryan ’14, Haileab, Bereket. “Geochemistry of the early Eocene Coast Range Volcanic Province, Pacific Northwest, and evidence for plume-ridge interaction.”


Wagner, Chelsea A. ’14, Alexander, Sarah O. ’14, Titus, Sarah. “Rock magnetic data from the outside corner of a ridge-transform system, Troodos Ophiolite, Cyprus.”

Kahn, Maureen J. ’14, Fayon, Annia K., Tikoff, Basil, Byerly, Ad. “Constraining exhumation of the Sawtooth and White Cloud Mountains by (U-Th)/He zircon thermochronology.”


Lempert, Rainer N., Crowley, Peter D., Davidson, Cameron, and Garver, John I. “Geochemical and petrologic evidence for magma mixing in the Sheep Bay and McKinley Peak Plutons, Prince William Sound, Alaska.”


Schneider, Emma ’15, Garver, John I., Davidson, Cameron. “Cooling history of the Sanak-Baranof Plutons, Alaska, using zircon and apatite (U-Th)/He thermochronology.”

Davidson, Cameron, Garver, John I. “HF isotope signatures from fore-arc plutons of the Sanak-Baranof Belt, Alaska, suggest spatial and temporal control of crustal contamination.”

Carleton People Present Papers at Annual Meetings - Con’t

The following Carleton Geology Department people presented papers in technical sessions at the meeting of the AGU annual meeting in San Francisco, CA; as well as regional meetings of Geological Society of America. The Carleton folks are indicated in bold face type, and students and alums are indicated with their class years. The presentations listed are only those which involved a current Carleton student or employee; many other Carleton alums, too many to list here, also presented papers at the meetings.

**American Geophysical Union**

Dits, T. M., **Nelson, Leah L. ’16, Moore, Peter L. ’98, Pasternak, Jayne H ‘15.** “Small-scale variations in Melt of the Debris-Covered Emmons Glacier, Mount Rainier, USA.”

**Penprase, Shanti B. ’16, Abramson, N, LaSharr, K, Chorover, J.** “The effects of rock type and landscape position on solution chemistry of soils in the Biosphere 2 Desert Site of the Santa Catalina Mountains Critical Zone Observatory.”


McKenna, L., **Auner, Lydia ‘15, Weller, E., Paton, M., Doucet, M., Lobecker, E.** “Preliminary analysis of manual and Automated Seep Detection in Multibeam Water-Column Backscatter.”


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Panoramic of Thomson Dam
Faculty and Staff Updates (Retired and very happy updates!)

Not a lot to comment on. Cynn and I are both healthy and happy. She has taken on the job of “weeding” the woods surrounding our house. I have lovingly renamed her Paula Bunyon because of all the work she has done removing European buckthorn and other invasive species. While helping her with this immense problem I have discovered a new orchid to add to the floral list we have worked on for the past 41 years.

Some problems with walking have reduced my traveling schedule but the two dachshunds we have make sure that I walk at least three times a day, so I am slowly improving but have not tossed the cane away quite yet. At the end of October I will officiate at the wedding of one of my old Boy Scouts and shortly after that Cynn and I will visit grandchildren in Oregon. We are combining that with a visit to see Mark Gonzalez ‘83 and his family, too.

Finally, Mary Savina has asked me to participate in a series of talks scheduled for the Weitz Center. She has asked me to tell the audience about one of my earliest environmental projects (mid ’70s): an analysis of flow characteristics of the Cannon River used to successfully demonstrate that it would be foolish to try to harness the Cannon River for a 3200 megawatt, coal-fired power plant. That experience led me to work on a series of state and national environmental concerns.

I end with my usual plea for you to come back for reunion weekend. It is the most fun time each year for me and I hope for you, too.

Ed Buchwald

This past year has made Jean and me grandparents! We are discovering the joys of a wonderful grandson who was born to our daughter Laura in Minneapolis on July 5, 2014. We were present for his birth and have spent time with him every week watching him grow. What an amazing time the first year of life is! Salah Andrew Alagbash (Laura’s husband is Palestinian), at 11 months old, is a curious little engineer determined to figure out how everything works. Best wishes to all our Geo friends - have a great year!

Tim and Jean Vick
Not just about the rocks: In memory of Anu Gupta ’93, 1971-2015

It was late on the first night of the SWANK reunion and the bottle of tequila was well on its way to oblivion. I turned to Anu and remarked that I had known these college friends of hers for over twenty years; although I had met them through her, they had become my dear friends as well. “Well, it took you long enough to figure that out!” was her response.

