

# *Carleton Geology Newsletter*

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Carleton College  
Northfield, MN 55057

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**Department Of Geology**  
**Carleton College**  
**Northfield, Minnesota 55057**

June 21, 1999

Dear Friends,

Well, it's been a busy, exciting year here, and miraculously, the department has survived my first year as chair — enrollments have not plummeted, we're still part of the Keck Consortium, and the College has not lost its accreditation. We're graduating 32 wonderful seniors this year and as always, we are delighted and amazed to see how much they've grown and accomplished during their time here. Next year's crop will be a bit smaller, but the sophomore class will be back up to around 30.

We started off the year with a major job search for a tenure-track position in geochemistry, a rather lengthy process that concluded in February when we offered the job to Bereket Haileab. Bereket, as many of you know, has been with us on a temporary basis for about five years, and we are all very pleased that we'll be able to keep him in our midst. He is an enthusiastic and inspiring teacher whose research interests deal with the geochemistry and geochronology of ashes in the East African Rift. Bereket will be on sabbatical leave next year — a long-overdue break for someone who given so much to the department these past few years.

Clint Cowan is the other new guy in the department. He has just completed his second year in the department and so far we are all surviving his rapier wit merciless mockery. He is an absolute delight as a colleague and the students love him. Clint is primarily a carbonate sedimentologist, but he has diverse interests that include modeling and the applications of fractals and chaos to geology. His summer fieldwork will include studies of the modern reef system in Belize and the upper Cambrian in Alberta and Newfoundland (talk about ambitious!).

Ed Buchwald finished his last year as a full-time member of the faculty — starting next year he'll go to half-time status for three years. Ed joined Clint for a winter break trip to study modern carbonate environments last December, and also will join Clint and two students in Belize this summer.

Mary Savina continues to wear several hats within the college — archeology, ENTS, and several important committees compete with geology for Mary's time. She spent her winter term leave in San Antonio once again (when she was not flying back to Carleton for job interviews), but appears to be ready to face a whole Minnesota winter next year. Mary is spending a good bit of this summer in Jamaica as part of a Keck project.

Shelby Boardman will return to the geology department next year, after a long hiatus in the Dean's Office. He spent all of last year at the University of Arizona on sabbatical and is energized for a return to geology — we look forward to having him in our midst again.

I'm heading off to Italy again this fall, leading the fourth Geology in Italy seminar — a very tough assignment, as you can well imagine. The big news, however, is that Jenn Macalady and I are getting married this summer, over in Italy, and I could not possibly be any happier.

Tim Vick and Betty Bray continue to be wonderfully adept at running the department and keeping everyone happy. Their crowning achievement was the organization and execution of the Keck Symposium, which we hosted in April. They did an absolutely masterful job.

As always, thanks to all of you who provide help and support to our students during the course of the year — the network of geology alums is really important to us.

Best Wishes,  
*Dave Bice*



For a weekend in April about 120 visitors descended upon our labs for the 1999 Keck Consortium conference. Among the students participating were (in the picture at left, clockwise from the left) Angie Knapp from Whitman College and James Sammons from Washington and Lee University, being shown GIS images created by the Texas project by Michael McGlue, also of Washington and Lee. In the picture above, Chevaun Alford, a student at Sam Houston State University in Texas, explains maps from the GIS Texas project.

## DEPARTMENTAL NEWS

### *Carleton Hosts Twelfth Keck Geology Symposium*

The twelfth annual symposium of the Keck Geology Consortium was held at Carleton in April, completing the cycle of having the symposium at a different member school of the consortium each year. Roughly 130 faculty, students and other scientists attended the very successful symposium, which we held in our own facilities on the Carleton campus.

The member schools of the Keck Geology Consortium are Amherst College, Beloit College, Carleton College, Colorado College, Franklin and Marshall College, Pomona College, Smith College, Trinity University, Washington and Lee University, Whitman College, Williams College and the College of Wooster. Over 600 students have now participated in Keck projects over twelve summers. The program has been very strong and has fostered many excellent student/faculty collaborative projects and papers.

The purpose of the symposium was to report results of last summer's research projects. The subjects of the projects included: depositional environments of Proterozoic sediments in Arizona; slip stability of septonized shear zones in California; the effect of subducting seafloor roughness on forearc kinematics along the Pacific coast of Costa Rica; the igneous geology of Vinalhaven Island in Maine; land-use impacts on the hydrology and chemistry of the Mill River in Hatfield, Massachusetts; mapping the geology of the Elkhorn Mountains in northeastern Oregon; the melting of pelitic schists in Massachusetts, and geologic applications of geographic information systems. The conference also included a keynote talk on the geology of Venus by Vicki Hansen '80 and a panel discussion on career options featuring representatives of academia, the oil and mining industries and the environmental consulting industry.

Carleton is one of the founding members of the Keck Consortium. Carleton faculty members active in Keck research projects this year included Clint Cowan, who worked on the sedimentological project in Arizona, and Mary Savina who worked on the GIS project in Texas. Eight Carleton students participated in projects last summer and presented the results of their work at the symposium. This summer Mary Savina will be working with Rob Sternberg of Franklin and Marshall College on a project to map a Jamaican slave village using field geophysics, and Shelby Boardman will be working with Lori Bettison-Varga and Bob Varga of the College of Wooster and

Diane Smith of Trinity University on the petrologic and structural evolution of the northern Rio Grande Rift in Central Colorado.

The keynote speaker for the symposium was Vicki Hansen '80, who gave a wonderful talk on interpreting the tectonics of Venus using 3-D imagery from space vehicles. Vicki's work has been published in the Geological Society of America Bulletin, Science, and the journal Icarus. She teaches geology at Southern Methodist University in Dallas, Texas.

Kate Hofmann '99 participated in the project mapping the geology of the Elkhorn Mountains in northeastern Oregon. Kate said her experience on the project was a valuable extension to the work she had done at Carleton and provided the material for her senior comprehensive exercise project as well. "It gave me a much better understanding of what goes into making the geologic maps we use all the time. The process requires a lot more creativity and inference than you might expect. The experience was a valuable part of my study of geology, and a great opportunity to see how geologists really work in the field."

In addition to presenting orally and in a poster display, each student wrote an extended abstract for publication in a bound volume summarizing the year's research. According to the Consortium's Coordinator, Cathy Manduca, "This year all students gave poster presentations and participated in oral sessions summarizing and discussing their research groups' results. The posters were outstanding, the research was of high quality, and the students did an excellent job of answering questions. The new format emphasizes both the collaboration involved in addressing large research questions and the individual efforts made by each student researcher or student research team."

Cathy added, "The consortium is well positioned to begin its next 12 years of program activities. Discussions at the meeting reaffirmed the value of the program both as an integral part of the students' education and as an important aspect of faculty professional development and research at our twelve schools. Faculty are committed to keeping collaborative undergraduate student-faculty research groups as the consortium's main focus. A long-term funding strategy is being developed."

