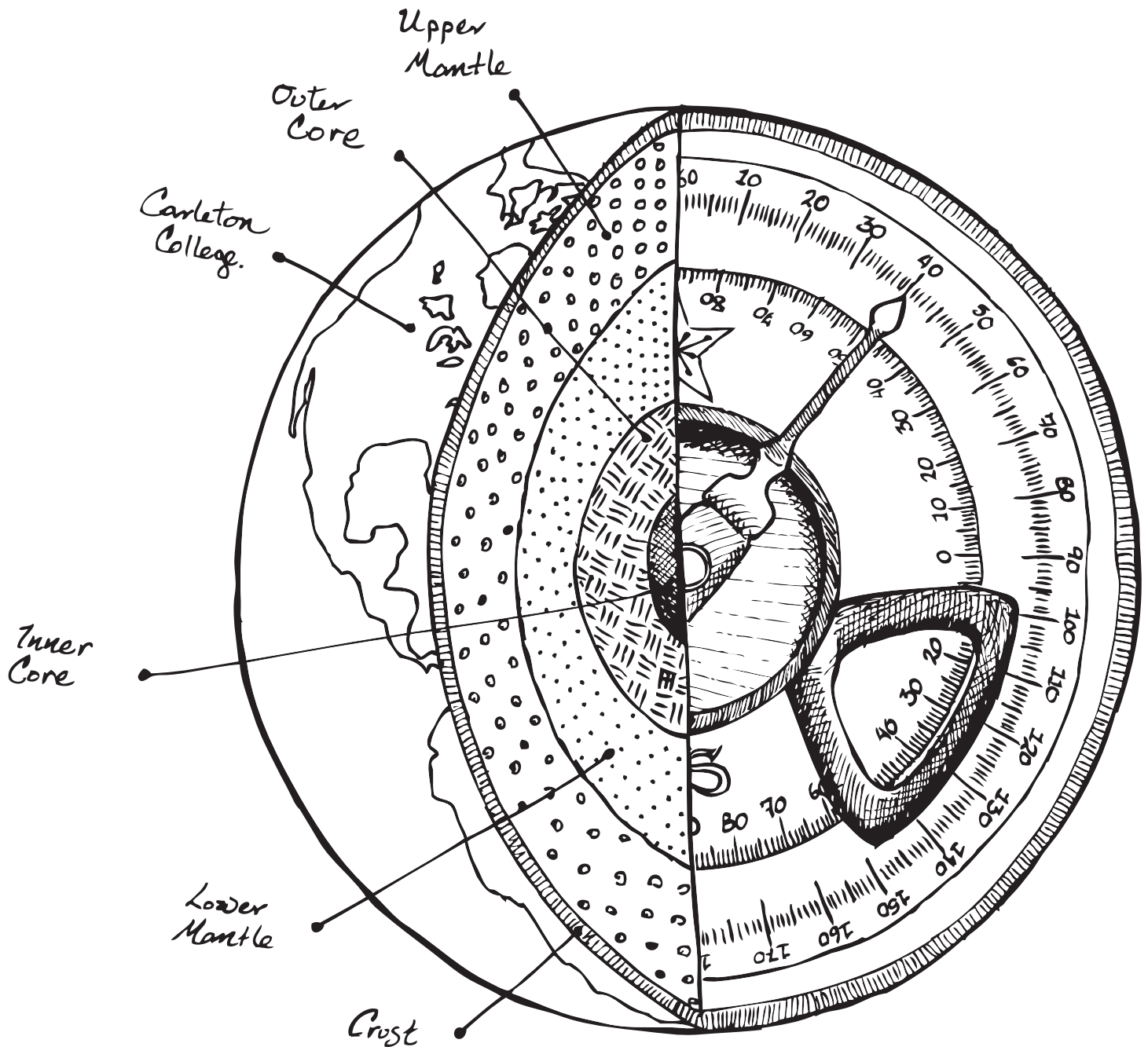


Carleton Geology Newsletter

Volume XXXIII

2008



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The cover drawing is the 2008 Geology T-shirt design by Lydia Staisch '08.

The Carleton Geology Newsletter is edited by Timothy Vick.

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. Pictures with less than 200KB resolution generally will not reproduce well on paper.

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*Department of Geology
Carleton College
Northfield, Minnesota 55057*

July 9, 2008

Dear Alumni and Friends,

As some of you are probably aware, Jean Boardman lost her battle with cancer and passed away on June 1, 2008, one day after the dedication of the beautifully situated memorial to Shelby located near the Hill of Three Oaks. It's been a rough couple of years in the geology department as we continue to deal with tragedy; our thoughts are with David and Steve Boardman and their families.

The 2007-2008 academic year was also filled with joy and much hope as we graduated a terrific group of twenty-one geology majors and celebrated the 75th anniversary of the Geology Department. Tim Vick does an excellent job in this newsletter reviewing the various activities associated with our anniversary that culminated with a well-attended field trip to Taylors Falls during Reunions. We were treated to fantastic weather, great company, excellent geo-lunch, and superb rocks. Thanks to all who helped us celebrate!

As Clint Cowan pointed out in last year's letter, he sadly turned over the reins of Chair this year to Bereket Haileab, who proudly carried the mantle until spring term. This left me holding the bag as Bereket begins a 1.33 year well-deserved sabbatical that includes running the ACM program in Tanzania during Fall, 2008. Mary Savina continues to keep herself busy with her duties as Faculty President, teaching, and attending meetings on both coasts. She also played a little musical endowed chairs by exchanging the Lloyd McBride Chair in Environmental Studies for the Charles L. Denison Professor of Geology Chair. Congratulations to Mary! Clint appears to be enjoying his newfound freedom, and is busy this summer working with Tyler Mackey '08, next year's 5th year intern, on the highly classified details of climate signatures in the Cambro-Ordovician rocks of the Midwest. Congratulations to Sara Titus, who received a substantial research grant from the Petroleum Research Fund this past year for her ongoing work on the strain history of the San Andreas Fault. Sarah finished her second year at Carleton and appears to be fully immersed in her research, teaching, and advising duties. As for me, I find it hard to believe that I've been at Carleton for six years now. I'm continuing to push along my work in Southeast Alaska while preparing to teach "Geology in the Field" for the first time this fall as a Freshman Seminar. Shelby taught this course to rave reviews (and high yields of geology majors) two years ago. I don't plan to fill his shoes, but rather follow his footsteps.

In her first full year with the department, our administrative assistant Ellen Haberoth found her stride and has learned how to handle the rest of us so that we actually get the important things done to keep the department running. In addition, we all owe her a debt of gratitude for her excellent work organizing the various 75th Anniversary celebrations. As always, Tim continues to be the bedrock, and now senior member of the department. He too makes this place run in more ways than any of us will ever know, and for that I thank him.

Thanks to all of you that have helped make the first 75 years of Geology at Carleton so successful and rewarding. We are looking forward to the next 75 years with a renewed sense of optimism and hope for the future. May the coming year bring you peace and fulfillment.

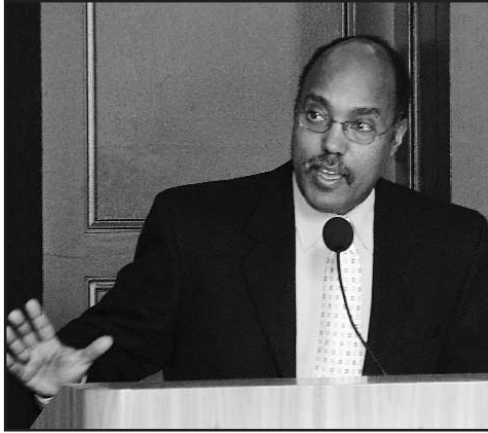
Sincerely Yours,



Associate Professor and Chair

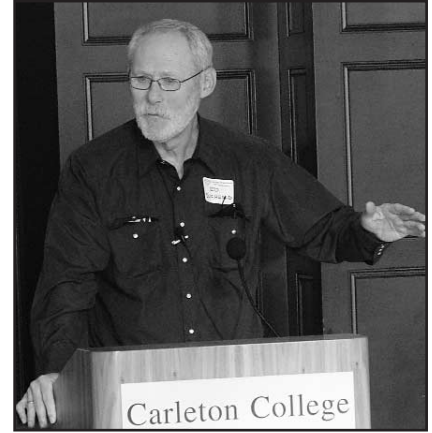
75th Anniversary Festivities Include

Mini-Symposium In January For Current Students And Nearby Alums



Departmental Chair Bereket Haileab

The first part of our celebration of 75 years of having a Geology Department at Carleton was a mini-symposium for current students and those alums that live within about a hundred miles of Northfield. The gathering featured a reception on Friday night, Jan. 18, and a technical session Saturday morning which included talks by four alums, a banquet and keynote address by Professor Emeritus Ed Buchwald.



Professor Emeritus Ed Buchwald

The speakers and titles for the talks were: Christine

Siddoway '84: "Antarctica: Geological records of Global Change, A Tribute to the Vision of Laurence M. Gould;" Josh Feinberg '97: "Tuff Impressions: Geochronologic Investigation of Footprints Preserved in a Volcanic Ash;" Vicki Hansen '80: "Venus, Earth's Sister: No Catastrophism, Just an Incredibly Rich Geologic History to Unravel, Creative Geologists Needed!"; and Carl Tape '01: "Seismic Wave Propagation for Imaging Earth's Interior."

Ed Buchwald's keynote address was entitled, "What I Learned On 61 Geology Department Field Trips."



Symposium events included a reception for students and speakers and a banquet. In the pictures above, Carl Tape '01 and Christine Siddoway '84 talk with students at the reception. At left, Ann Zawistoski '97, Dave Bitner '98, Marin Byrne '99, Anders Nilsson '98, and Jennifer Wightman '97 enjoy the banquet.

Symposium and Taylors Falls Field Trip

Alumni Revisit Taylors Falls in a Special Anniversary Field Trip

The second half of our anniversary celebration was a field trip to Taylors Falls, Minnesota, during Alumni Reunion weekend in June, to see the classic locations that drew many of us into the Geology major when we were taking our Introductory course. Almost everyone who has taken geology at Carleton has been on the Taylors Falls field trip, so this was a chance for alums to revisit this magical spot and show their family members what turned them on to becoming geology majors. Eighty-three people participated in the trip, not counting Eiler Henrickson and his friend Pat Forsyth who greeted people as we loaded the bus before leaving campus.

We captured a few highlights of the trip in pictures: In the top picture, Mary Savina '72 and Clint Cowan '83 introduced the field area and got people oriented to the task at hand. Clint had created a trivia quiz about the Geology Department's people and history and placed the questions on placards strategically among the potholes where people would find them. The participants formed teams of about fifteen people each, and the winning team got prize bags containing a geologic time scale on a lanyard, a bottle of bubble-blowing solution and a Winner badge, all in a handy sample bag.

Below left, Ed Buchwald conducted a special session for children about fossils; here he shows a mastodon tooth to Gabe, the son of Mark Gonzales '83.

In the picture at the lower right, Mary Savina explains the geology we saw on the upper trail near Curtain Falls.