Anupma Gupta (Anu) died suddenly and unexpectedly Sept. 12th in Switzerland, where our family was living during the first leg of our sabbatical year abroad. She was just 44. She was a dear wife and friend, a person of unparalleled raw and emotional intelligence, an advocate for women and those seeking to make the most of their lives, and a wise mother who raised two kind, sensitive, smart, strong and resilient daughters. At the time of her death, Anu was preparing to embark on a career in middle school science education; prior to that, she was a career and life coach, stay-at-home mother, college professor and earth scientist.

Anu loved her time at Carleton and in the Geology Department, from the very first field trip into the Boundary Waters Canoe Area Wilderness. One of the pictures from that trip shows her grinning, holding an enormous pike she had just caught. In the orbit of the Geology Department, she connected with a group of friends that came to refer to themselves as the Strong Women, including: Maria (Panfil) Wright ’93, Beth Pratt-Sitaula ’93, Naomi Lubick ’94, Liz Butler ’94, Kate Jesdale ’95, Joan Ramage Macdonald ’93, Karin Stratton ’93, Julia Daly ’94, Beth Lambert ’93, Martha (Tobey) Alvarez ’93, the late Julie Williams ’94, Neera Gupta ’98, Anita Ho ’93, and Michelle (Lang) Boardman ’93. After college, they all dispersed into careers but they made a point of coming together, once a year, to canoe or kayak, to be together, to eat s’mores, to skinny dip. Later, when there were boyfriends and husbands, we were not allowed to go on these trips. Still later, when more marriages happened and babies were born, the Strong Women morphed into the Strong Women and Nifty Kin (SWANK). Husbands and kids joined these wonderful times together, most recently earlier this year in the Colorado Rockies with the tequila.

Anu loved when Carleton friends would visit. First, in New York City, where she earned a PhD in tectonophysics at Columbia, but was happy to be dragged to the tourist sights. Then in Arizona, where she was a professor at the Biosphere 2 Center, mother and life coach, especially during the winter, she enjoyed warm desert hikes in the late afternoon colors with visitors. And in Takoma Park, which is lousy with Carleton alumni, the door was always open. There, Liz Butler ’94 and Will Morris ’94 moved into our basement for a few months that stretched into five years. FULL (Food Unlimited, Lots of Leftovers) House on Jackson Ave. emerged. Erik Stokstad ’92, Liz Keyes ’94, Anu’s sister Neera, would all drop in, anytime. Sometimes I would come home from work and there would be two roast chickens and all the trimmings on the table, surrounded by a dozen friends. I would think: it was like I had died and gone to Carleton.

Anu was at the center of all this warmth. Her shy, quiet, dimpled smile. Her non-judgmental way of listening to the stories of career changes and struggling relationships. So many people, including myself, called her “best friend”. So although she liked geology, it was never just about the rocks. It was also about the wonderful people in her life, many of whom were imprinted upon by this Department. And I think that is the highest praise she could have offered.

Mike Evans, Takoma Park, MD, 3 November 2015
1937. Allan Matthews
I am pleased at the continued strength of geology at Carleton, especially the interest by ladies. I studied the matter under Larry Gould, and then went to Antioch College and Johns Hopkins. Thereafter I prospected for vermiculite in Colorado, spent 4 years as editor of Dept. of Interior’s “Minerals Yearbook,” and deserted to Agency for International Development for two decades. While there I helped Yemen find groundwater. Now at a Virginia retirement community, I explain the piedmont we walk on.

1958. Dante Stepheensen
Here’s a story about Eiler Henrickson that should be shared... He camped out in a tent on his honeymoon taking his geiger counter and managed to discover Uranium. When I built my jazz supper-club in 1970 in a pre-civil war basement I dug up something unusual; 2/3’s of an earthenware dinner plate with a regal looking print on its underside. I sent a photo to a professor of such things and he said that piece solved a Civil War dilemma...why? England chose to fight with the South, while France sided with the north. Our then President hoped England would also fight with the north, so he had a member of the Royal family tour the south on his private train to see how underdeveloped it was. It is documented the train only got to Richmond, VA., but this Earthenware dinner plate was of that royal family proving the train got to Atlanta, home of the Cotton gin. The piece showed why it became such a long war with 1000’s of casualties versus a short war had England and France both fought with the North. An Acheological Triumph of one who left geology for jazz.