The scientific results presented at the meeting included:

### Departmental News

- Recognition that "melt zones" in migmatites in the Rangley Formation are not composed of crystallized melt but may be residual minerals left behind when melt migrated out of these rocks.
- Holocene uplift of the Nicoya Peninsula directly inboard of the subducting Fisher and Christmas seamount chain has proceeded at rates approaching 6 meters per 1000 years. Uplift rates decrease linearly away from the Middle America Trench and the subducting seamount chain.
- Shallow igneous intrusions on Vinalhaven Island preserve records of the accumulation of crystals at the base of the magma chamber in layers that have a mappable stratigraphy. These layers tell the story of events that occurred in the magma chamber including fractional crystallization, injection of new magma batches, and mixing between magma batches. Pillow mounds formed when mafic magma was injected into the chamber and quenched are particularly spectacular in this sequence.
- The composition of Mid-Proterozoic quartzites in the Mazatzal Group was shown to be consistent with derivation from nearby uplifted volcanic rocks and metasediments in an active basin setting. Petrologic and geochemical studies indicate the composition of the quartzites is dominated by quartz grains reflecting the selective breakdown of lithic fragments and feldspars during diagenesis.

### ***Ed Buchwald Begins Phased Retirement, Clint Cowan Introduces Chaos***

This year Ed Buchwald is embarking on what is called on campus a three-year "phased retirement" plan. The plan allows Ed a gradual transition from full time teaching to retirement, and allows the Geology Department a way to smooth the inevitable bump in the road for both us and the students. Clint Cowan '83 has been appointed to pick up some of the courses Ed has taught for the past several years including sedimentology and paleontology.

The plan calls for Ed to teach winter and spring terms through 2002, taking fall terms off to pursue other projects. Clint has been teaching Introductory Geology, Sedimentology and Chaos Theory since fall, 1997. Clint's position is permanent and tenure track.

Ed has been a member of the Carleton College Geology Department since the fall of 1967 and was appointed

Full Professor in 1977. While his Ph.D. thesis and formal geology education centered on sedimentology, Ed long has been interested in environmental geology and geology education. Among the achievements he is proud of Ed lists his directorship of the Cowling Arboretum from 1977 to 1985, his contributions to the Minnesota Environmental Quality Board in the 1980's and 1990's, memberships on national committees of the Geological Society of American and the American Geophysical Union, and 28 years of leadership of the Carleton-affiliated troop of the Boy Scouts of America.

After graduating from Carleton, Clint earned his M.Sc. in geology at the University of Michigan under the supervision of Dr. B.H. Wilkinson in 1985 and his Ph.D. under Dr. Noel James at Queen's University, Ontario, Canada, in 1992. Along the way Clint did a stint with Exxon as a production geologist and then spent four years as a carbonate reservoir geologist with Shell Research Co. During his oil company days Clint published extensively on theoretical aspects of reservoir modeling in carbonate rock units. Clint is too modest to mention it but his career in carbonate subsurface geological modeling was jump-started in 1981 by mapping the buried bedrock topography associated with Cannon River near the Carleton campus with Dan Packer '83 and Tim Vick.

### ***Bereket Haileab Placed On Tenure Track***

Dr. Bereket Haileab, who has replaced Shelby Boardman for the past several years while Shelby was assigned to the Dean of the College's Office, has been awarded a tenure track appointment beginning next year. Bereket has been teaching Mineralogy, Petrology and Introductory Geology here since the fall of 1994, so he is scheduled to kick off his new appointment with a sabbatical leave next year.

Bereket's new position will raise the strength of the Geology Department to five full time faculty positions. Bereket's appointment, which follows an extensive national search with campus interviews with three other excellent candidates, will include teaching geochemistry, geochronology and volcanology. His areas of expertise and past research have centered on unraveling the geochemistry and geochronology of the ash fall layers blanketing parts of East Africa, particularly in the area of the East African Rift Zone. These ash beds are particularly interesting because they help paleoanthropologists date the sites where some of the earliest well known hominid fossils have been found.

Bereket is a native of Eritrea, a new nation that for many years was part of Ethiopia. He gradu-

## Departmental News

ated from Addis Ababa University in Ethiopia and earned his master's and Ph.D. at the University of Utah under the direction of Dr. Francis H. Brown. Bereket's family is now scattered throughout Europe and the United States, but his parents still live in Eritrea and he has two brothers fighting in the current border war between Eritrea and Ethiopia. Congratulations, Bereket!

### ***Carrie Patterson And Kari Paulson Supplement Offerings***

Dr. Carrie Patterson, Senior Scientist with the Minnesota Geological Survey, joined our department winter term to teach an upper level course in the glacial geology of Minnesota.

Carrie has many ties with Carleton. A resident of Northfield, Carrie has helped us teach other courses in the past. Her husband, Sam, is an Associate Professor of Mathematics and Associate Dean of the College. And their daughter April graduated from Carleton last year.

Carrie earned her bachelor's degree at Northwestern University and her master's and Ph.D. at the U. of Minnesota.

Carrie's course this winter enjoyed an interesting guest speaker almost every week. The speakers have included Jeff Dorale, Roger Hooke and Bill Zanner from the University of Minnesota; Nigel Wattrus from the Large Lakes Observatory at the U. of Minnesota-Duluth; Bob Jacobel from St. Olaf; Tim Fisher from the University of Northern Indiana at Gary; Mark Johnson from Gustavus Adolphus; and Paul Cutler from UW-Madison. Another highlight of the course was a field trip to Big Stone Lake on the western border of Minnesota to core bottom sediments through the ice. We usually think of winter as a bad time for fieldwork, but it's the best time to study glacial deposits on lakebottoms!

We were fortunate to be able to invite Kari Paulson '89 back for spring term to teach a course in hydrology. Kari's class used the Spring Creek watershed as a natural laboratory, and the class divided into groups to study different aspects of the watershed including surface runoff, ground water, human impact, urbanization and agriculture, and so on.

After graduating from Carleton, Kari earned her masters in Forest Hydrology at the University of Washington in Seattle in 1997. She also has considerable experience in watershed management issues as a consulting geologist.

Carrie and Kari were replacing one-term leaves by Ed Buchwald and Mary Savina.

### ***Art Radtke '58 Donates Large Mineral Collection***

The Geology Department recently was given a wonderful donation of mineral specimens by Art Radtke '58. The collection includes 175 specimens of collector quality. Many of them are very attractive and have showy crystals, and some are unusual minerals such as torbernite, jalpaite, jamesonite and cobaltodolomite. The collection will be used for displays and museum reference material. Art, a resident of Palo Alto, CA, is president of Cougar Metals International.

We'd like to extend a very special thanks to Art for the donation!

### ***Exxon Foundation Aids Keck Consortium***

The Keck Geology Consortium, of which Carleton is a part, has received a \$75,000 grant from the Exxon Education Foundation for continued support of programs to foster collaborative student-faculty research projects over the next three years.

The consortium, formed in 1987, comprises 12 geology departments from select undergraduate colleges. The goal is to improve student and faculty research opportunities and share equipment and expertise.