These and many more pictures from the trip are available for viewing in the Field Trip section of the Geology Department web site within www.Carleton.edu.



DEPARTMENTAL NEWS



Members of the Boardman family who gathered for the dedication of the memorial to Shelby included, on the left, Karen and Steven and their sons Grant, Samuel and Maxwell, and on the right David '95 and Michelle '93 with their son Abraham. They are seated in the central part of the memorial among the basalt, banded iron formation and limestones which are the bread-and-butter of Minnesota bedrock geology.

Memorial to Shelby Boardman Dedicated

Carleton College dedicated a memorial in honor of former Professor and Dean Shelby Boardman on Saturday, May 31, near the upper part of the Cowling Arboretum. Shelby's sons David and Steve welcomed friends and colleagues at the dedication ceremony, and President Rob Oden extended a welcome on behalf of the College and spoke of Shelby's many contributions to the college.

Spencer Jones, the designer of the memorial, explained the design concepts of the memorial. The memorial is a very attractive structure built of rocks which would have been close to Shelby's heart. Besides our locally abundant limestones which are the bread and butter of our introductory class field trips, large boulders of banded iron formation anchor the ends and corners of the memorial. Near the center is a natural basalt column standing about five feet high. The arcs and lines of the memorial are concentric around and radial to a grand old oak tree which provides shade and a sense of strength and grace.

The College and Boardman family partnered closely in the design and construction of the memorial. The memorial is located past the Hill of the Three Oaks on the border of the arboretum.

The memorial was made possible through gifts received in memory of Shelby and is designed as a gathering place for the Carleton community and friends. Shelby, who was the Charles L. Denison Professor of Geology and former Dean of the College, passed away in January 2007 at the age of 62. He came to Carleton as a geology professor in 1971 and was named an Associate Dean of the College in 1994, served as Acting Dean of the College in 1997, and was Dean of the College from 2002 to 2005. After a yearlong sabbatical in 2005–06, he returned to teaching geology in the fall of 2006.

He is survived by his sons Steven and David, daughters-in-law Karen and Michelle, and grandsons Grant, Samuel, Abe and Max.

Jean Boardman Passes Away

We were very saddened this spring with the passing away of Jean Boardman, Shelby's wife, on June 1, just a day after the dedication of Shelby's memorial on campus.

Dean of the College Scott Bierman wrote a brief but eloquent memo to the campus when Jean died, which

expresses our feelings as well as any of us could:

"What Jean has meant to our community cannot be overstated. The College can boast of no friend who has been more loyal, committed, and generous. Jean was gracious and wise, and she had an energy that seemed boundless. Whether you came across her walking in the Arb, on a downtown sidewalk, or at a Carleton basketball game, she always had a word of kindness and you would invariably be treated with her beautiful smile. As a community, we are very fortunate to have been so deeply influenced by Jean and Shelby Boardman.

"Our thoughts and prayers are with all of Jean's family and friends. She will be greatly missed."

Mary Savina Awarded Charles L. Denison Endowed Chair

Congratulations to Professor Mary Savina '72 who has been awarded the Charles L. Denison Professor of Geology endowed chair! This is a great honor. Previous holders of the chair were Duncan Stewart from 1961 through 1970, Eiler Henrickson '43 from 1970 through 1988, and Shelby Boardman from 1988 through 2007.

Established in 1962, the Charles L. Denison Professor of Geology chair was named in honor of a geologist who developed several successful coal, silver, and gold mines in the eastern United States and Canada during the late 1880s and early 1890s. At the time of Mr. Denison's death in 1930, Loren Wood '99, a prominent New York lawyer, was co-trustee of the Denison estate. Knowing his client would approve of the estate being used to train future generations of geologists, Mr. Wood established the endowed chair in his name. The professorship has helped Carleton develop one of the preeminent undergraduate geology departments in the nation.

Mary previously held the Lloyd McBride Chair in Environmental Studies from 2002 through 2008.

Sarah Titus Awarded Petroleum Research Fund Grant

Congratulations to Sarah Titus, Assistant Professor of Geology, who has received a Type G starter grant from the American Chemical Society Petroleum Research Fund for \$40,000, to be used for Fundamental Research in the



On the fall departmental field trip to Northern Minnesota, we visited a gravel pit with spectacular periglacial fluvial deposits. Here Clint Cowan leads the group through the observations and logic sequence needed to interpret the story in this particular exposure.

Petroleum Field. Type G starter grants have been especially designed to assist early-career faculty members to initiate programs of self-conducted research.

Bereket Haileab Directing ACM Tanzania Program

Bereket Haileab will be absent from the Geology Department this next fall while he serves as Program Director of the Associated Colleges of the Midwest (ACM) Tanzania Program, Studies In Human Evolution And Ecology. Bereket will be assisted in the program by three other faculty members from the University of Dar es Salaam.

Bereket has a long history with archaeological geology work on early hominids in the African Rift Zone, and particularly the Turkana Basin in eastern Africa, where his thesis work was on the correlation of volcanic ash beds as a tool for dating layers containing hominid fossils.

Tanzania is not an easy place for Western visitors accustomed to daily showers, air conditioning and a varied diet. But the ACM Tanzania Program offers adaptable students an extraordinary opportunity to observe and conduct field work in some of the world's greatest paleoanthropological and ecological sites. The program includes visits to sites in Dar es Salaam and some short field trips, such as to the port of Bagamoyo on the coast and to Zanzibar.

During the first two months of the 19-week program, students live in dormitories at the University of Dar es Salaam. In the field for the next several weeks, students live in tents at established campsites. The campsites are primitive, however, with pit toilets and, in some cases, no water on site.

In the last four weeks of the program, students live with host families in Dar es Salaam. The family members are often faculty at the University. The home stay invites participation in the daily life of the community, broadening the program experience beyond the classroom.

The courses which students will take include: Intensive Kiswahili, Research Methods, Human Evolution, and Ecology of the Maasai Ecosystem. Students will also have field projects at Tarangire Park and Endulen, Laetoli and Olduvai Gorge. Finally, students will have papers, exams and presentations at the University of Dar es Salaam.

Bereket's wife and daughters, Delina and Amira, also will be in Africa with the program. After the program, Bereket plans to hike an active carbonatite volcano known as Oldoinyo Lengai.

Carleton Receives \$1.5 Million Grant to Boost Interest in Science Programs

Carleton College, along with 47 other colleges and universities, is the recipient of a Howard Hughes Medical Institute (HHMI) grant to usher in a new era of science education.

Carleton, one of only two Minnesota institutions to receive the grant along with Gustavus Adolphus College, received a grant of \$1.5 million over the next four years.

Carleton is using part of the \$1.5 million grant from HHMI to prepare its students to move beyond traditional approaches to address real-world scientific complexity. Carleton will develop programs that prepare students to tackle scientific problems as teams, to analyze data with quantitative methods, and to communicate complex information effectively. Faculty members will support a focus on complexity by strengthening teaching and research skills and developing computer-modeling collaborations involving the science and the mathematics departments.

Geology Department Web Site Continues to Develop

We should remind everyone who may not have been checking the Geology Department's web site on a regular basis that the site continues to develop extensively beyond the scope of most departmental web sites. It contains lots of current news about our alums and our department.

The Geology Department site contains all the news articles that appear in the Newsletter and even a few extras that don't make it into the Newsletter, and they appear when they happen rather than waiting until summer to be published.

In addition, there are links to news articles about Carleton Geology alums, and a page of links to web pages by and about our alums. Approximately half of our Geology major alums have their own web pages, and we have links to most of them, mostly to professional pages rather than personal sites like Facebook or MySpace, however.

And, let's not forget the field trip pictures, recent comps papers in downloadable pdf format, and much more!

And another by the way, we also have a Carleton Geology Facebook group now for anyone who might be interested, but there are a couple of caveats. One is that there are several Carleton Geology groups on Facebook



Last winter break we added a couple of magnificent new rocks to the rock garden at the south entrance of Mudd. The columnar basalt which Tiffany Cox '09 is showing off is from the Pacific Northwest and weighs 3180 lbs. In the background, the iron formation from Northern Minnesota also weighs about a ton and a half. Tim bought the rocks at a landscaping supply company at the same time rocks were being purchased for the Shelby Boardman memorial near the Hill of Three Oaks.

that are from Carleton University in Canada, so you need to make sure you're actually looking at the Minnesota Carleton College group. Secondly, the Carleton group is part of Facebook's Carleton Network, and you need to have a Carleton email address in order to join. Carleton email addresses are forwarding addresses which you can sign up for free of charge through the Alumni Services web page. This is not a full email service, just a forwarding address.

Check out our web site occasionally, tune in and join the fun!

Professional Talks Given In The Geology Department This Year

Professional and technical talks given in the Geology Department this year included:

Joy Crisp '79, Jet Propulsion Laboratory, "Spirit, Opportunity, and the Next Big Rover Going to Mars"

David Montgomery, University of Washington, "Dirt: The Erosion of Civilizations"

Ken Tape '99, "Arctic Responses to Global Climate Change"

Christine Siddoway '84, Colorado College, "Antarctica: Geological records of Global Change, A tribute to the vision of Laurence M. Gould"

Josh Feinberg '97, University of Minnesota, "Tuff Impressions: Geochronologic Investigation of Footprints Preserved in a Volcanic Ash"

Vicki Hansen '80, University of Minnesota – Duluth, "Venus, Earth's Sister: No Catastrophism, Just an Incredibly Rich Geologic History to Unravel, Creative Geologists Needed!"

Carl Tape '01, Caltech, "Seismic Wave Propagation for Imaging Earth's Interior"

Jim Miller, Minnesota Geological Survey and the University of Minnesota – Duluth, "The Precambrian Research Center at the University of Minnesota Duluth - Training Students in Field Mapping Skills for the Mineral

Exploration Boom"

Anna Henderson, University of Minnesota,
"Landscape evolution and water in the western US"

Dan King, University of Minnesota, "The
Interactions Between Deformation and Phase Segregation
in the Lower Crust and in the Lab"

Kendra Murray '07, University of South Carolina,
"On board the R/V Laurence M. Gould: Some Photos from
Kendra's Recent Adventure Along the Antarctic Peninsula"

Sam Matson, University of Minnesota, "Neogene
Terrestrial Paleoeology and Paleoclimate from the
Mediterranean Region: The Story from Stable Isotopes"

Brad Singer, University of Wisconsin, "Lying in
Wait? Linking Magmatic Processes to Volcano Evolution
through $^{40}\text{Ar}/^{39}\text{AR}$ and ^{238}U - ^{230}Th Geochronology."

Carleton Geology People Present Research At GSA

A number of people from the Geology Department and a related Carleton office, the Science Education Resource Center, presented papers at the 119th annual meeting of the Geological Society of America in Philadelphia in October, 2007. Approximately 6300 geoscientists attended.

Below are the authors and titles. Carleton students and alums are indicated with their class years, and current Carleton staff members are listed in bold face type.