Anu is greatly missed by her husband Mike, daughters Aditi and Maya, sister Neera, parents Din and Reena, the extended Gupta, Garg and Evans families, SWANK, our friends and neighbors in Takoma Park, Tucson, Cambridge, and New York, and her teaching and coaching communities. Additional remembrances may be found at:

http://candlesandmemoriesforanu.wordpress.com/.
If you would like to contribute, please contact Naomi Lubick (nlubick@gmail.com).
1960. Rene Founier
Helping with some gold exploration in NV, and class agent for Alumni Fund and class webpage, on 55th Reunion committee. Visited Mt Lassen and Mt Whitney in CA as well. Travel to both coasts last year.

1958. Dante Stephensen - con’t
(left) Dante’s Down the Hatch - An Atlanta Tradition since 1970, Live Jazz & Entertainment Nightly

The Survivor (Because it has) Initially named “Japauldon” (For James Paul Donahue); the ne’er-do-well husband of Jesse Woolworth; used by three railroad presidents, 1974 to 1972, (B & O, Monon, and the L & N), currently owned by Atlanta restaurateur Dante Stephensen.

Virginia and Truckee, Carson City, NV

Donner Pass, CA

Union Pacific at Moffat Tunnel, Rollinsville, CO

Mt Whitney, CA, east side
1964. Peter D. Rowley
I am still a consulting geologist, and my wife Dawna is still managing two Wilderness Study Areas in SW Utah for BLM. My main consulting work has been submitting a summary report for Southern Nevada Water Authority on a compiled geologic map of 25,000 sq mi of E. Nevada and W. Utah. For no money but lots of fun, I am continuing work with colleagues at the Utah Geological Survey and Kent State University on mapping the Markagunt gravity slide, about 21 million years old and covering at least 2,500 sq mi (half the size of Connecticut) of the S. Marysvale volcanic field of S.-central Utah--the World’s largest subaerial gravity slide!

1965. Jan Tullis
I am now “emerita” but still doing full time undergrad teaching and advising. I enjoyed my 50th reunion in June, delighted that 2 other geo majors, Jamie and Bill, also made it. Campus and programs look fantastic!

Joel Renner
Retired from Idaho National Laboratory but still do a bit of consulting on geothermal energy. I also participate on a technical review team that reviews and advises various U.S. DOE funded exploration and enhanced geothermal systems projects. I recently joined the Committee on Earth Resources of the National Research Council.

1967. Mark McBride
I’m still working at NRC, although at 70 I’ve cut back to four days a week. My current project is editing a series of reports on flooding risks at operating nuclear plants - prompted of course by the Fukushima accident. It’s not as simple as it sounds, since I have to harmonize the work of four or five different authors, all with different ideas about spelling, capitalization, and what to call the same feature. I also have to look out for technical inconsistencies, and make or improve figures. Otherwise, we are busy with gardening, canoeing, travel, and family, and trying to find more time for furniture making.

1970. Steve Hulke
Forty-five years after graduating from Carleton, I’ve finally set a retirement date: the day after I get the job as lead singer for the Eagles (Welcome to the Hotel California!), or the day before I start my first game at wide receiver for the Texas Longhorns (Go long, and Hook ‘Em!), or the day I get the job offer for hunting and fishing guide in Yellowstone NP (Squeeze the trigger, and shoot the big one with the antlers!). Until the date is set, I continue to work at Devon Energy, where they’re still under the impression that I’m a geologist. The scam goes on!

1961. Jeffrey S. Hanor

1963. Wendell Duffield
Anne and I continue to enjoy our “new” home on Whidbey Island in lovely Puget Sound. Most days are spent gardening, reading, writing, sleeping, and aging. On the writing front, I have a newly published book in print “JIGGLES, ROLF, AND THE REMARKABLE FINALE TO FRANK STONE’S CAREER”. You can get a glimpse of it by searching for books by me at amazon.com and other bookseller internet sites. Though one may not guess so from the title, the book is a tale built around a geologically well-documented history of lava-flow dams across the Colorado River in Grand Canyon. I’ve created a new lava dam at an unspecified future date. It could happen!
**1971. Karen E. (Klusmeyer) Lubke**  
I have been at Hess nearly one year working Gulf of Mexico Deepwater Paleogene Exploration. Imagine my surprise to meet Libby Ritz 08’ and Will Gallin 05’ who also work at Hess.

**1972. Chris Rautman**  
I retired from Sandia National Laboratories in Albuquerque at the end of 2011 after 26-plus years. I am now semi-retired, which means that I still do consulting (geologic mapping and visualization) in the underground storage business, which is basically what I did my last decade or so for Sandia. I also volunteer as a visiting geologist at Philmont Scout Ranch, in northeastern New Mexico, each summer for 2-3 weeks.