The consortium's activities have been coordinated since 1995 by Cathryn Manduca, Research Associate in Geology at Carleton. This grant, Manduca noted, brings Exxon in as a new funding partner and indicates that Exxon values undergraduate research experiences. The consortium sponsors research projects around the world where faculty and students collaborate on original earth science research. Each research project involves six to 15 students and two to four faculty who spend the summer conducting fieldwork. Their results are then presented at the annual Keck Research Symposium in Geology.

Examples of approved projects for the summer of 1999 include:

- "Late Ordovician Paleontology, Sedimentology and Stratigraphy in Ohio, Indiana and Kentucky," directed by Mark Wilson of The College of Wooster;
- "Rookery Bay Estuary," directed by Carol Mankiewicz of Beloit College; and
- "Tectonics, Topography and Landscape Evolution Of The San Andreas Fault, California," directed by Dorothy Merritts of Franklin and Marshall College.

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The consortium has been supported primarily by grants from the W.M. Keck Foundation of Los Angeles, which has contributed \$4.4 million to date. The National Science Foundation and the individual schools involved in the program also contribute to its support. The participating colleges are Amherst, Beloit, Carleton, Colorado, Franklin and Marshall, Pomona, Smith, Whitman, Williams, Trinity University, Washington and Lee University, and The College of Wooster.

### **Noel James Is Geologist-In-Residence**

We were thrilled this year to be able to bring Dr. Noel James of Queens University in Ontario, Canada, to campus as our 16th Bernstein visiting geologist.

Dr. James visited in September, giving talks entitled "Reefs on the Young Earth" and "Carbonates of the Southern Ocean." In addition Dr. James participated in a Sedimentary Geology lab session with Clint Cowan's class, field trips, and had a several meals with students and faculty. He is a leading authority on cool water carbonate deposits and Proterozoic carbonates with many publications in leading journals in sedimentary geology and petroleum geology.

Dr. James added a wonderful new dimension to our discussions and we thank him for visiting!

### **Thanks For Your Help!**

We'd like to extend special thanks to a number of alums for special contributions this year:

Vicki Hansen '80 was the keynote speaker at the Keck conference in April which was discussed in the lead article in this Newsletter, but it never hurts to say thanks again for coming all the way up here, Vick!

Phil Brown '74 visited in November to give a talk on Archean gold deposits and tell students about the University of Wisconsin;

Karen Bobbitt Gran visited Mary's Geomorphology class to speak about her work at the Hydraulic Laboratory at the University of Minnesota;

Tim Cowdery '83 and Stu Grubb '85 visited the Advanced Geomorphology (watersheds) class in the spring to speak;

Several people loaned us excellent poster displays they had prepared for professional meetings including:

Pat Bickford '54, "A Transform Southern Laurentian Margin During the Mesoproterozoic: Evidence From Rift-Related Deposits;"

Sara Gran '96, "Calculating Fault Displacement Rates, In-Situ Cosmogenic <sup>36</sup>Cl Concentrations of a Limestone Normal Fault Scarp, Northern Israel; "

Christine Smith Siddoway '84, Josh Feinberg '97 et al, "Proterozoic Geology of the Northeastern Wet Mountains, Central Colorado;"

Ben Surpless '93 et al, "A Structural and Thermochronological Study of the Northern Sierra Nevada - Basin and Range Transition Zone."

We thank all of you warmly for helping us make the Geology Department a more interesting and vibrant place to be!

### **Network For Lesbian, Bisexual, Gay and Transgender Alums**

The Network For Lesbian, Gay, Bisexual and Transgender Geology And Natural History Alums provides students and alums with career information, fellowship and support. The network was founded in 1990 and now has 31 members from coast to coast.

The network has the twin objectives of helping reduce isolation among alums and helping to provide 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. 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. We happily will provide contacts for them as well.

### **Stewart Fellows Named**

Congratulations to two members of the class of 2000, Luc Mehl and Joanna Reuter, who have been named Duncan Stewart Fellows for the 1999-2000 school year!

The fellowship was established in 1976 by Daniel Gainey '49 in honor of Duncan Stewart, professor of geology at Carleton for nearly 25 years. It carries a stipend plus makes available a fund, which may be drawn on to cover research expenses. The principal criteria for selection are excellence in scholarship, a high level of intellectual curiosity, potential for scientific growth, a demonstrated ability to work independently and involvement in departmental activities.

These students will extend the number of Stewart Fellows to 64.



## Departmental News

### **GSA Reception**

The Carleton get-together at the 1999 meeting of the Geological Society of America in Denver will be held on the Monday night of the meetings in the area near the other school receptions. More information will be mailed out separately, but you are all encouraged to come and visit!

### **Geology Department T-shirts Again Available By Mail**

I have a good supply of 1997, 1998 and 1999 geology T-shirts available that I can mail out. The cost is \$8 plus \$3 postage payable to Carleton College. They are all-cotton and OK to wear to your grandmother's house.

The 1999 shirt is yellow with a Tin Tin cartoon " (see the cover of this Newsletter) on the front in black ink and the back says Carleton Geology 1999 on it; it is very nice. M, L and XL are available.

The 1998 shirt is dark "dusk" blue, a sort of grayish dark blue, with white ink. The picture on the front is a geologist at a bar trying to hustle the other patrons (fossils of different varieties) with the quote on the back of the shirt saying, "A geologist will date anything. Sizes S, M and L are available.

The 1997 shirt is light tan with brown ink. The cartoon on the front shows two stick figure people saying "Gee!" and "Oh!", the cheer of the Geo broomball and ultimate teams. On the back of the shirt is a Peanuts cartoon about the relationship between geologists and mud. I have many XL's and one XXXL. -- Tim Vick

### **1999 Awards**

#### **National Science Foundation Fellowship**

Britta Gustavson-Unger '93

#### **Mortar Board**

Debbie Goodwin

#### **Phi Beta Kappa**

Alison Anders

Emily Burton

Marin Byrne

Sarah Goese

Kate Hofmann

Katie Werner

#### **Sigma Xi**

Erika Beyer

Emily Burton

Marin Byrne

Rachel Davis

Ben Diener

Heidi Guetschow

Erich Heydweiller

Kate Hofmann  
Millie Kimes  
Bill Pike  
Mike Rhodes  
Dave Schneider  
Nate Sheldon  
Michael Smith  
Leigh Stearns  
Kate Trafton

#### **Independent Research Fellowships**

Debbie Goodwin

Liz Penny

Jean Dixon

Anna Nelson

Kevin Uno

#### **Dwornik Planetary Geosciences Student Paper Award**

Bill Pike

### **Geology Majors**

This year's seniors, their hometowns and titles of integrative comprehensive exercise projects:

**Alison Anders**, Minneapolis, MN, Secondary volcanic hazards: Dating and classification of the Springpoint Landslide, Red River Lahar and Red River Event Deposit, Iliamna Volcano, Cook Inlet, Alaska

**Erika Beyer**, Eugene, OR, Using foraminiferal stable isotopic compositions to reconstruct paleoceanographic changes: a study of the Middle to Late Miocene Mediterranean, Monte dei Corvi, Italy

**Emily Burton**, Prescott, AZ, Outer forearc response to seamount subduction: evidence from Holocene marine terraces, Nicoya Peninsula, Costa Rica