Sarah Titus, Charles Demets, Bernard Housen, and Basil Tikoff. "Geodetic and Geologic Deformation Rates From the San Andreas Fault System, Central California."

Basil Tikoff, Martha Kane Savage, and **Sarah Titus**. "Lithospheric Mantle Deformation in the Central San Andreas Fault System."



The spring departmental field trip this year went to Baraboo, Wisconsin, with 40 students. Baraboo is such a classic area, it couldn't help but be a great trip. Here, Sarah Titus discusses the ways different rock units respond to folding. Most of the rock we can see in this picture is quartzite, but near her shoulder is a layer of phyllite which accommodated a lot of the slipping between layers.

Cathryn Manduca and **John McDaris**. "The NAGT Teaching In The Field Website: Sharing Pedagogy and Resources."

Cathryn Manduca, Heather Macdonald '76, Geoffrey Feiss, Timothy Bralower, Randall Richardson, and **Carol Ormand '89**. "Building Strong Geoscience Departments For The Future."

Karin Kirk, **Cathryn Manduca**, David Mogk, David McConnell, and Thomas Koballa. "Expanding Your Teaching Strategy: Considering the Affective Domain in Teaching Geosciences."

Carol Ormand '89, **Cathryn Manduca**, Heather Macdonald '76, Geoffrey Feiss, Timothy Bralower. "The Changing Landscape of Geoscience Careers and Education: New Online Resources From Building Strong Geoscience Departments."

Cameron Davidson. "Integrating Authentic Research Activities Into The Introductory Geology Course At Carleton College."

Dexter Perkins, David Mogk, Julia Baldwin, John Brady, **Cameron Davidson**, David Hirsch, Andrea Koziol, Rachel Teasdale, Karl Wirth, and Donna Whitney. "Web-Based Resources For Teaching Phase Equilibria."

Matthew Dettinger '08, Lauren Colwell '08, Sonya Krishnan '10, Tyler Mackey '08, and **Cameron Davidson**. "Kyanite After Andalusite in the Contact Aureole of an Epidote-Bearing Pluton Near Petersburg, Alaska: Confirmation of Rapid Tectonic Burial in Southeast Alaska?"

Lauren Andrews '07, Sarah Bergman '07, Gloria Jimenez '07, Yuichiro Takeshita, Carl Ulberg '07, and **Bereket Haileab**. "Carbon and Oxygen Isotope Analysis of Modern Freshwater Mollusk Shells: Applications For Climate Reconstruction."

Jack Gibbons '07, Zack McGuire '08, Michael Barret '08, William Mitchell and **Bereket Haileab**. "Geochemistry of Sericite From A Sapolite of the Precambrian Morton Gneiss In The Minnesota River Valley of Southwestern Minnesota."

Five Named Duncan Stewart Fellows

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 '49, 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 pleased to announce that Dorene Sam Nakata '08 of Waipahu, HI, Lauren Colwell of St. Paul, MN, Aaron Fricke of Kalispell, MT, Jessica (Katie) Marks of New Berlin, WI, and Kristin Sweeney of Portland, OR, all class of '09, have been named Duncan Stewart Fellows, extending the number of Stewart Fellows over the years to 93. Congratulations and best wishes to all of you!

ORDOVICIOUS Sweeps Soft-Core Frisbee League

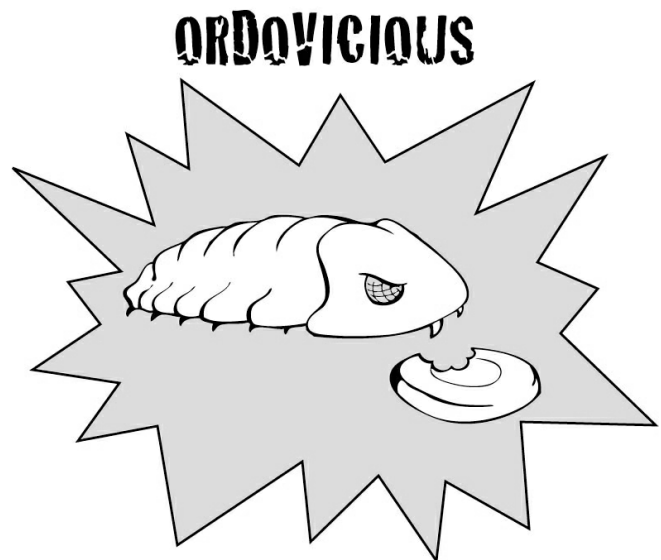
The 2008 Geology majors' ultimate frisbee team ORDOVICIOUS powered away with the championship of their soft-core intramural league during spring term in a sudden-death playoff.

ORDOVICIOUS faced the Zen Poachers in semi-finals and pulled off an 11-9 victory despite a drenching rain for much of the game. They actually seemed to gain an advantage due to the wet conditions, perhaps reflecting their grit developed on field trips.

The finals the next day saw ORDOVICIOUS facing 'Hue Cubed And Friends, the floor team from third Goodhue, and ORDOVICIOUS gnashed their way to a 13-5 win for the soft-core league championship. The final point was carried across the line by Katie Bovee '08 in a triumphant dash.

Team captains were Katie Buckner '09 and Ethan Hyland '08. Good work guys!

The team shirts, designed by Lydia Staisch '08, featured a ferocious two-fanged trilobite taking a bite out of a frisbee disc. It's possible the team's vigor and competitiveness was propelled at least in part by the great shirt design and the ominous new name ORDOVICIOUS.



*The ORDOVICIOUS logo, by Lydia Staisch '08.
Good job Lydia!*

Carleton Network For Lesbian, Gay, Bisexual And Transgender Geology and Natural History Alums

The Carleton Network For Lesbian, Gay, Bisexual and Transgender Geology And Natural History Alums provides students and alums with career information, fellowship and support. It was founded in 1990 and now has 41 members coast to coast.

The network has the twin objectives of helping reduce isolation among alums and working toward a more open, accepting and informative environment on campus for students in geology and related fields.

The network consists of a confidential list of names and addresses, circulated only to members of the network, maintained by Marilyn Yohe '88, Dan Spencer '79, and Tim Vick (Geology Department staff member). Inquiries about joining may be addressed to any of them.

LGBT folks might also be interested in the general alumni group called Out After Carleton (OAC). Full information about OAC is available through www.carleton.edu in the alumni section.

Geology Department T-shirts Available By Mail

Special Two-For-One Deal!

We have a supply of geology T-shirts available that can be purchased by mail. The cost for current year shirts is \$10 plus \$4 postage payable to Carleton College. Prior years' shirts can be had for \$5 each plus postage.

The 2008 shirt is a light tan or beige color ("sand" according to the suppliers) with the globe/Brunton design shown on the cover of this Newsletter done in dark maroon ink. It is quite a classy shirt. At this writing, only S and XL are available.

There is also a timeless (and priceless!) special shirt 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 cardinal red with white ink. All sizes are available; \$10 per shirt plus \$4 mailing.

The 2006 shirt is dark blue with white ink. On the front it says "Carleton Geology 2006," and on the back it says "The Dark Crystal... Trial By Stone" with a picture of a quartz crystal. The only size of this one left are mediums. Clearance sale price on the 2006 shirt of \$5 per shirt plus \$4 mailing cost.

We still have some 2002 shirts left, which are light blue with black ink, with a picture of a trilobite and saying "Hoc animal maxime placet," which translates to "This is my favorite animal." L and XL are available. These shirts have been here entirely too long so for each copy of the other shirts listed above that you order, I will include one of these 2002 shirts **free of charge!**

Email Tim Vick at tvick@carleton.edu or give him a phone call at (507) 222-4401 to find out whether your size is still in stock.

2008 Awards

Distinction In Comps

Matthew Dettinger
Ethan Hyland
Tyler Mackey
Zachary McGuire
Dorene Samantha Nakata
John Nowinski

Sigma Xi

Michael Barrett
Katherine Bovee
Daniel Callahan
Matthew Dettinger
Ethan Hyland
Tyler Mackey

Dorene Samantha Nakata
John Nowinski
Elizabeth Ritz
Lydia Staisch

Mortar Board

Cicely Miltich

Phi Beta Kappa

Tyler Mackey

Dana Award for Personal Achievement

Tyler Mackey

Mike Ewers Award

Jessica (Katie) Marks

Duncan Stewart Fellow

Lauren Colwell

Aaron Fricke

Jessica (Katie) Marks

Dorene Sam Nakata

Kristin Sweeney

James S. Berglund Social Science Prize

Cicely Miltich

The Class of 1966 Diversity of Achievement Award

Maija Sipola

Writing Portfolio Recognition

Jessica (Katie) Marks

Dean's List

Cicely Miltich '08

Jessica (Katie) Marks '09

Kristin Sweeney '09

National Science Foundation Graduate Fellowship

Callen Hyland '05

Ross Mitchell '07

Senior Projects – 2008

Graduating senior geology majors, their hometowns and titles of integrative exercise ("comps") projects:

Karen M. Aydinian, Spring, TX, "Structural Models for the Geology of the Hanna Basin, Carbon County, Wyoming"

Michael Barrett, Walla Walla, WA, "Kootzna-who? Provenance and detrital history of a mid-Tertiary basin in Admiralty Trough, southeastern Alaska"

Katherine Bovee, Henderson, MN, "Implications from flowstone $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ records for Late Pleistocene paleo-sea-levels, Dead End Cave, Government Quarry, Bermuda "

Karin Brown, Madison, WI, " $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology of the Silver Hills andesite, Montserrat, West Indies"

Daniel Callahan, Centerville, GA, "Error Reduction in Cave Conduit Modeling"

Matthew Dettinger, Washington, PA, "A borehole video examination of debris within the terminus of a polythermal glacier, Storglaciären, northern Sweden"

Ethan Hyland, Poland, ME, "Paleomagnetic stratigraphy across the Eocene-Oligocene Boundary at Monte Cagnero (Piobbico, Northeastern Apennines, Italy): Correlations to the GSSP at Massignano (Ancona, Italy)"

Hannah Kinzie, Evanston, IL, "Implications of Groundwater Level and Temperature Fluctuations beneath a Newly Developed Subdivision in Sun Prairie, Wisconsin"

Calvin Lieu, Hong Kong, " A Cyclostratigraphic Analysis of the Mid-Cenomanian Event, Avacelli and Furlo, Italy"

Tyler Mackey, Madison, WI, "Ephemeral cementation of beachrock in the Jordan Formation: a case for ice near the Cambrian equator"

Zachary McGuire, Fanwood, MO, "Rotation of Crustal Blocks in Central California based on Paleomagnetic Declination"

Cicely Miltich, Cohasset, MN, "Climate change past and present: Carbon cycle analogs"

Marc Monbouquette, Omaha, NE, "Obliteration of climate signals in an avalanching pile of rice and implications for interpreting stratigraphy"

Dorene Samantha Nakata, Waipahu, HI, "Mapping Volcanism and Tectonism of the Slow-Spreading Lucky Strike Segment (Mid-Atlantic Ridge, 37°17'N)"