**1974. Anne Rohsenow Thomas**  
Have enjoyed several July trips to Ireland, with hill walks in the Burren’s karst topo and especially the Dingle Peninsula with sea cliff walks, interior glacial bowls and little beaches all w/in short drives of each other. Lots of music (playing for hours on end for Bill and a bit of singing for me)

**1974. Steve LeClerq**  
At Carleton, I double-majored in Geology and Biology. Presently, I’ve gotten more into the bio side of things with public health research as my line of work. I am presently working in Nepal with a Johns Hopkins University Bloomberg School of Public Health project. Over the years we have been conducting large community trials of various public health interventions. Some of our research results have led to saving thousands of lives in many developing countries, through the development of programs to reach those at most risk. They have included vitamin A supplementation to reduce child mortality rates and application of chlorhexidine antiseptic gel to the cut umbilical cord to reduce neonatal mortality rates. Our present main research study involves a comparison of traditional mustard seed oil for baby massage with sunflower seed oil for baby massage. There is reason to believe that sunflower seed oil will be more beneficial for very young babies, even to the extent of reducing mortality rates in the first few months of life.  
Several months ago, we were reminded of the geological processes at work here in the Himalayan region, when a magnitude 7.8 quake shook our world mightily. Luckily, no one in our family or circle of friends was killed or seriously injured. But thousands of people in various parts of central Nepal were killed, and many more injured and made homeless. Thousands are still living under plastic tarps or in tents, waiting out the monsoon to see if they will be able to get their lives back together. And after the first spate of aftershocks, some quite large, we have been continuing to experience smaller aftershocks up till now. Most people hardly notice anything up to a 5.0 on the Richter scale now. We hope that these quakes will awaken Nepal to the necessity of building houses to withstand similar quakes in the future.
1975. Emily Wrubel
My husband, James McDonough, and I just had a fabulous visit at Merck Forest in Rupert, VT with Karen Noyce ’75 and Art Norton ’74. I hadn’t seen them for about 38 years! So wonderful to hear about their interesting lives while taking a hike in this beautiful place where they had spent their first two years of marriage.

1976. Philipp Muessig
My work as director of the MN GreenStep Cities program goes well and this winter we will roll out a higher level of recognition for cities - 86 and growing - that report city performance metrics. And truly my sustainable communities work was made possible by having a science degree: when hired that was one requirement. Thank you Ed Buchwald!

Bill Matlack
I spend most of my time on Klondex, a high-grade underground gold-silver producer in Nevada; mineral exploration in the West and Alaska; and global mining finance primarily focused on Chinese investment in jurisdictions less favored by the West. Otherwise, I am enjoying the Pacific Northwest and Nevada.

Barbara Rosing
Highlight of the year: attending Dan Spencer’s (1979) wedding to Pat Burke in Missoula in July--congratulations, Dan!! Loved seeing trilobites and other “wonderful life” fossils of the Burgess Shale on a hike to Wolcott Quarry in Canada’s Yoho National Park in August.

Barb Wonson Liukkonen
Not much new, except that we had a large streambank stabilization project along the Stewart River that runs through our property just outside Two Harbors. So many bit from Fletcher Driscoll’s hydrogeology class as still pertinent. It’s a great project and should reduce the sediment load and improve habitat in the river.

1977. Camille Parrish
My family and I had a wonderful trip to MT this summer to visit our daughter. We enjoyed the hiking and geology in Glacier, fly-fishing in multiple rivers, and simply spending so much time outdoors in a remarkable place. I remain at Bates College teaching and working with fellow Carleton Geology alum Holly Ewing.

1978. Steve Ingebritsen
Enjoyed working with Ilana Crankshaw (2016) this summer -- her 3rd summer with our project and 4th at USGS-Menlo Park.

Barbie O. Bach
For 10 days in June, ‘78 classmates organized a mini-reunion trip to Alaska and gathered a group of 32 travelers that included 18 alums. We had a blast, viewing wildlife, sea kayaking, glacier trekking, bicycling, learning about Native culture, panning for gold, fishing, hiking, rafting, ATV touring, and just chilling during the summer solstice in Denali National Park and Anchorage. Some called it an amazing geology field trip as nine ’78 Geo majors participated. We found out from other majors on the trip (chemistry, biology, English, history, economics, French, psychology) that geology majors develop a unique and lasting bond from time together on field trips, in lab classes, hanging out in Mudd, and wearing the same Tshirts.