**Marin Byrne**, Garrettsville, OH, Microstructures as indicators of larger scale deformational patterns in serpentinites from Sand Dollar Beach, Monterey County, California

**Carrie Davis**, Wooster, OH, Erosion, runoff, and carbon in agricultural watersheds: An examination of general processes in a specific environment

**Rachel Davis**, Orinda, CA, Devising a classification system for stream bank erosion and stability in Stony Creek, California

**Ben Diener**, Carpinteria, CA, Sand contribution from bluff retreat between Point Conception and Santa Barbara Harbor as a way of determining the sediment transport rate around Point Conception

**Noah Finnegan**, Cambridge, MA, Paleomagnetism of the Tuscan Nappe and Ligurian Ophiolites: Preliminary constraints on tectonic rotations in the internal northern Apennines, Tuscany and Liguria, Italy

**Brian Fleming**, Sherborn, MA, Are geosynthetics an answer to the problems of bank stabilization methods?

**Sarah Goese**, Duluth, MN, Direct dating of Milankovitch cycles: A study of the rhythmic limestone-marl sequence at Monte dei Corvi, Italy

## Departmental News

**Heidi Guetschow**, Anchorage, AK, Stratigraphic textural analysis of Novarupta Dome, Valley of Ten Thousand Smokes, Katmai National Park, Alaska

**Zach Gustafson**, Greenfield City, NY, Mixing and mingling magmas at the Tenpeak Pluton Margin in the North Cascades, Washington: An example from the Twin Lakes agmatite complex

**Erich Heydweiller**, Syracuse, NY, Sedimentology and provenance of Lower and Middle Eocene Formations, Great Divide Basin, Southwestern Wyoming

**Bret Higman**, Seldovia, AK, Methods of structural analysis in petrified wood

**Kate Hofmann**, Petoskey, MI, Classification and interpretation of pyroclastic and epiclastic rocks in a Mid-Tertiary volcanic terrane: Crawfish Lake Quadrangle, northeastern Oregon

**Millie Kimes**, Bellingham, WA, Investigating crustal deformation of Alaska using the global positioning system

**Mizu Kinney**, Deadwood, OR, Seismic hazard identification and education on the Cascadia Margin, Central Coast of Oregon

**Tiffany Mathias**, Honolulu, HI, An examination of the ratio of Pahoehoe to Aa Lava in the Koolau Volcano, Hawaii and possible implications for variations in magma composition and shallow magma chamber dynamics during shield building

**Andrew Mattox**, Seattle, WA, Processes, causes, and potential future movement of the 1700-block Earth movement, Perkins Lane West, Seattle, Washington

**Chuck McCallum**, Describing the structure of subducted slabs on the basis of gravity anomaly measurements

**Emily Peterson**, Seattle, WA, Effects of bank stabilization and channel maintenance on a natural system: A study of the Cedar River in Washington State

**William Pike**, Lancaster, PA, Melting relations in the Fe-Ni-S system at high pressures: Implications for the state of the Martian core

**Michael Rhodes**, Bloomington, MN, The mafic and silicic magma interaction and plutonic stratigraphy on the Southeastern Coast of Vinalhaven Island, Maine: Mafic injections into a silicic magma chamber

**David Schneider**, Pittsburgh, PA, Signs of stress under pressure: The stress and strain significance of syntectonic quartz veins in the Maverick Shale, Mazatzal Mountains, Arizona and their regional structural and Proterozoic tectonic context

**Nate Sheldon**, Minnetonka, MN, Magneto and lithostratigraphy of the Early and Middle Eocene Fluvial/Lacustrine Sequence near Continental Peak, Wyoming

**Michael Smith**, La Crescent, MN, Lithostratigraphic control of Goat Prairies on bluffs along the Mississippi River and its tributaries in SE Minnesota

**Leigh Stearns**, New York, NY, Water flow through the firm area of Storglaciaren, northern Sweden

**Ken Tape**, Fairbanks, AK, A heterogeneous package of metamorphic rocks: Mineralogical and Metamorphic variability

**Katherine Trafton**, Rumford, RI, Paleogeographic implications of quartzite bearing fluvial sediments, Elkhorn Mountains, northeastern Oregon

**Katherine Werner**, Webster Groves, MO, Sedimentology, geomorphology, and pedology of an alluvial fan adjacent to the Mazatzal Range, central Arizona

### Class of 2000

Thomas Alcivar  
Christina Berglund  
Sara Bertelsen  
Alden Boetsch  
Jean Dixon  
Matthew Howard  
Jonathan Jensen  
Zachary Katz  
Anders Matney  
Luc Mehl  
Anna Nelson  
Elizabeth Penny  
Joanna Reuter  
Erica Richardson  
Patrick Roehrdanz  
Michael Stewart  
Sean Sturges  
Stacy Tellinghuisen  
Nicholas Weinberg  
Annie Winkler  
Lila Woods

Chesterfield, MO  
Britt, MN  
Rockville, MD  
Lexington, VA  
Atlanta, GA  
Tulsa, OK  
Baltimore, MD  
New York, NY  
Northfield, MN  
McGrath, AK  
East Harwich, MA  
Los Altos, CA  
Berryville, AR  
Belgrade, ME  
Fargo, ND  
Holliston, MA  
Great Falls, MT  
Nashville, TN  
New York, NY  
Duluth, MN  
Ettrick, WI

### Class of 2001

Willy Amidon  
Katherine Anders  
Philip Anderson  
James Bishop  
Laura Cleaveland  
Sara Decherd  
Jonathan Eaton  
Matthew Hinckley  
Scott Hynek  
Kevin Jacobs  
Sarah Johnson  
Odin Jorgenson  
Ani Kameenui  
Kristen King  
Maureen Kirch  
Katie Kolarich  
Isaac Larsen  
Jamie Levine  
Elizabeth Lowham  
Peter McAuliffe  
Stefanie Morrison  
Anna Moyles

Charlotte, VT  
Minneapolis, MN  
Rochester, MN  
Wheeling, WV  
Elkhorn, NE  
Portland, OR  
Cincinnati, OH  
Seattle, WA  
Parker, CO  
New Haven, CT  
Plymouth, MN  
Grand Marais, MN  
Eugene, OR  
Hampden, ME  
Milwaukee, WI  
Dubuque, IA  
Clear Lake, IA  
New York, NY  
Casper, WY  
Seattle, WA  
Chisago City, MN  
Berkeley, CA