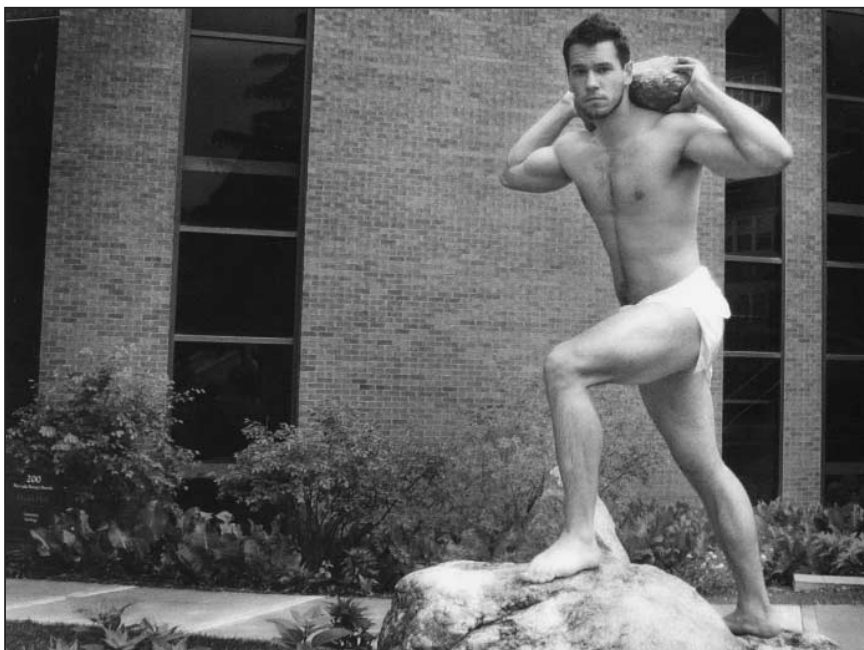
John Nowinski, Black River Falls, WI, "Dirt, water, and wine: deciphering soil-water interactions and their implications for viticulture in the Walla Walla Valley, American Pacific Northwest"

Frances Reid, Newport, OR, "Effects of El Niño and the North Atlantic Oscillation on Zinfandel and Primitivo wine quality in Santa Rosa, California and Manduria, Italy"

Elizabeth Ritz, Madison, WI, "Can the stream power law be used to quantify differential landscape evolution from bedrock incision in the Central Alps, Switzerland?"

Samuel Roberts, Leverett, MA, "The Origin of Polish on Pebbles in the Windrow Formation of Goodhue County, Minnesota"

Perry Spector, Aspen, CO, "An Environmental and Time Series Analysis of Pelagosite: a Mediterranean Intertidal Aragonite Crust"



One feature of the 2007-08 school year in the Geology Department was the "Carleton Men Of Geology" calendar that was produced by the male Geo majors, with some assistance from a female or two on lighting and technical issues, in the spring of 2007. Jack Gibbons '07 struck this classic Grecoian pose outside of Mudd for the May picture.

Lydia Staisch, Saint Louis, MO, “Dislocation Modeling and Comparison with GPS Data to Assess Possible Strain Accumulation in the central Lesser Antilles, Commonwealth of Dominica”

Clara Tsang, Hong Kong, “Do secondary magma chambers exist in Mauna Loa’s Southwest Rift Zone? - A Petrologic and Geochemical Analysis of Xenoliths”

Class of 2009 Geology Majors

Kirke Anderson Elsass, Madison, WI
 Jonathan Aronson, Little Rock, AR
 Kathryn Buckner, Inman, SC
 Kort Butler, Amherst Junction, WI
 Lauren Colwell, Saint Paul, MN
 Tiffany Cox, Farmer City, IL
 Aaron Fricke, Kalispell, MT
 Mary Henke-Haney, Saint Paul, MN
 Justin LaMont, Scarsdale, NY
 Dylan Linet, New Paltz, NY
 Jessica Marks, New Berlin, WI
 Maija Sipola, Babbitt, MN
 Kristin Sweeney, Portland, OR
 Phillip Varela, Saint Paul, MN
 Elizabeth Webb, Waterville, ME

Class of 2010 Geology Majors

Lila Battis, Cary, NC
 Laura Bazzetta, Waukesha, WI
 James Bethune, Portland, OR
 Sarah Crump, Marshfield, WI
 Travis Drake, Portland, OR
 Kimberly Elson, Davis, CA
 Jordan Epstein, Los Altos Hills, CA
 Nathan Evenson, Saint Joseph, MN
 Neil Foley, Winchester, MA
 Mark Hagemann, Hurley, WI
 Lauren Howell, Newton, CT
 Zachary Montes, Seattle, WA
 Michael Mooney, Montclair, NJ
 Allison Pfeiffer, Seattle, WA
 Nathaniel Ryan, Wallingford, PA
 Allison Schwartz, Milwaukee, WI
 Julia Schwarz, Seattle, WA
 Chelsea Scott, Bryn Mawr, PA
 Mahima Swarup, Kolkata, INDIA
 Stuart Sweeney Smith, Bemidji, MN
 Allison Vitkus, Shaker Heights, OR
 Sibow Wang, Hamden, CT



During mid-term break in February Sarah Titus’s structural geology class ventured to California to map the faults and folds in Painted Canyon, near the Salton Sea south of Palm Springs. Painted Canyon makes a great mapping exercise because the structures are too big to grasp quickly, but within the reach of the class as a group given a couple of days of mapping time and a spirit of cooperation. The class forms several teams and each team maps a sector of the area. In this scene they are discussing strategy at a lunch stop.

NEWS FROM ALUMS

By Katie Buckner '09

Faculty

Ed Buchwald: Not a lot of news to report. Life is pretty sweet because I am retired and make up my own calendar most days! Cynn timer and I did enjoy alumni weekend this year. The trip to Taylor's Falls was a highlight. Since I almost always taught Introductory Environmental Geology in the winter term I seldom went to the Falls with students. There were more than 75 people at the anniversary field trip, and, aside from being pushed off the trail and into the creek at Hidden Falls by rambunctious alums, it was great. I even had a chance to teach some paleontology to potential majors (Class of 2023?).

Cynn timer and I have been enjoying grand kids, our daughter Julie's wedding, travel, a bit of work with the National Park Service, sailing our boat, and all the things retired people are supposed to do. The Carleton Men's Lacrosse club asked me to help coach again this year and honored me with a yearly award in my name given to the player who has done the most for the team. I was truly overwhelmed at the team banquet!

We were greatly saddened to hear of Jeannie Boardman's sudden death. She was always so supportive of what Shelby and the rest of us were trying to accomplish in the Department and College. She will be sorely missed by the Carleton and Northfield communities.

I close with my usual plea for you to come back for alumni reunion. It is so much fun for us to hear your stories. It is truly a great get-together.

Alums

1937. Jerry Kyle writes that he is still getting occasional jobs as a geological consultant with local individual oil prospectors. **Allan Matthews** remarks, "Geology has advanced quite some since Gould's good teaching. Just finished an updating Smithsonian course on plate tectonics by William Nelson. He helped reveal the process by analyzing rift drill cores. I visited Venezuela last August and observed its oil bounty being used to develop a fairer democracy."

1946. Charles Higgins says, "75 years! 1933! I arrived at Carleton just nine years later and Dr. Gould's Geology 1 class inspired me to make geology my career. He was called to the war mid-semester, but equally-inspiring **Bill Fiedler** continued in his place. The Department and Carleton have changed a lot since then, but I think the inspiration remains!"

1947. Georganna Dickson writes, "I loved being back

on campus last June for my 60th reunion – and above all I love what Carleton is, does, and keeps doing. I have a grandson who will graduate in June – don't know whether I'll make it back for his commencement."

1949. Ed Rudolphy writes, "nothing is new. It's all older. Spend the days trying to avoid the inevitable."

1953. Jim Mancuso has been fully retired since 2005. He worked in minerals exploration and management for a range of companies (Kennecott, Exxon, and Chevron) until 1992 when he retired as head of the Minerals Business Unit of Chevron. He was then chairman/CEO of four junior mining companies before retiring again in 2005. **George McGill** says, "I continue to support three graduate students with NASA research grants, which also support my research. All three students have projects on Mars and I cannot tear the students away from Mars to work with me on Venus. For various reasons, I will be easing off of my grant-supported research in the near future."

1954. M.E. (Pat) Bickford writes, "I continue to enjoy my work as Science Editor for books for GSA and my service on the GSA Publications Committee. I am teaching a course at Syracuse University, "Volcanoes and Earthquakes," for 25 bright students this semester. I have a paper on Adirondack anatexis in press for GSA Bulletin and one (also in press) on the Colorado Paleoproterozoic in GEOLOGY. I will give a talk on Adirondack anorthositic and related granitic rocks at GAC-MAC in Quebec City in May. In August I will go to the IGC in Oslo and on an eight-day field trip. Retirement is great!!!"

1955. Joseph Mancuso writes he received a "second hand" honor in April: "My son, Toby, who is CEO of Consolidated Gold Inc. in Reno, NV, returned to Bowling Green where he was honored by the BGSU Geology Dept. as Distinguished Geology Alumnus of the Year. He got his BS from BGSU in 1981 and MS from Univ. of Idaho in 1983. He worked for several mining firms before starting his own company."

1956. "We spent nine months of 2007 in southwest Colorado," says **Richard Buchheit**, "returning to Grand Marais at Christmas. Lots of oil/gas-uranium exploration activity to keep aware of out there! Heard a talk and visited with **George Hudak '84** – he's part of the Precambrian Research Center at Univ. of Minnesota, Duluth addressing mineral exploration possibilities in the PC. Looking forward to the Alaska Coastal Wilderness tour on National Geographic's "Sea Bird" with fellow Carls and Cam Davidson as our science host in late June. We will probably

"winter" in Colorado into 2009 – Detta's horses need work and TLC!"

1958. William (Bill) Hollweg sends word that he is "still enjoying retirement. I now have three kids, five grandkids, three great-grandkids and I am proud of them all!" **Dante Stephensen** writes, "I flew over the Gobi Desert in China, then did that great train trip up over 16,400ft."

1960. Michael McLanahan was elected to the Holidaysburg, PA, Borough Council in November of 2007 to serve a four-year term.

Rene Fournier reports that Condor Geotechnical Services, Inc. is into its 23rd year with eight great employees. Rene is helping with the Class of 1960's 50th reunion, prompting him to say afterward,

"which means the Geo Dept. is only 25 years older!"

1961. Jeff Hanor writes, "I enjoyed attending the 12th International Symposium on Water-Rock Interaction in the summer of 2007. It was held in Kunming, Yunnan Province, China. Yunnan lies directly south of Sichuan, the site of the devastating earthquake of May 2008. Yunnan also borders on Tibet, Burma, Laos, and Viet Nam, so it is a very culturally diverse part of China. The people were extraordinarily pleasant, and we got to see some remarkable karst. I also enjoyed having lunch with **René Fournier '60** when I was in Denver for the GSA meeting. I hadn't seen René in years, and it was good getting caught up on what each of us has been doing."