Doug Robbins
The class of 1978 held a mini-reunion in Alaska over the summer solstice, June 15-24. We had about 34 Carls, spouses and close relatives in the group (including the Bach and Robbins kids). The geology department was well represented, with Laurie Nadelhofer, Liza Doull Wright,
Sue Campbell, Barbara Okamoto Bach, Zach Wilson, Cliff Wright, Betsy Turner-Bogren, Bill Witte and me. It was a pleasure to welcome the group to our home in Anchorage for a meet-and-greet, to renew old friendships, and to share a little bit of Alaska with everyone. Special thanks to organizers Maureen Gupta, Karen Schilling, Betsy Turner-Bogren, Barbara Okamoto Bach and fun czar Laurie Nadelhofer!

Lona Sepessy
* I finished my Masters in Education with a Reading Concentration from Concordia Portland Online, a new experience but very convenient for a full time worker.
* I moved schools - to one closer to home and adjacent to a wonderful State Park. Still loving being an Elementary School Librarian!
* Scott (Jamieson ‘78 biology) and I were empty nesters for the year with both kids in college and Claire, our oldest graduating this spring! I talked my son into taking a Geology/Chemistry duo for his Freshman seminars but unfortunately, he decided Chemistry was his field.
* This summer I became bionic with a total knee replacement and once again look forward to hiking, backpacking and other activities!

Laura Nadelhofer
I enjoyed a fabulous 10 day excursion to Alaska this June on the first annual (?) Class of 1978 Summer Solstice Mini Reunion with fellow geo majors Doug Robbins, Betsy Turner-Bogren, Bill Witte, Liza Doul-Wright, Zach Wilson, Barbie Okamoto-Bach, Sue Campbell, and Cliff Wright! Joined by 20 other classmates and assorted spouses and relatives, we cruised glaciers in Whittier, Hiked the Matanuska glacier, climbed Flattop Mountain in Anchorage, and hiked and rafted in Denali National Park. Thanks to Doug, Betsy, and Bill, we were well informed on the amazing local geology. The wildlife did not disappoint either, and we saw many local critters: Moose, Grizzly Bears, Caribou, Eagles & a whole Ptarmigan families. We also may have raised several glasses to Eiler, Shelby, Ed and Tim along the way--Cheers to Carleton Geology! and what a field trip!

Dorothy Davis Morrow
Still fundraising for Bellevue University in Omaha, Nebraska (20 years!) and love it. Our students are mostly non-traditional, coming back to school later in life. And since I was a “late bloomer” in the parenthood department, I still have two kids at home - a 12th grader and 8th grader. Attached is a photo of the closest I have come to being surrounded by rocks in a looooooong time. The photo was taken earlier this summer on our vacation to Arches National Park in Utah. I have a blessed life, and cannot believe that my time at Carleton was 37 years ago.
1979. Daniel Spencer
A big year for me! After a 15-year courtship, my partner, Pat Burke and I were married July 11th outside Missoula, with many Carls in attendance (Barb Rossing '76 ably represented the Geology Dept!) -- our 20 month old grandson, Colin Burke, served as ring bearer. Pat and I honeymooned in Greece for 2 weeks after -- very interesting geology! I'm writing from Manchester, England, where I am attending the biannual international conference of the Society for Ecological Restoration -- I now serve on the Board of the SER. I start my 15th year teaching at the University of Montana in a week. A good, full year!

Marie Del Toro
It has been a busy and fun year for our family! We took a family trip to Mexico City this July and enjoyed the food, sites, and culture. Within a month of that trip, our children, Hollynd and Wilder, departed for their year of study at Santa Clara University. Wilder, an incoming freshman, is going to run cross country and track for them and is planning to major in physics. No geology, sigh. Hollynd, a junior, has just joined her fellow students in El Salvador where she will attend classes three days a week and work at a local village the other two. I have just added assistant cross country coach to my activities this fall and am happy to again be working with high school students on a more regular basis.

Daniel Maturen
Working seasonally in Katmai National Park as a Bear Tech.

1980. Reid Fisher
Moved to Cal Engineering & Geology in January, am really enjoying the crew, the work, and the possibilities. It’s a small outfit, am working out of their San Jose office. Main focus is engineering geology for public works in northern California, of course having the most fun with the geohazards stuff -- landslides, seismic hazards, some post-fire work.

The girls are now sophomores in high school, so this year they’ll be lobbying to drive. They just finished raising and taking their FFA pig and goat to the County Fair -- an experience they learned a lot from, on a bunch of fronts. I confess to skepticism at the outset, but came around. Please pass along to Tim that I hope he’s keeping up with the fiddle; I have no doubt that he is. On this end, am in a lull between C&W bands, have been concentrating on the new job but that’ll change.

Recent alums: please continue to send resumes -- one never knows. The same things continue to be valuable: summer field and good writing, because those are things that are time-intensive and an employer has a hard time paying for an extended ramp-up. Other skills and specific areas of knowledge are easier to pick up along the way. Hi to Mary, and to Ed Buchwald if he ever cruises through!