## Departmental News

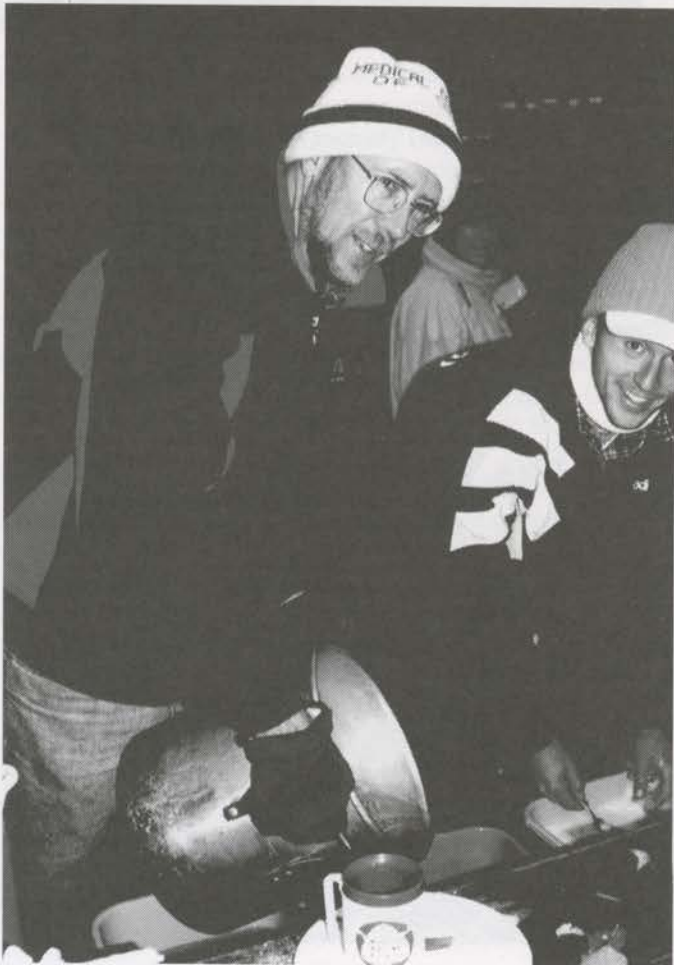
Aleshia Mueller  
Edmund Phillips  
Rachel Putnam  
Anne Sawyer  
Trent Terriquez  
Elizabeth Valaas  
Kevin Uno  
Galen Ward

Backus, MN  
Sewickley, PA  
Orford, NH  
Northfield, MN  
Northfield, MN  
Bellevue, WA  
Kirkland, WA  
Seattle, WA

### **Summer Field Work**

Many senior geology majors do field work during the summer between their junior and senior years for their comprehensive exercise projects (senior thesis). Sources of funding include endowments at Carleton such as the Bernstein Challenge Grant, the Charles W. Potts Endowment Fund and the Henrickson Fund for field geology, in addition to support from the Keck Consortium, the office of the Dean of the College and outside sources. At right, Heidi Guetschow gives the thumbs up in a helicopter during her research in the Valley of Ten Thousand Smokes in Alaska. Heidi worked in cooperation with the Alaska Volcano Observatory of the USGS. Below, Alison Anders participated in the 1998 National Parks Undergraduate Geology Summer Interns program organized by the Geological Society of America and the National Park Service.





## Northern Minnesota Trip

The fall field trip this year was to Northern Minnesota with 38 students participating. One of the highlights of the trip was a visit by Dean of Students Mark Govoni, who camped with us for several days. In the picture above, Clint Cowan talks about the sedimentological aspects of the rivers on the north shore of Lake Superior at the bar at the mouth of the Gooseberry River at Gooseberry Falls State Park. At left, Dean Govoni was a good sport about being assigned K.P. duty by the mealmeisters; Tom Alcivar, at the right side of the picture, was also on K.P. that night.

We didn't have a spring departmental field trip this year because it was crowded out of the schedule by the Keck Consortium conference in April.

# Advanced Geomorphology Class Helps Carleton Assess Spring Creek Storm Damage

By Mary Savina

In late June 1998, a severe thunderstorm affected much of the Cannon River watershed, including Spring Creek, which runs through the Carleton campus. Abutments of the Highway 19 bridge over the Creek were damaged, destroying part of the roadway and causing a semi-trailer to get stuck. Further upstream, a few houses were flooded, banks were eroded and an enormous amount of sediment was moved. By late January, the College was beginning to consider a protracted and expensive project to "repair" eroding streambanks on College property upstream of Lyman Lakes. On the basis of a quick walk-through in February, I doubted that eroding stream banks were a major future source of sediment to the lakes. Working out the details was a perfect project for the thirteen-student Advanced Geomorphology class in the spring, which was to focus on watershed analysis and a long-term monitoring network for Spring Creek.

Here is a short list of our accomplishments during the course:

1. We added information to the GIS database for Spring Creek watershed. (Joanna Reuter (Carleton '2000) and Miriam Krause (Pomona '2000) created the GIS during a 1998 Keck project). This GIS has been made available to the City of Northfield and to the public, through the Northfield Library through an ENTS concentration capstone project. The GIS is accessible on the web at <http://gis.carleton.edu/>

2. We presented to Carleton's Facilities office and its consulting civil engineer and landscape architect the results of our study on streambank erosion on the College's part of Spring Creek including recommendations about bank stabilization and reports on flood effects of 1998.

3. We completed a preliminary monitoring plan for lower Spring Creek, including choosing sites for weirs and other permanent installations, devising plans for bank erosion and pond sedimentation studies, and continued biological monitoring.

4. We completed a preliminary biological survey of aquatic invertebrates that shows that part of the Creek (between Second Street and Wall St. Road) has stable riffles and pools and that the riffles, in particular, show high biological diversity.

5. We completed a preliminary water chemistry survey of Spring Creek to show the sources of water and develop hypotheses of how surface and ground water sources interact.

The high point of the class was the presentation to college officials on June 4, 1999 that focused on the stream banks. Students prepared a map showing areas of eroding stream banks, including the five sites (of 35 total) that we felt should be stabilized. All 35 bank sites are described in a database accessible through the GIS. We determined that the 1998 storm was highly unusual in the recent record in the amount of coarse sediment (mostly sand) that was transported into Upper Lyman Lake. We also found that vegetation on the Spring Creek floodplain slowed the floodwaters, allowing even more sediment to be deposited on the floodplain and preventing additional erosion. We concluded that the reach of Spring Creek on the campus above the Second Street bridge into the Arb is a healthy biological community, with stable riffles and pools and that disturbance along this reach should be minimized.

We were also able to suggest specific remediation measures for the relatively few banks that we believe need to be stabilized.

Dennis Easley, the Superintendent of Grounds, said this about the presentation: "I thought the work and the presentations by the students were done exceptionally well. They were thorough and informative. The College often talks about educational opportunities in the Arb, but in Facilities we rarely see anything that is useful to us. This was certainly a profound exception to that perception. Thanks for bringing it all together."



Rebecca Fallon '99 takes a GPS reading during the Spring Creek storm damage assessment.