1962. "To update my activities," writes **John Lufkin**, "there are many!!" John is now consulting pretty much full time, but he is also still teaching his week-long course in Ore Microscopy at Colorado School of Mines, offering it twice a year now. Next offering is July 28-Aug 1. John has also started a field trip

business, Lufkin Field Trips LLC, with trips this summer to Costa Rica, The Black Hills, Colorado parks, and Yellowstone-Jackson Hole, WY. Those interested can contact John at lufk3@comcast.net. In addition, John says, "I am very excited about my first major publication to come out, hopefully by June, entitled, "Guidebook to Geology of the Black Hills," with co-authors Jack Redden, Alvis Lisenbee, and Tom Loomis. Many of my reviewers think it's a winner, as do I." Good luck John!

1963. "No really newsworthy events to report," says **Wendell "Duff" Duffield**, "but Anne and I plan to drive south from Hayward, WI. to join the Taylor Falls field trip in June. Then we'll head on down to Northfield for the next two reunion days."

1966. In response to the question "what's new?" **Bruce Langhus** says that he has "moved yet again to a retirement village, but I'm not retired. The consulting partnership continues to evolve; we currently do about 50% of our business for government clients including the DOE, the BLM, and Army Corps of Engineers. We are doing more and more petroleum work, however, and keep trying to get higher upstream in order to help produce that last tea-cup of crude before it runs out. We supply Pollution Prevention and Sustainability training and development for the US Army, and try to do the same things for industry but I'm afraid this is yet another illustration of the DOD being decades ahead of the private sector. Had the pleasure of seeing **Joel Renner** (Class of 1921 or was it 1965) at the DOE in Washington and hope to work with him more closely on geothermal energy projects."

1971. After twenty-four years with the Billy Graham Evangelistic Association **Royston Kruse** is now



*Several Carleton faculty and alums attended a workshop entitled "Teaching Introductory Geoscience Courses" in early July. The workshop was sponsored by the Science Education Resource Center as part of its On The Cutting Edge series. Participants included, left to right, front row: **Jen Wenner '92**, **Kim Hannula '89**, SERC Director **Cathy Manduca**, **Sara Rutsky '01** and **Mary Savina '72**; back row: **Cam Davidson**, **Carrie Davis-Todd '99**, **Heather Macdonald '76**, **John Leland '86** and **Ed Buchwald**. Photo by David Tewksbury.*

serving with FaithSearch International, a ministry that uses historic and archaeological evidence to teach the reliability of the Bible.

1972. Kelton Barr writes, "I've been reborn – new wife, new kids, new home, new job - and life is wonderful!" He is living in St. Louis Park, MN, and is Principal Hydrologist for Braun Intertec Corp.

1973. Dick "R.J." Pautsch is "working on LNG, coal gasification, and Alaska gas projects in the Shell legal department. Still pursuing geographic projects such as visiting every county in the US and getting 4000 ticks in the ABA area (if you know what I mean by that, email me!). Eagerly anticipating retiring to Colorado, Monterey Bay, and the Upper Mississippi River in a few years."

1975. Jim DuBois says, "after many long years as a hydrologist with the State of Arizona doing aquifer permits and groundwater recharge projects, two years ago I made the switch to city government and the stormwater program. Those of you doing stormwater work know what a crazy quilt of regulations it entails. Lately, I've opted for a retirement incentive that will allow me to find a fun job. Susan and I have gotten our oldest son through Macalester and have another son in high school. Both have steered well clear of geology with interests in language, writing, media, and a multitude of other things. They never cease to surprise and amaze us." **Emily Wrubel** writes, "My youngest son, Carson, graduates from high school in May and heads off to the University of CO, Boulder come fall. Lots of people here don't quite get it – but with him in Colorado and his brother in Montana, why bring them home for vacations? We'll just go visit them!"

1976. "Ian (**SOAN '75**) and I moved back to Chicago last year, partly to help aging parents, but it's worked out well," reports **Leah Haworth Evison**. "After a year of commuting back to DC, I got my old Chicago EPA job back and it's great to be closer to Minnesota where my daughter Liz is a sophomore at Carleton – but it's looking like Linguistics for her, not Geo!"

Philipp Muessig reports, "I'm now part of a non-regulatory department of the MN Pollution Control Agency. My geology background has been most useful of late: I organized a major state conference in 2007 for local government on climate change and peak oil (www.nextstep.state.mn.us/conference). I was at the 2007 World Oil Conference in Houston (www.aspo-usa.org) but didn't see any Carls."

1977. David Gambill has moved to CA, back to the house he built in '84. He says he is "working part time with WildAid (visit www.wildaid.org) to stop the illegal wild-life trade." He is also helping a local conservation NGO foster a love of the land in Sonoma County part time and full time he is starting Sonoma

Chocolatiers, look for them online in May. Their motto is "Taste the Darkside." If you like dark chocolate, try them! **Bruce K. Nelson** got to combine teaching with research this past summer when he ran a field volcanology class for undergrads in the Canary Islands. After the class he stayed on with a few students for a couple weeks of fieldwork. Then in March he took a group of students to see Kilauea caldera venting and lava flowing into the sea during a week-long class field trip to Hawaii. "It's been a very volcanic year for me," says Bruce.

1978. Tom & Teri Baughs '80 report, "our 'fun time' is spent cheering on our sons' athletic endeavors. Mark is at University of Pacific on the volleyball team and Scott is at California State–Chico on the cross-country and track teams. Recent trip took us to Edinburgh to cheer on Scott and the US team in the World X-Country Championships. We looked at the rocks, they were mostly dark and hard." After ten years **Steve Ingebritsen** is stepping down from his "Branch Chief" position at the USGS. This was a rotational position, similar to a department chair, and Steve says "I held it much longer than intended." Steve is now looking forward to re-engaging in science. "A quiet year," writes **Craig Banister**, "no big adventures. Made my usual trips back to my parent's farm in western Minnesota to help with the spring crop planting (corn and soybeans) and the fall harvest."

1979. "Starting a medical exchange program in Shanghai," writes **Tillman Farley**; "I'll go there to work three months per year. Studying Mandarin hard! Son **Ben** is a sophomore at Carleton." **Karen Campbell** reports, "I continue to work at St. Anthony Falls Lab, which gives me wonderful opportunities to stay connected to Mary Savina, Clint Cowan, and Tim Vick in particular. Work gives me many opportunities to spend time with **Robb Jacobson '79** and **Barb Wonson Liukkonen '77** as well as **Heather MacDonald '76** and many others from the '70's Geo grads. New friends as well when students like **Nate Dixon '07** intern at the lab."

Marie Del Toro writes, "In October 2007, **Chris Brick**, **Jo Ann Murashige Gronberg**, **Georgane Callaizakis Higgins** and I got together in Portland, OR, for a weekend visit. We had a great time talking, laughing, and exploring the Mt. Hood wineries!! See you at reunion #30?" **Dan Spencer** had another amazing year, including a trip to Costa Rica, climbing another 14,000 foot peak in Glacier Park with **Dan Maturen**, and turning 50. He also has been serving on the board of the Wild Rockies Field Institute, a Missoula-based educational organization which does fantastic experiential education wilderness courses in the West. **1980. Mindy Bell** spent last fall in Antarctica through the PolarTREC program

(www.Polartrec.com) working with a team from Moss Landing, CA, on benthic invertebrates and sending a new submersible under the sea ice. See <http://scini.mlml.calstate.edu> for pictures! This summer Mindy will head to Amherst, MA, to work on polar curriculum for International Polar Year (IPY), before helping Darrell with his field work in Alaska. "Lindsey just got her driver's license, she says, "so I am also sporting a few new gray hairs!" **Reid Fisher** gave the job of relating "what's new" to his girls (8 years old) who write that they "just cross-country skied into and out of the cabin (4 mi.)," and "the Easter Bunny left eggs in the snow." Reid remarks that this "sounds more exciting than anything I could add. Geo majors seeking engineering geology work are encouraged to check in at rfisher@pacific-geotechnical.com." (**Teri and Tom Baughs See 1978**.) **Bill Hughes**, remarks "tickled to see my Geo TA on the adult education video series, "Living The Questions", at church. You know who you are, **Barb Rossing!**" **Vicki Hansen and John Goodge** report they are faring well at the University of Minnesota - Duluth, "enjoying students, a bit of travel and trying to maintain a good balance of teaching, research and family life." Casey and Berit seem to be thriving as they navigate the ins and outs of adolescence.

1981. "We are the proud parents of two collegiate daughters who have been jetting off to far away lands and spending our money under the guise of post-secondary education," reports **John Hankins** and his wife. "Looking forward to their return to earth." **Heyo Van Iten** says, "my dad and I spent our winter break in Bundenbach, Germany, where our host, professional fossil collector Wouter Sudkamp, showed us some of the Lower Devonian Hunsruck Slate mines that have yielded spectacular fossils with pyritized soft parts. For the first time in my life I was in the presence of trilobites with preserved limbs and antennae. My main reason for going to Bundenbach was to examine an association of 19 conulariids (Conularia) collected last year by Wouter that appear to preserve relic soft tissue. I have been viewing stereo pairs of these x-rays to see if the putative relic soft tissues occur within the test cavity, which they do. The conulariids appear to be attached to a fossil, which we cannot identify, and so we are working with other specialists in Germany and Holland to try to figure out what the apparent substrate may be. Really exciting stuff. This summer it's off to NewYork/Vermont/Quebec again to work the Devonian and Ordovician sections."

1982. "We're enjoying central New York," says **Ben Levy**. "Such an affordable, beautiful area for our family - with gardening, wind power plans, bicycling, and x-country skiing! Good travel opportunities with

work – less and less snow each year thanks to global climate change." Ben also says he is doing some pro bono work in hydrology for a local museum. **Ethan Bleifuss** and his family visited southern China during the worst winter in over 100 years and they came back with a second daughter, Ava LiXing.

Congratulations Ethan! **Heidi Bredenbeck Wells** writes, "Reunion last summer was great and I'm still enjoying the reconnections with folks there. Met **Sherren Clark** in Chicago last fall for a quick visit (and a little pool playing). Discovered that **Scott Linneman '83** and I have a mutual friend in Bellingham and I get up that way often so maybe we can all meet up next time."