Steve Miller
Started a new job as a geoscientist with Shell Global IT in Houston, seen one son start college, and another son start high school. Attached is a specimen dug out the sands in the Middle East by a youth I coached in soccer 10 years ago, and gifted to me recently when that youth came through Houston to start college in America.
1980. Mindy Bell
STEM City (aka Flagstaff) keeps me busy connecting Northern Arizona University professors and students, plus local businesses, with K-12 students. Flag has more and more Carls here including Mike Smith (99) in NAU’s geology dep’t. New grads should consider NAU for their next step towards an impactful STEM career!

1981. Heyo Van Iten
Getting ready to spend the fall in China (basal Cambrian and Ediacaran) and hoping to get out to Morocco next year to dig in the Ordovician. Very glad to have taken time out 22 years ago to study hydrogeology, and am always encouraging students to explore careers in environmental engineering, sustainable agriculture and urban planning.

1982. Heidi Wells
Brad and I are pleased to have two seniors (not including ourselves!) - one at Carleton and one in high school. Empty nest looms large and we are already both excited, sad, and nervous. I love my job at Cardinal Peak Technologies as a National Channel Manager for a software/hardware product. I get to travel all over the US but not too much! I am working with a bunch of engineers which is about the closest I have come to working with Geology types in the last 20 years. I love not having business ownership responsibilities anymore! Brad continues to wind down our book wholesaling business and pushes forward with his housing in developing countries start up. His latest project is in Kenya and he was there last fall. I saw Sherren Clark last month while she was here for company training and still get to see Ed Secor once in a blue moon when he is down from Ft. Collins. I also caught up for lunch with Jerry McNeish a few weeks ago while he was here for a conference. I feel lucky to live in a place that attracts biz gatherings so I get to see old Geo friends. I predict we will be back in Northfield next Spring for Dylan’s graduation so more memories to be revisited and made!

TD Schoonmaker
Just finishing the third year in Peru of my final tour as a DEA agent before retiring. Sending my first, Sarah, off to NYU Tisch School of the Arts. I continue to try to keep up with the young ‘uns playing soccer and tennis and climbing the local hills.

1983. Amy Patton
Thirty years after graduation, as my colleagues are beginning to retire, I decided to get my geology registration. Had to re-learn everything I ever knew about geology and learn a lot of new stuff... Studied hard and passed both tests on the first try! Am enjoying working on projects of my own choosing at my own firm after an eleven year hiatus to raise kids. Life is good!

David Purkey
I am still leading the Water Group within the US Center of the Stockholm Environment Institute. The California drought, and relevant management responses, have created a huge opportunity for the Institute to be involved in efforts to discover new and innovative management water management arrangements in response to the “new normal” being brought about by climate change. I am involved in similar efforts in the Andes as well. On a personal note, the youngest of my two daughters finished college in the Spring so the days of paying tuition are over.

Keith Knudsen
The Ultimate team (CUT) accident has caused a lot of us ultimate pioneers to get in touch, so I’ve been seeing or corresponding with a number of frisbee players. There also are quite a few alums wandering the halls of the USGS in Menlo Park. It may be hard for some of you to believe, but I tell people my job is mainly trying to keep others out of trouble. Annie and I are empty nesters and really enjoying it. We have room in Albany (near Berkeley) for anyone traveling through.

1985. Laura Runkle
We are now empty nesters, as our youngest has just gone off to St. Ambrose (Pre-OT), while our oldest is finishing up at Iowa State (Materials Engineering). I am finishing up my BSN at Mt. Mercy University, while working full-time as an RN. Great to see the geology department going strong!

Jonathon Parshall
I’m still COO at CodeWeavers, but I’ve gone down to 80% time to work on completing my next book, a military history of the year 1942. I keep very busy with WWII military history-related stuff: teaching for the Naval War College, speaking at places like the National WWII Museum, doing mapping projects, some TV work, and writing articles. Also played drums for the Carleton 1985 class reunion and had a blast doing it.

1986. Sean McKenna
Living in Dublin, Ireland, enjoying having lots of visitors. We were excited to be back on campus in June for our daughter Libby’s graduation.