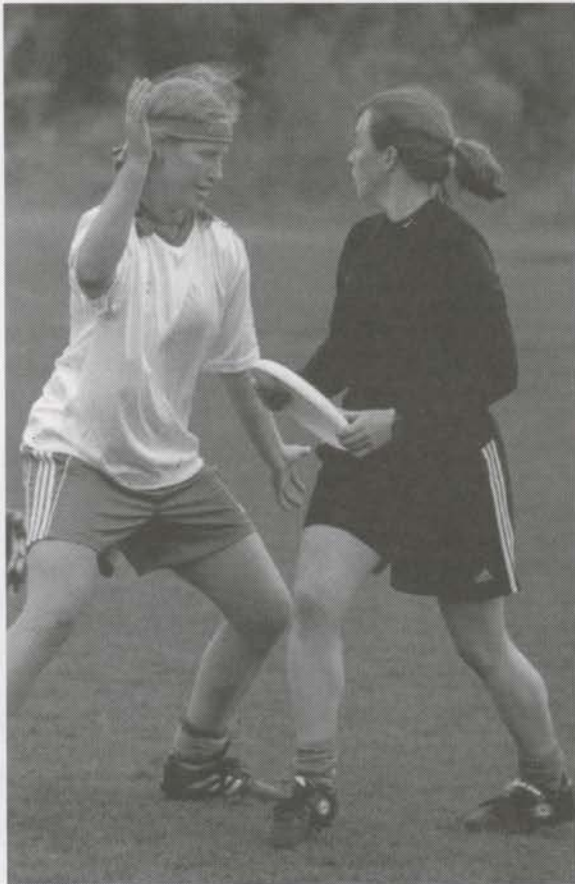
## ...And Bring Your Rock Hammer And Disc

What do you need for a successful geology field trip? Vans, tents, food and stoves, rock hammers, compass, frisbee...

Frisbee?

Well, yes, frisbee.

Frisbees have been required gear for geology field trips for the past quarter century. The durability of the frisbee's popularity is unmatched in geo circles by that of any other portable sports equipment. It's light, compact, cheap and fun.



*Syzygy alum Deb Cussen '98 looks for a way around current Syzygy player Anna Nelson '00 during the student/alum game this spring.*

You can play frisbee at a variety of levels from just tossing it around to hard core competition in games of ultimate frisbee. It appeals to active folks who like to be outdoors and sociable at the same time.

Ultimate frisbee (often called just "ultimate") is a non-contact team sport with seven players on the field at a time for each team. The rules are an amalgam of soccer, basketball and football.

There is a history of overlap between geology majors and Carleton's informal frisbee

leagues dating from the 1980's when a geology major, Carolyn Carr '88, was a member of the first Carleton frisbee team to qualify for national competition. Carolyn remembers, "We got a wild card slot in the nationals and the college paid for us all to fly out to Santa Barbara, California, to play frisbee like crazy people. We were placed 10<sup>th</sup> going into it and we ended up being seventh so it was very exciting!"

Currently geology majors and recent alums participate in several frisbee leagues and teams. At the basic level, there is the unofficial Geology Department frisbee intramural coed team, "Shel-bee." ("Bee" is short for frisbee, but our geologist namesake of the team denies responsibility for the naming of the team.) Shel-bee games are usually pick-up affairs, meaning there is no organized roster of who will play each game. The team depends on people's desire to appear at games and play to put together a team each time.

For Shel-bee, fun, rather than vicious competition, is the game. According to Emily Burton '99, a Shel-bee regular, the team "is an unusual team in that it really reflects the Carleton demographic - half men and half women, all the players get thrown to and share in the action. It's a lot of fun." Winning is great but not a prerequisite for a good time. Team captain Kate Hoffman '99 said in an interview for this story, "I think we might have won a game, the one I missed..."

Higher up in the competitive hierarchy from the intramural teams are the men's and women's intercollegiate teams. These teams also enjoy substantial support from geology majors and compete against teams from other colleges and cities at the regional and national levels.

One of the women's teams is Eclipse, co-captained by Kate Trafton '99. Other geo majors on that 17-woman team include Kate Hoffman '99, Emily Burton '99, Laura Cleaveland '01 and Anna Moyles '01, all of whom also play for Shel-bee. Eclipse has existed for several years and was formed as a B-team to accompany Carleton's premier women's ultimate frisbee team, Syzygy.

The men's equivalent of Eclipse is GOP ("Gods Of Plastic"), captained by Erich Heydweiller '99. Another geology major, Jake Eaton '01, also plays with the team. Erich comments, "Philosophically we stand for the idea that the primary reason for playing frisbee is to have fun. While we are competitive at the regional level, our focus is on having fun playing quality frisbee, rather than just winning." The team also forms a social group and has a ritual barbecue dinner the night before each tournament. This year they qualified for the regional tournament.

The nationally ranked Syzygy is Carleton's shining competitive frisbee star, and it is a geology-

dominated team. This year six of the 18 members were geologists as Syzygy hammered its way through game after game to finally become the second-ranked women's team in the nation against all other college and university women's teams. The team's exquisite teamwork crushes the competition at every turn. Geology folks on the team this year included Mizu Kinney '99, Liz Penny '00, Anna Nelson '00, Anne Sawyer '01, Sara Decherd '01, and Hilary Gittings '02.

The Carleton Ultimate Team ("CUT") is the nationally competitive men's team. CUT has counted many geo majors among its players over the years although this year there were none.

According to Anna Nelson, a veteran of the Carleton varsity swimming and diving team as well as Syzygy, "Syzygy is just as much work and is as intense as a varsity sport but the team has a lot more self-direction and autonomy since it is not run by the college." The captains rather than coaches run the practices, and Syzygy also enjoys a sense of family and is a social group for its members.

The frisbee frenzy is not without costs for its members. Players on the nationally ranked teams in particular do pay a price for the playing. In order to qualify for national competition the teams have to play through a long series of local and regional tournaments, grueling weekend road trips from which players often return sunburned and exhausted. If someone is late or sleepy in a Monday morning class, frisbee could be a factor.

But frisbee is a sport which carries over into life after Carleton. Many graduates of the student

teams transfer their enthusiasm to club teams in other cities after they graduate, and return for student/alum games in later years. In some cases Carleton alumni teams can assume a lasting identity such as the CUT alumni counterpart GUT ("Graduate Ultimate Team"). This spring both GUT and the Syzygy alums returned for student/alumni games. CUT edged out GUT by a razor-thin 21-20 margin but Syzygy ground its alums into the dirt 15-0 despite excellent showings by geo alums Deb Cussen and Martha Carlson, both '98.

Carls who move to the Twin Cities after graduation find teams to join there but they often find themselves on the opposite side of the field from the teams they sacrificed their bodies for in college. Karen Bobbitt Gran '96 played intramural frisbee at Carleton and now plays for GLU ("Glamorous Ladies of Ultimate") in Minneapolis. Her team plays Syzygy in local tournaments. Karen has observed that the primary club season is in the fall whereas, because of the nature of the school year, Syzygy is at its peak in the spring. GLU often can beat Syzygy in the fall game but Syzygy takes over during the spring game.

Karen also points out an interesting parallel between frisbee and geology: "I'm intrigued by the fact that in both frisbee and professional geology circles, when I meet new people they often react with something like, 'Oh you're from Carleton - Everybody's from Carleton!'"

By Timothy Vick  
Photos by Hanna Koenker '00



GUT geology alums (from left) Brent Nystrom '92, Dave Boardman '95, Allon Katz '96 and Kelvin Chan '98 returned to campus this spring to test the mettle of the current CUT team.