1983. Pipestone Vinyards, the brainchild of **Jeff Pipes** and **Florence Wong (Chemistry '84)**, won the 2008 Central California Green Award. Jeff says, "thanks to all of you who nominated us and wrote letters of support. It's nice to get a little bit of recognition for the extra work we do here trying to be gentle on the land!" Jeff and Florence have also been learning to plow with their two draft horses, Betty and Bobblie. Jeff remarks "I don't think Florence growing up in Hong Kong ever expected to be plowing with a team of horses!" Jeff also says, "I'll be at the reunion (no way it's been 25 years!?) and I'll be doing a wine tasting in Olin. Now in my day there wasn't much wine tasting in Olin Hall, but ahh, think of the possibilities! As always, my offer stands for Geo folks to visit us in beautiful Paso Robles California where the wine is good and the livin' is easy!" **Rob Alexander** reports. "on the personal side, all is well with family. My wife Becky and I celebrated our 20th wedding anniversary by traveling two weeks in Alaska where we met, hiking, canoeing and camping. I can't believe I traded Alaska for Houston. My older daughter graduates from high school and will attend either Oberlin Conservatory or Rice University, studying viola performance. Boy, that sure reminds me of where the past 25 years have gone! My younger daughter still homeschools, but may attend performing arts high school (violin) next year if Mom's teaching contract negotiations don't go well...On the professional side, I am still working geoscience (geology and geophysics) in the deepwater Gulf of Mexico, but I switched jobs and I am working more on the producing side and less exploration. Sure hope to see a bunch of Geos at our 25th reunion in June, especially for the Taylor's Falls field trip with the department...75 years of history in the Geology Dept...pretty amazing." **David Purkey** writes, "Still living in Davis, it has been over 15 years now, but changed jobs in 2006. I am now leading the Water Group at the US Center of the Stockholm Environment Institute. We are known for our long-



Maria Peterson '85 visited her parents in Northfield this spring. She wrote, "My aunt just turned 90 years old, and we had a party for her. She lives at the same senior center in Northfield as Eiler Henrickson '43, so I was able to get caught up with Eiler during the party. Here's a photo of me and my husband Ken Boyer with Eiler and his friend Pat Forsyth. I continue to work with JSR Micro in Sunnyvale, CA,

focusing now on Emerging Products (materials for semiconductor & solar technologies). I had a business trip to Japan during the cherry blossom season in early April. It was spectacular."

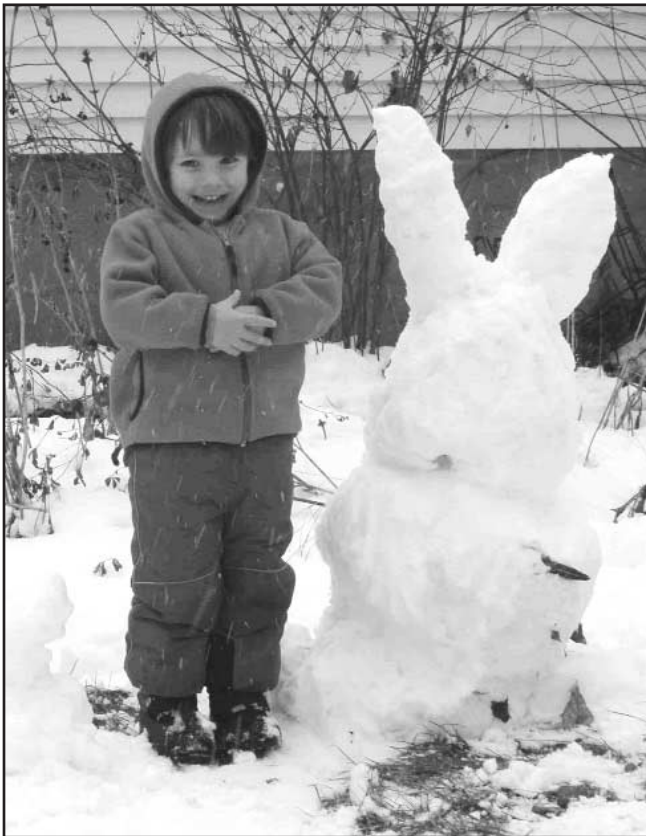
range water planning software WEAP. I am having the chance to work on water management issues around the world, with much work motivated by climate change impacts on hydrology." In response to "what's new?" **Susan Dolgin Ruggles** says, "I changed careers two years ago to become a late-arriving stay-at-home mom. I have a two-year old precious boy and a little girl on the way in July. Too close to be traveling to the reunion. I'm sure it will be a blast!" After a year and a half, **Mark Gordon** is "leaving Repsol and joining Shell Research. I look forward to concentrating on structural geology again. In the past year, we have been to Colorado and southern France for vacation. We went to Romania in January to see Cecilia's father before he passed away, and then stayed for the funeral. That was a sad time but he had lived a full life almost to age 81." **Elliot Bruhl** wrote in last summer reporting that he had moved to a new clinic in Sitka. He said, "I continue to enjoy my medical practice here in Sitka. I moved to a new, smaller practice which is both challenging and refreshing.." At the time, Elliot was in his third year of cello lessons - go Elliot!

1985. Bill Dewey writes, "Kudos on the department's 75th! By the by, I was in contact with a fellow geology alum [**Sara Gran Mitchell '96**] who is now a professor at the College of the Holy Cross, where my Dad taught mathematics in Worcester, MA. My Dad clipped an article about her teaching what was thought to be the first geology class in Holy Cross history. I emailed her and she and her husband live

just a few blocks from where my Dad lives and where I grew up. Small world and interesting to think how the Carleton geology department's influence extends! My family is well. Alex(andra) is in 3rd grade and Liam is enjoying being at her school in kindergarten. Cristine continues to work at Roco Films and is off to Cannes on Friday for her annual trip to France. My work continues well. My 10% weight loss in 2006 and continued running led me to run a half marathon on Super Bowl Sunday (2:17) and a 20k in China Camp State Park in March (under two hours!)." **Russel Urban-Mead** is still providing water resource and water supply studies to local towns and counties. He is also providing remediation services as well as water supply and geothermal designs and tests for private clients. "Can't believe I've been with one firm for 14 years now," he writes. "They've just introduced an ESOP [employee stock ownership plan] - we'll see how that goes. Also keeping active with family, sustainable agriculture issues, and regional climate change preparedness." **Brad Werrell** is actively marketing video database and management software to medical colleges and post-graduate training programs. "I am still interested in building a geology system - anyone game?" says Bill, "We can tie it to GPS location for higher level roadside geology..." **Kristin Grady Mitchell** is still living in Green Bay, WI. "Not much new," she says, "except we will soon have a teenager! We went to Arizona for spring break where we spent time showing the kids the 'geology' at Meteor Crater, Sunset Volcano and the Grand

Canyon." **Susan and Stu Grubb** sent a neat holiday letter in the form of the Grubb Family board game. It featured a serpentine path of excursions to exotic locations, Special Olympics athletic events, a driver's permit, and chickens won and lost. In the end, everyone wins for surviving the year! On his Geo Dept. response card, Stu wrote, "After 9 years with my previous employer, I have started a new job with Geomatrix in Minneapolis. I will still be doing groundwater work with more emphasis on mining and pollution remediation. I also started my term as president of the Minnesota Groundwater Association. We are looking forward to a presentation by Mary Savina at our spring conference on 'Biofuels and Water Resources.'" **Glen Carleton** writes, "Middle age leads to few changes, but occasional irrational behaviors. This year I got a tree service to drop off 34 surplus logs, brought in a portable saw mill, and now have 5,200 board feet of rough-sawn lumber, some annoyed neighbors, and an understanding but exasperated wife. I'll report back next year as to whether the planned garage and wood-burning furnace come about or this turns out to be less practical than a sports car." Yes, Glen, please do!

1986. Kate (Heimes) Carlson writes, "My eldest child



Carolyn Carr's '88 daughter Sylvia, who's about three and a half years old now, made a magnificent snow bunny for Easter!

(Bethany) graduates from high school this year. I have had the pleasure of being closely and daily involved in her life as a home-educator. We will proudly watch her next phase as she pursues a linguistics degree at Eastern Michigan University. Life is good because God is good!"

1988. Congratulations to **Sean C. Weekes** who has a second baby boy, Oliver William Weekes, born on January 24th. Sean, who is a fire truck driver for the City of Minneapolis, also is reporting a few gray hairs.

1989. In response to the question "What's new with you?" **Sonja Wolter** says, "I decided I should take advantage again of being able to take free classes at CU (though I work at NOAA, I'm employed by the university). This semester I'm taking an intro electronics class." She also wrote of her travels, "In mid-July, I went to a Polie wedding in Livingston, MT. I carpooled up with two of my fellow Pole winterovers and their 4-year old son. We went through Thermopolis when the Carleton alumni trip was going on. I tried to track down Ed Buchwald at the hotel, but no luck, so I just left a note. We were on borrowed time with the 4-year old, so we couldn't linger very long - too bad." **Ben Edwards** says "hi" to all of the Carl alums. Ben and his family are "slowly starting to think about moving back to the US as we near the end of our two year stint in the UK. I have been acting as the on-site director for Dickinson College's Norwich Science Program (NSP), housed at the University of East Anglia (UEA). We've had a busy two years, with the girls playing lots of 'football' and a bit of European traveling. We had a brief trip to Sicily (Etna and beaches), southern Italy (Vesuvius, Pompeii, Rome), and more recently a whirlwind trip to Paris. Kim's decided it's time to break out of the house and started taking more math courses at UEA, with future plans upon returning to the US to get her teacher certification to teach high school math. Most recently I took nine Dickinson NSP students for three days in Iceland as part of my course on Science and Society. They heard talks on earthquake monitoring, volcanic hazards, and the Icelandic H-fuel cell project. They also visited a geothermal energy plant and toured an Aluminum smelter. All very good examples of how science and scientists are an important part of life in Iceland and more broadly. We'll be sad to leave the UK (especially missing the convenience of trains!), but we are looking forward to getting home, and our 20th reunion next year!" **Karen Merritt** writes, "After several (?) detours I finished my PhD in Environmental Engineering last summer. I'm working now for a company called ENVIRON - I do mostly fate transport modeling for sediment-associat-

ed chemicals and remediation design. The fate transport stuff is good fun – our group all started in geo and call ourselves the Forensic Geology Section. It’s a good place to have landed.” **Hillary Liller Ward** has been home-schooling her son Benjamin, 9. She says, "Between trying to develop an ever-evolving rounded curriculum for a child who objects to the whole idea of writing and wants to learn calculus and the finer points of engineering, every day is an adventure."

1990. Rebecca Arenson is “enjoying having a niece and nephew – they are lots of fun. I am attempting to make a quilt for Sophie, my niece.” Rebecca also says she is “volunteering with a rare plant monitoring program – a great way to meet neat folks. Planning some summer travel with friends from the east coast – they are finally coming out to Seattle for a visit. Trying to shift away from policy to all science – no luck yet with the budget crunch.