1989. Suzanne Savanick Hansen
This summer my family had a chance to check out the Montana Dinosaur Trail (http://mtdinotrail.org/). At the Two Medicine Dinosaur Center we took our 11 year old on an excellent half-day dig.
1990. Scott Nesvold
The icy pictures with eagles are from the Madeline Island Ferry in March, 2015. The northern lights from June. The waterfall is Lost Creek falls taken in August about 10 miles from my home. Working at the Ferry Line is new as of last fall.
1993, Lance Dockter (picture above)
Doubled-up on children this year (went from 2 to 4) by getting re-married at the beginning of this year and happily living as the brady bunch in Andover, MN. Continue to work for a Canadian-based company in the oil & gas market as a corporate Health & Safety Manager for their U.S. operations. Spare time is spent running kids to hockey, dance, baseball, football, and lacrosse practice. Life is good.

1994, Brett (Kessler) Dooley
Tim, graduated with his associates degree and has transferred to Radford University. He plans to major in biology. Butch is enjoying his new position in Southern California. I have just passed the half way mark in my doctoral program with Texas Tech and have a full load teaching biology and geology classes at Partick Henry CC. In other words we are all busy!!

Naomi Lubick
I just finished an amazing academic year as a 2014-2015 Scripps Fellow in Environmental Journalism, at the University of Colorado at Boulder. The professional experience was made even better by the personal: I got to see a ton of old geology friends, including Liz Butler (‘94), Beth Pratt-Sitaula (‘94), Anu Gupta (‘93), Maria Panfil (‘93), Joan Ramage Macdonald (‘93), Martha Alvarez (biology, ‘93, but she went to Australia with a bunch of geos, so I count her!), Ofori Pearson and Cindy Alm Pearson (‘95). (I have pictorial proof if you should need it, particularly of a mountain excursion weekend that was so much fun, with potential Carls of the future -- i.e. geo alums’ fabulous kids!) I even randomly met a party who, it turned out, graduated 10 years before I did from Carleton, now working in oil and gas in Colorado (he sent his kid to Colorado School of Mines, sorry!). Post-fellowship and Rocky Mountain high, I am back to Sweden and the freelance journalism life. Drop by if you are ever in Scandinavia!

1997, Dave Barbeau
My partner Amy Moragues and I welcomed Ethan Fenway Barbeau to the world in November 2012 while we were living in Brooklyn. His present interests are sticks and butterflies, but he did briefly attend South Carolina’s geology field camp in Colorado this summer. Perhaps there is still hope!

1999, Alison Anders
I’m thrilled to report that I just received tenure at the University of Illinois! Life in the corn fields is good. I’m enjoying lots of field work close to home on the impacts of intensive agriculture on floodplain sedimentation and ongoing sediment, water and nutrient transport. Home life with 6-year old Oscar and 2-year old Leo is highly focused on Spiderman and bathroom humor. Visions of an Alaskan sabbatical sustain me through corn and fart jokes. I look forward to hearing from everyone - as the last Facebook holdout, I really appreciate reading the newsletter to see what’s new!

2000, Alexander Barron
After an amazing 8 years in DC - and with the rollout of EPA’s Clean Power Plan - Jenna and I are moving to Massachusetts, where I will be starting a tenure track position in the Environmental Science and Policy Program at Smith College. I’m very excited to get back to liberal arts teaching and sneaking my way onto the Geo Dept field trips. Folks passing through the area or teaching similar gigs, please get in touch.

Erica Wallstrom (maiden name: Richardson)
I just finished up a year-long Albert Einstein Fellowship which pairs k-12 STEM educators with federal agencies and congressmen in Washington D.C. I had the good fortune of being placed with Polar Programs at NSF. Through the fellowship, I had an opportunity to experience and support various education and outreach projects occurring in the division. Now I am back in Vermont and excited to return to the classroom. My polar year has been truly amazing, but I absolutely love and really missed teaching.
2001. Aleshia Mueller
I’ve strayed from Geology and work in the Moving Image Industry, mostly script supervising films and commercials and producing documentaries. This spring I script supervised 6 short films for Italian Director Giacomo Arrigoni. We worked in Cortona, Italy. While I was there I took an excursion to Umbria. Being in Tuscany and Umbria brought back lots of fond memories of the Geology Study Abroad program with Dave Bice in the Umbria/Marche region. Even though I don’t do geology anymore, if I could go back in time, I’d do it all again. What a great experience! I have nothing but love for the Carleton Geology family!

James Bishop
We still live in Houston, which is blazing hot as I write this. The family are doing well (see photo cavorting on a glamorous Galveston beach). I split my time between carbonate research, 1st grade sight words, and playing with superheroes. I’ve been travelling to Kazakhstan a lot recently, to focus on the former. I had the pleasure of visiting the geology department in February-- my first visit since 2001. There were lots of changes around campus, but the students were as clever as always.

2002. Alyssa Thomas
I successfully defended my PhD in environmental studies back in March. Applying for jobs although there are not many out there. Currently have a short-term job undertaking a review of the New Zealand Climate Change Centre.