# News From Alums

**1937.** Chandler Swanson sends greetings; he and Ruth have recently moved into the Winter Park Towers in Winter Park, Fla. Allan Mathews is the secretary of the Association to Unite the Democracies in Washington, D.C. He writes, "We assembled European and American citizens in July 1998 at The Hague, Netherlands, and drafted a constitution for a union of democratic peoples. Now we are organizing a movement to install national popular initiatives and referendums to dialogue and ratify."

**1938.** Mary-Hill Kueffner French reports "A wonderful cruise from Shanghai up the Malaysian coast, across to India, Oman, then up the Red Sea, Suez Canal, across the Mediterranean to Athens with fascinating stops along the way and spectacular displays of geology. The karst topography in the Bay of Phuket, Thailand makes it look like Guilin, China. Trips inland through the mountains on either side of the Red Sea showed the Precambrian basement with granites, intruded by basalt and amphibolite dikes, with occasional sediments on top." Mary-Hill, you get an A+ for keeping good notes!

**1941.** Robert Chapman sends word that he has "fully retired from the U.S. Geological Survey and have cut back on some volunteer and other activities. Still am involved and active (30th year) in singing with the Barbershopper Chorus (San Jose), and participated in a contest and program in Honolulu last October. Also, I am serving as president of the local chapters of both the Lions Club and the Alaska-Yukon Sourdoughs Club."

**1942.** Thanks to Dode Hamilton Wanson for your card; Dode writes she's "keeping busy with volunteering and good friends."

**1943.** Eiler Henrikson is making plans to move back to Minnesota soon. At the time he wrote he said



*Eiler Henrikson '43 greeted his friend Yanni at a recent concert in Denver. Yanni lived at Eiler's house in Northfield for a time while he was a student at the University of Minnesota in the 1970's.*

he planned to move back to Northfield this summer, and also spend some time at his cabin in Deerwood, Minnesota. Welcome back, Eiler! Edward Sullivan writes, "I lost my wife of 54 years on March 21. I am getting used to my new life. The kids live in North Dakota, Minnesota and Arizona." Loyd Beaurline reports he and Mary Jane are both in good health after 55 years of marriage - they must be doing something right!

## Lloyd Pray '41 Cited by SEPM

The SEPM (Society for Sedimentary Geology) recognized the career of Lloyd Pray '41 this spring by awarding him its highest honor, the Twenhofel Award, at the SEPM annual convention. The award recognizes an exceptionally long and productive career in both industry and academia, including more than a decade at Marathon Oil and three decades at the University of Wisconsin-Madison. In his acceptance remarks Lloyd cited three views he felt important enough to pass on to others:

- The importance of SEPM as a professional organization;
- The importance of "maverick interpretations in our science. Maverick ideas are needed when we recognize that interpreting Mother Nature's geology usually proves more complicated and complex than first appreciated;"
- The importance of field geology. "The awe-inspiring digestive ability of computers and recent advances in microanalysis yields exciting geologic dividends, but endangers field training and field observations."



**1946.** When he wrote, **Charles Higgins** was about to leave for a trip in Turkey. "Such travel has been really broadening (in the northwest Sahara of Morocco I encountered what appeared to be a regionally extensive pediment, possibly even a peneplain) but it severely interrupts my attempts to finish writing up some of my still-unpublished earlier research!"

**1947.** **Georganna Dean Dickson** is now a Carleton Alumni admissions representative, and she says "I love talking about Carleton and all it has to offer to juniors and seniors but haven't had a lot of luck so far. Nobody wants to leave New England." They just don't know what they're missing!

**1950.** **Paul Fossum** and **Moira** are "still in the active travel business and enjoy the need to put our feet on the floor 6 days a week. When asked about retirement the response is, 'tried it three times and it didn't work for us.'" Paul says they are busy with their travel business but often enjoy evening cruises on their own boat for relief from work. Of their nine grandchildren, one lives in Alameda near them. "Son Sean is an Army Captain flying Blackhawks and stationed in Germany. Not a comfortable situation in these times. However, he is well trained and excellent at his job. We keep him, his wife and two boys in our prayer box. What I remember of my Geology comes in handy now and then as I serve on the Alameda City Planning Board and the City is developing what used to be the Naval Air Station Alameda. There are about 1000 acres of usable property to be developed. It is quite possibly the most valuable land in Northern California so the politics are almost overwhelming. Often times we hear some very creative geological theories depending on whether the speaker is pro or con. Larry Gould and Dunc Stewart must turn over in their graves!"

**1951.** **Thad Harris** writes they moved to Grand Junction in November to get away from the severe winters in Ouray. Besides being active in the Presbyterian Church and an early music consort, he says, "We love being near the Utah canyonlands, the wonderful geomorphology of the Colorado Plateau, and the dinosaur 'digs.'"

**1952.** **James Papadakis** and his wife **Joanne** were planning a trip to Martinique in May to see Mt. Pelee and St. Pierre, which was destroyed by the volcano in 1902. He writes, "I have been interested in volcanoes since the 1960's when I developed a commercial cave in Idaho, Crystal Ice Cave, which is in the vent of a 2000-year-old volcano."

**1954.** **Pat Bickford** sent an email saying, "Although I have been formally retired from Syracuse University for two years, I retain an office and access to my laboratories. My concession to retirement (which I love) is that I only work at the University four days

each week. I still have a Ph.D. student (my last) and a post-doctoral Research Associate working with me. Last June I received two major Research Grants from NSF. The first is entitled 'The Paleoproterozoic of Central Colorado: Accreted Arcs or Rifted Older Crust'; this work is designed to test whether the bimodal volcanic association in the Salida-Gunnison-Powderhorn region may have been derived as rift-melting products of an older crust that is not now exposed. Methods involve SHRIMP analysis of zircons to search for inherited cores, Sm-Nd isotopic analysis, and trace-element modeling. It seems only yesterday that I was working on these rocks with Shelby Boardman! The second project is a collaborative effort with Kent Condie, Matt Heizler, and Shari Kelley, all of New Mexico Tech. We are studying the thermochronology of the Trans-Hudson orogen in Saskatchewan and Manitoba. The goal is to understand the cooling history as an orogen becomes stabilized and eventually becomes a craton. We are using U-Pb and Ar/Ar thermochronological methods. Finally, I am completing a year as president of Phi Beta Kappa, Kappa Chapter of New York at Syracuse University."

**1956.** **Richard Buchheit** writes, "After 35+ years of experience, the State of Minnesota has conferred 'expertise and professionalism' upon me with its Professional Geologist License. While **Jane Willard '71** received license No. 1 (she was on the registration board), mine is #176! It makes a nice wall hanging."

**1958.** Got a note from **Dante Stephensen** here which my glasses aren't doing as well on as I'd hope, so Dante please correct me if I get anything wrong! But I think the message is that Dante went on a dig with the famous paleontologist Jack Horner, who has discovered some fascinating things about the way dinosaurs lived and raised their young. Dante helped unearth some dinosaur eggs in Montana last year, and now is planning to go on another dig in Inner Mongolia with Dr. Horner.