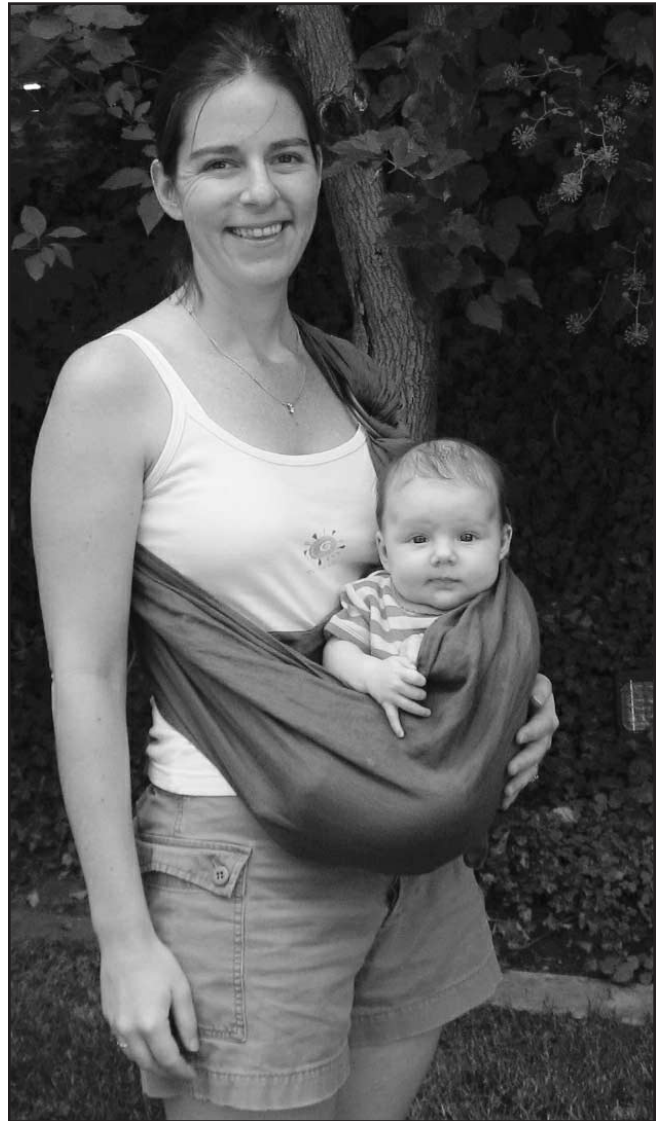
Andrew Garrett writes, “Jennifer and I are still in Lexington, MA. I’m still a disaster doc with the Columbia Univ. Public Health School, working on issues around disaster response workforce capacity and the care of vulnerable populations in disaster. I managed to get board certified in Disaster Medicine and I’m still active as a medical officer on a national response team, as I have been since '01. Still working with EMS and law enforcement as a medical director locally here to go along with my crazy NYC commuting schedule. We’re expecting our first kid in July, so our two-pediatrician household is trying not to go nuts worrying about things! Mom’s still in Cody, WY, so I usually get an annual trip or two in back to my old stomping grounds in Yellowstone, which makes me homesick for the cool geology and one of my favorite jobs ever as a ranger there.”

1992. Some sad news, **Morgan Cowles** passed away January 28th of this year in an avalanche while back country skiing in California’s Sequoia National Park. He was a recent graduate of UC Santa Barbara and was working there as a librarian when the accident occurred. We send warm thoughts to his friends and family. **Jill Baum** has moved out to Mt. Rainier National Park in Washington to direct the Student Conservation Association volunteer efforts to restore trails and other facilities after a disastrous rainstorm last year in which 18 inches of rain fell in 36 hours. The goal of her program is, following the emergency clean-up and repair effort, to create a tradition of volunteer stewardship in the park. You can find her program online by Googling SCA Mt. Rainier.

1993. Beth Pratt-Sitaula writes, “We are still enjoying being on the sunny side of the Cascades here in Ellensburg. Ajay graduates from UW with his electri-

cal engineering degree and will hopefully find a job around here too. We are going to take a two-month trip to Nepal this summer to celebrate. Kiran is one-and-a-half now and fanatically passionate about balls. Come visit!”

1994. Mike Unger sends an update, saying, “We’re still living in Scotland (Aberdeen to be precise). I’m working as a geophysicist for Chevron on a field in the North Sea, and enjoying playing with the toys



*Congratulations to **Cari Johnson '96** on the birth of a very cute daughter, Miss Gabriella Lucille Carlen ('Ella'), born June 5, 2007. Last August when this picture was taken, Ella’s hobbies included holding her head up, smiling, and hanging out with her dog Jake. At the time, Cari and David were planning to go to Belgium with her this May. Cari added, “we had a long, hot summer here - it was so weird not spending it globe trotting or goat munching in the Gobi, but we’ll get back to that soon enough!”*

(and data) they give me. The winter at 57+ degrees north is tough, but the spring and summer are wonderful! I'm doing a lot of mountain biking and cycle commuting, which is great. The twins turn five in four days (7 April), and our youngest just turned two (all girls). I'm off to South Africa for a field trip tomorrow (4 April), and looking forward to crossing the equator for the first time!" **Brett Dooley** reports that she has "been home-schooling Tim, who is now 12 and towers over me. He is doing well and enjoying the freedom this type of schooling can bring. I taught a digital media course for Averett University last summer and this spring will start teaching earth science and biology for a local community college. It will be nice teaching outside of a K-12 classroom.

Butch is doing well and getting lots of prep work done since the Virginia Museum of Natural History opened its new building a year ago. Butch has a blog – you can get there from the museum webpage at www.vnmh.net." **Liz King** says, "We had enough of the cornfields and moved to Jackson Hole. I am now the environmental policy coordinator for an oil field services company focused on more sustainable natural gas development. I'm working for the dark side now!"

1995. Ian Wallace reports, "life is grand these days. Married on July 28, 2007 to Jennifer Ponczek. We had an awesome ceremony up in Crested Butte, CO, with friends and family. I've finished my second year of medical school at the University of Colorado Health Sciences Center and will take my first licensing exam tomorrow (4/2/2007). Very excited to get out of the classroom and actually start seeing patients during my third year clinical rotations." **Dan Fehler** became the parent of twins (Caroline Bay Fehler and Cathleen Lillian Fehler) on October 26, 2007. The twins join his other two children Thomas Jerome Fehler and Cecilia Carol Fehler, four and two years old respectively. Congratulations Dan!

1996. Shannon Ginn finished her masters in Public Health last June. She is now enjoying being back in Seattle raising her five-year-old boy, Diego.

Stephanie Phippen and Dan Feiveson are still out in Colorado chasing around their toddler, Julian, and waiting for another little one due in September. Dan is enjoying running a small business that provides research software for journalists. Stephanie is working at the same company with a few projects all over the US. "We ran into a bunch of Geo majors from our 'era' at Carleton who live in the area at GSA in Denver last year," they write, " – small world!"

1997. Erica (Oesting) Marley writes, "I had our second baby boy on March 4, 2007, and graduated with my masters in Public Health in June 2007. Since

then I've been enjoying our family and continuing to do the book-keeping and administration for my husband's dental practice." **Geoff Ruth** says, "My partner and I will be parents in about two weeks! That's some new news!" **Dan Feiveson** (see **Stephanie Phippen 1996**) **Adam Soule** reports he is "currently on the scientific staff of the Woods Hole Oceanographic Institution where I am researching volcanism at mid-ocean ridges. This work has allowed me to travel the globe and given me opportunities to travel to the ocean floor in submersibles. Home is on Cape Cod where I live with my wife Melissa (Chemistry '96)." **Dave Barbeau** has been back and forth to Antarctica leading Team Barbeau, the research juggernaut picking apart sediments in the quest of tectonic plate histories. Among the members of his team are **Nick Swanson-Hysell '05**,



In April, Joanna Reuter '00 sent this great picture from her wedding day (Oct. 14, 2007), "in which Sarah and Ned Phillips '01 along with Eric and I are looking at a scale model depicting the plans for our farm, Chert Hollow Farm. [Yes, the model is more or less topographically correct; in fact, one could say there are two Neds in the picture, because the model is based on the National Elevation Database (NED).] USGS colleagues Carrie Elliott '98 and Robb Jacobson '79 were also in attendance at the wedding. The last couple of weeks have been especially busy at the farm. We now have 5 goats and 27 rapidly growing chicks." (And, we might add, a very nice web site which is linked from the Geology Department alum links page).

Kendra Murray and Willie Guenthner, both '07. **1998. Nate Church** says, "In celebration of the Geo Department's 75th anniversary and my 10th year reunion, I've finally decided to emerge from the darkness give some sort of update as to what I'm up to. After a year off or eight, last year I started a PhD at the University of Cambridge in mineral sciences, looking at exsolution structures in titanomagnetite and their effect on magnetic properties (and hence, on paleomagnetic measurements). I'm having a great time and had the pleasure of meeting up with a bunch of Carls and Bereket at AGU in San Francisco in December. I've been collaborating a fair bit with **Josh Feinberg '97**, now at the U of Minnesota, and also finally made it back into the field a few weeks ago to introduce some first year geology students to the joys of sediments, tectonic deformation, and magma fractionation on the Isle of Arran in Scotland. Looking forward to more of that in the future! I'm also in close contact with a number of former students of the (ex-)geology program in Italy and we meet regularly in Coldigioco for food, wine, and pelagic limestones." **Frances Watson** writes she's "glad to be living and working in central Virginia. **Katy Szramek '98** recently moved to nearby Lexington, teaching at Washington and Lee. My beau Mike and I have enjoyed lots of hikes, dinners and hilarious stories with Katy. It's been great to have an old Carleton friend nearby again." **Ali Macalady** reports, "I started a PhD in Geography at the University of Arizona in 2007. **Derek Murrow '05** and I got married in 2004...we both finished master's degrees at Yale School of Forestry and Environmental Studies, me in 2006 and Derek in 2003. We're enjoying Tucson – come visit!"

1999. Hig Higman and Erin McKittrick '01 completed their year-long hike from Seattle to the Aleutian Islands in June after 385 days of living in the wilderness out of two backpacks. While they journeyed they wrote a fascinating blog, which you should go and read right now if you haven't already. Congratulations to them for making it in one piece! It took a lot of grit and was the adventure of a lifetime. The URL is www.groundtruthtrekking.org. "I don't think I have any big updates for this year," writes **Alison Anders**. "I'm in Urbana, IL, with my husband and we're both teaching at UIUC and enjoying the town, the university and our jobs. We bought a house and adopted a little black cat named Peat. Now that we're within striking distance of MN, we get back there quite a bit more than we used to - although with blizzards in April, we may stay away until the warmer weather! We had a fun time on a KECK project last summer in Switzerland - and had the

pleasure of working with **Libby Ritz '08!** **Andrew Mattox** is "no longer a smoke jumper. Now I make funny little boats, which were used in the search for ITHICA. We sponsor Hig. Hi!" (For updates on Hig's trek from Seattle to the Aleutians, see the Geo Dept. website, Alums In The News)

Noah Finnegan and **Heidi Guetschow** say, "Happy 75th Anniversary, Carleton Geo-rockstars! We find ourselves about to embark on our third cross-country move with our cactus, Wallace. This time we are off to California where we hope to stay a while. Noah is preparing for life as an assistant professor at UC Santa Cruz, while Heidi is sharpening her fangs in preparation for her new legal career in Silicon Valley."