2004. Bess Koffman
I just moved to Sharon, Vermont to begin a postdoctoral fellowship at Dartmouth. I’ll be working on reconstructing Antarctic climate over the past 40,000 years or so, when I’m not out feeding the chickens or watering the garden. Excited to be back in New England - and with a guest bedroom to boot! Let me know if you’re ever in the area or want to come stay with Noah and me in our old Vermont schoolhouse!

2006. Kelsey Dyes (Dyck)
I’m now working as a postdoctoral fellow at Lamont-Doherty Earth Observatory (Columbia University). Mainly focused on mechanisms of Pleistocene climate change and is biking around NYC.

2008. Frances Reid
I just finished getting my Doctor of Physical Therapy degree and moved to Virginia to live with my sister. I’m licensed to practice, now I just need someone to give me a job!

Erica Wallstrom (Richardson)
2007. Nicholas Riordan
“The 10 year anniversary of the Geoboyz calender is approaching. To acknowledge the cruel passage of time, there will be a commemorative Grizzly Edition: Softer and with more body hair. Submissions in a variety of mediums are encouraged (riordannk@gmail.com). I’ve included a photograph of myself and a large vegetable in the New Zealand Alps to get the ball rolling.”

2009. Tiffany Leonard
I graduated this year with my Masters in Geology from the University of Illinois a few days before my daughter turned one year old. I am currently working from home doing some freelance editing for Compuscript Ltd., and curriculum writing for Renaissance learning.

Lauren Colwell
I moved back to Minnesota in July 2014 after graduating from the University of Wyoming with a dual Master’s degree in Geology/Environment and Natural Resources. I’ve been an environmental consultant with NRG for over a year and I love living and working in my hometown.

2009. Kristin Sweeney
I finished up my PhD at the University of Oregon this summer and am starting a postdoc at the USGS Cascade Volcano Observatory this October. I’ll be studying the ecogeomorphic response to the 1980 eruption of Mt. Saint Helens.

2010. Stuart Sweeney Smith
Began a new job as an environmental engineer with Apple’s environmental technology team in January.

2011. Ben Parks
Entering my third year of geo grad school @ Brown w/ advisor Alberto Saal

2012. Alex Walker
I’m entering my second year my masters program at Utah State under Jack Schmidt, studying Watershed Sciences. My research covers the 20th century history of the Green River through Canyonlands National Park in Utah. I am fortunate to live and work in such a beautiful place.

2013. Lillian Pearson
Right now I am a GeoCorps intern at Point Reyes National Seashore, just north of San Francisco. The past months I have been surveying the park for fossils which are largely located on the coastal cliffs. I’m finishing up a park protocol that will monitor the stability of the paleontological resources within the park and in particular document the effects of future sea level rise on the fossils. We also just discovered a new species of Pliocene dolphin! Before this I worked in Israel for 6 months doing underwater archaeology research and modeling paleo-tsunamis (2014). In fall 2014 I had a paleontology internship in Panama at the Smithsonian Tropical Research Institute excavating and studying fossils along the Panama Canal.

Caroline Scheevel
I’m starting my master’s degree at Colorado School of Mines this week! I’ll be studying geological engineering with a focus on landslides. Also, Ryan Skinner ’13 and I are engaged! We’re getting married next June here in Colorado.

Tom Birren
I am in the midst of a semester long post with the Schuler Scholar Program, a regional college access program. I work to coach students to be successive in STEM courses and to pursue varying fields of study in higher education. This year I’m developing guides for our AmeriCorps volunteers and building a more succinct curriculum with my team. In January I’ll be joining the Geo Dept as a TA for the New Zealand program.
2014. Rachel Johnson
Fall 2015, I’m working in Freeport Maine as the Marine Science TA/RA at Coastal Studies for Girls. Spring 2016, I’ll be teaching Spanish, natural science, and literature for the travelling school’s South America Semester program.

Chloe Nelson
I’m working in Madison at an environmental Non-Pro fit doing a bunch of different projects in sustainable agriculture and environmental conservation. My team does external compliance for the Whole Foods Market Responsibly Grown Rating System, but I also work on apple and stone fruit certification programs, coordinate a Public Tick IPM Working Group to reduce the incidence of tick-borne diseases as well as help organize the International IPM Symposium. There are a variety of projects here that range from watershed protection to pest management certification, so I’m learning a lot! I hope everything in the department is running smoothly. All the geobiddies miss you guys. Maybe we should have a reunion in Costa Rica... I have to come back to finish my coasters sometime, so see you then!