2000. Patrick R. Roehrdanz is now a full-time Master's student at the Bren School of Environmental Science and Management at UC Santa Barbara. **Nina Berglund** writes, "I graduated from law school in May 2007. I passed the Minnesota bar exam and am officially licensed to practice law. I'm working in environmental compliance and volunteering with the Volunteer Lawyers Network assisting low-income individuals with legal problems. Oh yes, and **Gus Chung '99** and I were married on December 23, 2007 in Vegas, baby! Hope all is well with everyone!!" **Luc Mehl** completed an MS in Geology from M.I.T. and Woods Hole Oceanographic Institute last fall. Now he writes, "I've been on skis around 13 days for every one day I've earned money. The best trip was a 140 mile ski traverse in the Wrangell-St. Elias Mtns. This summer I'm working for the state of Alaska to help promote geothermal and hydrokinetic energy production in rural Alaska." **Liz Penny** writes, "I'm in Phoenix, AZ! I'm as surprised as anyone that I'm in a booming, waterless desert metropolis, but the martial



Laura Cleaveland '01 and Rolf Peterson are engaged to be married. This fall Laura is starting her new job teaching geology at Luther College in Decorah, Iowa. Congratulations on both counts, Laura!

arts apprenticeship that I moved here for is awesome. Still, I'm looking forward to getting back to Berkley ASAP (real food and water come back!) or maybe spending my 30th year gallivanting around visiting pregnant friends and new babies. Love to you all!" Got a card last summer from **Annie Winkler**, who said, "In the last year, give or take, I got married, bought a house, finished my first year as a classroom teacher, and I just got a lab-ish rescue puppy named Toast."

2001. Carl Tape is "On the home stretch finishing my PhD at Caltech. Who knows what the fall will bring, but I know I like seismology enough to keep going!" **Willy Amidon** is in his third year as a PhD student at Caltech, learning lots of great stuff and enjoying the experience. "Not sure what will happen next," he says, "hope everyone is well!" **Anne Sawyer** writes, "I am soon to finish my first year as a snow hydrologist with the weather service. As part of my job I've been to the Alaskan arctic twice for snow survey work! Enjoying what Minnesota has to offer in terms of fishing, hunting and great gardening. I miss Colorado and the mountains, but it's good to be back home."

2002. Chris Andreassi reports, "for the last year I have been working as a lab tech for Chris Field at the Department of Global Ecology at Stanford. Chris, my boss, just got to go to Oslo, Norway to pick up the Nobel Prize because he is one of the lead authors on the IPCC (Intergovernmental Panel on Climate Change), so it is very exciting to be working in such a great lab." He also writes that he is "having fun being a DJ in San Francisco and thinking about grad schools in paleoclimatology or paleoecology." Congratulations to **Kizzy Charles-Guzman** who was selected by City Hall News for a "Top 40 Under 40 in New York State Politics" award for her work on various environmental policy advocacy campaigns. She also recently joined Mayor Bloomberg's Office of Long Term Planning and Sustainability as an advisor on air issues. She adds, "I am working on implementing the air section of PLANYC – the City's sustainability plan. It's been an exciting year." **Dave Hunzicker** says, "Seattle is great! I have an interesting job building furniture out of salvaged urban trees and I run a one-man tree trimming business on the side. Lots of great people out here. It's like a Carleton reunion every day. Come join the fun!"



*Kristin Bergmann and Nick Boekelheide were married in a hay field on June 21, and are, as I type, honeymooning by biking from Maryland to Oregon during July and August. According to their blog <http://bikamunga.blogspot.com/> they are now crossing the Appalachians on their rebuilt 1984 TREK touring bikes. The people I can pick out of the wedding picture (and any mistakes or omissions are mine alone - Tim) include, mostly from the class of '04, **Dave Auerbach**, **Jonathan Young '03**, **Leah Morgan**, **Sean Bryan**, Nick and Kristin, bridesmaids **Sarah Leibson** and **Kristin O'Connell**, and **Kate Sammons '05**.*



Sarah Greene '05 is in Guatemala studying the Santiaguito dome field, which is associated with Santa Maria Volcano, and in the picture above she faces off with the erupting Caliente dome. Santa Maria produced the second largest eruption of the 20th century in 1902, and is only a few miles away from Guatemala's second biggest city, Quetzaltenango. When I asked Sarah what it was like camping in the shadow of the volcano as in the picture at right, she told the following story:

"On our first night in the dome field we only set up one tent, which everyone kindly allowed me to sleep alone in, as I was the only female in the group. As I said goodnight, my advisor interrupted, "You understand that the minute it starts raining, we're all climbing in there with you." I think my smile was strained, since that would mean sharing a two person tent with two professors, another grad student, and two non-English speaking porters.

"Sure enough, I woke up in the middle of the night to the sound of heavy rain hitting the tent canvas. I curled up in the far corner and waited for the invasion,

but no one came in. Eventually I dozed off. A few hours later I woke up again. I could still hear rain, but the tent remained empty. I figured that the men were trying to be macho, and went back to sleep.

"When I poked my head out in the morning, the sky was clear, the ground was dry, and everyone had disappeared under three inches of fluffy white stuff. I hadn't heard water hitting the tent, I'd heard the ash falling out of the eruption clouds.

"Everyone got their own tents after that."



The pictures are by Dr. Clark Johnson of UW Madison.

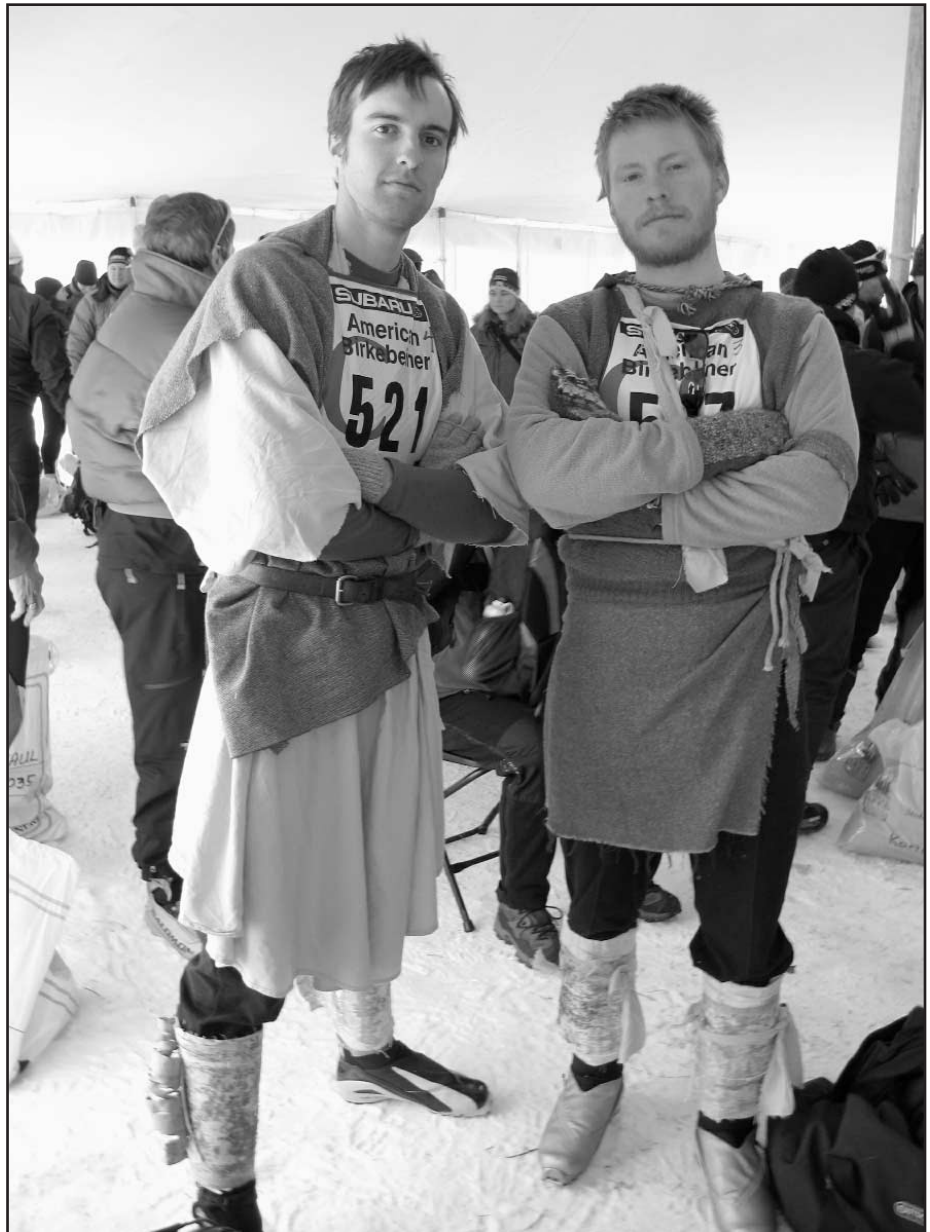
2003. Tiffany Larsen is “looking forward to seeing you all at reunion this summer! Love from Vermont!”

2004. “I’m getting involved in ice core research and really liking it, reports **Bess Koffman**. “I’ll be heading to a field camp on the West Antarctic Ice Sheet and spending a few months in the cold beginning in November. The Maine winter feels even longer than the one in Minnesota, probably because I’ve worked straight through, but at least the dreary weather keeps me out of trouble. Take care, everybody!”

2006. Hilary Christensen is a second year grad student in the University of Chicago Geophysical Sciences Department studying how diet changed with the increase in body size in mammals after the K/T extinction. **Molly Kent** says, “I’ll be starting a masters program at the University of Texas at Austin this fall. It was great to see everyone at GSA in Denver last year!” **Kelsey Dyck** writes, “I am finishing up my required classes at UC Santa Cruz and starting to focus in on research, defining projects, etc. I am studying Holocene climate variability and how things like ENSO might play a role and what we might be able to expect from future climate scenarios. Last summer I went to a paleo-climate short course in Italy (<http://www.uniurb.it/ussp/>) and had a poster at AGU on my recent work on inter-tidal mollusks from anthropological midden deposits. Turns out a PhD takes a while. **Rachel Brown** has also started her graduate work here at UCSC, so it is nice to have Carleton Geology company. Take care!”

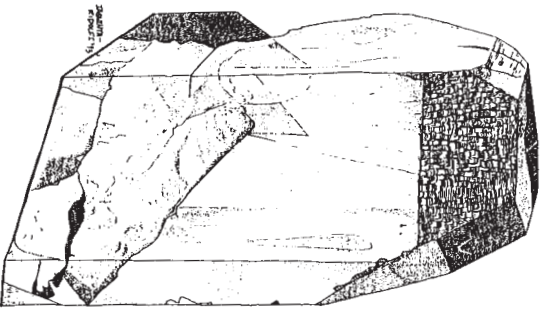
2007. Sarah Bergman writes she is “teaching ninth grade science and electives (like geology!), working on my garden and preparing applica-

tions for grad school next year.” **Chrissie Spence** says, “I’ve been working as a field technician for GeoEngineers Inc. since the beginning of September, 2007 and I moved into my first apartment at the beginning of December. It’s been nice to be able to live on my own and establish myself in ‘the real world.’”



Two fierce Vikings, Mark Dyson and Nick Riordan (both '07), terrorized the American Birkebeiner cross-country ski race in Wisconsin this February. Note the authentic birch bark gaitors. They swear no trees were harmed in the making of these costumes.

Department of Geology
Carleton College
Northfield, MN 55057



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