**1959.** **Norrie Jones** writes, "The Oshkosh Geology Department, of which I am the chair, underwent an every-seven-year academic program review this year (1998-99). Shelby Boardman served as our external reviewer and spent the better part of three days with us. Now there is one competent dude! He delved into every corner of the building, looked through the mounds of data we and the University provided, interviewed three deans, three department chairs, eight geology faculty, a bunch of students, and wrote a 17-page report on the whole thing. In spite of all the work, we found time to socialize a bit and had a great time with him. Thanks again, Shelby. As for me, my term as chair ends this summer and I'm planning on retiring next year. Shelby wore me out."

**1960.** Thanks to **Michael McLanahan** for your address update...

**1961.** Don Davidson has decided to step down from his post of Executive Director of the Geological Society of America effective June 30 so he can spend some time travelling, going to triathalons and even attend a Carleton event at GSA! Don writes, "Mary has other plans as well and we will be in Boulder through 2000."

**1962.** Stephen Johnson writes he "survived the 'redundancies' created when BP and Amoco merged by being in a strategic technology group. I'm hoping to continue 3D-depth migration for a few more years. Our job is to keep feeding seismic data to very large parallel computers to image the upper 10 km of the Earth." After 25 years in teaching and environmental geology, John Lufkin has decided to throw in the towel and join the computer craze, as a computer repairman. "Had one short course in computer hardware recently, and next up is an 80-hr course in Computer Troubleshooting, starting in June at Austin Community College. After that, I hope to open my business. The kids are fine. John is heading for Sam Houston State College next fall in criminal justice, and Nate, temporarily stunted at 6'8", continues basketball play in spring/summer league, becoming a junior next year. Hope to bulk him up this summer on a weight training program, something that was in its infancy in my day."

**1963.** An e-mail from Wendell Duffield reports he's "seventeen months into 'retirement' and thoroughly enjoying my new life style. I continue do a bit of research and writing for the USGS as a Scientist Emeritus. I do a bit of teaching and student mentoring in the Geology Department of Northern Arizona University here in Flagstaff. And I do a bit of consulting in the volcano/geothermal patch, with jobs mostly in Central America. This semester I helped teach a course in Hawaiian geology, and of course we had to visit Kilauea Volcano during spring break. Students and teachers alike really enjoyed the show where tube-fed lavas are spilling into the ocean. My first book (Volcanoes of Northern Arizona) for the popular audience is selling briskly, and a second book of this sort (tentatively called 'Understanding Kilauea Volcano') seems to be on a publication track whose printing date is probably at least a year and a half away. I'll be in El Salvador and Costa Rica on consulting jobs this June. And after that it's back to Minnesota for my mother's 90th birthday. Please try to control the Minnesota mosquito population during my visit." Ok, Duff, we'll work on it but don't hold your breath- a mosquito might fly in your mouth!

**1964.** In October, Pete Rowley "happily returned to science after three years of managing the Nevada Test Site project. In December, our new home in New Harmony, Utah, was finished. In January, I married Dawna Ferris, an archaeologist with the Bureau of Reclamation. At the urging of our four horses we both

are in the process of relocating our jobs to southwest Utah." In June during alumni reunion Pete was awarded a Distinguished Achievement Award by Carleton College. Congratulations from the Geology Department, Pete!

**1965.** Jan Tullis was awarded the Outstanding Educator Award by the Association for Women Geoscientists last October in Toronto - Good show, Jan! Jan has taught at Brown University for almost 30 years and is the foremost expert on plasticity of quartzofeldspathic rocks, and she has been honored with many other teaching and research recognition awards.

**1966.** A note from Beth Schwarzman last summer said she was just back from a year of sailing in the Caribbean. "Geological highlights included sailing by Monsaratt (to windward!) during one of the big eruptions and swimming in hot springs in Dominica and Guatemala." Beth is planning a Carleton Grand Canyon trip for 2000.

**1967.** Mark McBride is a Senior Hydrogeologist with Capital Environmental, an affiliate of Howrey and Simon, one of Washington's largest law firms. He writes, "Almost all my work is legally related, very interesting and challenging. I keep up to date partly through the Geological Society of Washington, a very active group to which I'd be happy to introduce anyone who comes out this way."

**1968.** Ron Nordquist sent an e-mail saying, "I have been an exploration geologist for Marathon Oil in Houston for the past 9 years, working mostly international projects. Nancy ('68) is teaching in the public schools in our community which is 35 miles north of Houston, and daughter Alice (Carleton 2006?) is 15 and enjoying school and music studies. I still think often of the Carleton years and what a rich experience they were."

**1970.** Judy Boudreau writes, "I've been busy with job and family. I'm the project manager for the installation of almost 40 new flood-warning gages statewide. Our 10 and 7-year old sons are active with sports (black and green belts in karate, respectively, and budding pro-athletes) and doing very well in school. Husband, Bill, is just finalizing a neighborhood-funded book on improving the quality of storm water runoff from one's own home and backyard. Recipes for Cleanwater is slated to be in every household in our Chain of Lakes watershed. And we just got back from a week in southern New Mexico visiting family, but thoroughly enjoying the stories of the mining culture. We even panned for gold (those flecks are hard to isolate)!" Thanks to Gretchen Steadry and Steve Hulke for your card and address updates.

**1971.** Royston Kruse is assisting on the development of a program for Amsterdam 2000, a global conference for Christian church leaders to be held next sum-

mer. He also notes that his oldest child, Ken, plans to start college this fall.

**1973.** With great sadness we report that **Bruce Nesbitt** died last August in a swimming accident while vacationing in Quebec. Bruce is survived by his wife Barbara and two children. We received this from Steve Kesler through **Phil Brown '74**: "The family has requested that tributes be in the form of contributions to a scholarship fund at the Department of Geology, University of Alberta, Edmonton, Alta., Canada, T6G 2E3 (checks made out to University of Alberta and sent directly to Brian Jones). Sympathy cards could be directed to his wife at: Barbara Tilley, 10316 42nd Street, Edmonton, Alberta, Canada T6A 1T3. Finally, Barbara has indicated that she would like to compile books for the two boys (8 and 10) to help them remember their father and that written or photo contributions to that would be great." A note last July from **John Sharry** reported he'd "just finished 2 1/2 years managing a project in western Siberia. I should have taken Russian at Carleton instead of my roommate. It's been interesting watching all of the changes taking place and how the country is reacting. I was even interviewed for a national broadcast on Moscow TV6. I'm now off to London to escape the heat in Dallas." **Rich Fiore** is vice president of Search Consultants International. He says they are "still focusing strictly on environmental, health and safety recruiting nationally. I work primarily in experienced hiring for industrial corporations, as well as some consulting companies. 1998 was a record year for me, though the overall market seems to have slowed down."

**1974.** **Phil Brown** was here in November to give a talk entitled "Archean Gold - Low Grade to High Grade." Thanks, Phil! It was great to see you at reunion, too.

**1975.** **Emily Wrubel** reports she's still teaching life science and earth science to 7th and 8th graders. She writes, "It's hard to believe that my oldest son, Wiley, is in 6th grade. Carson, age 9, is truly the son of a geology major. After a mountain bike crash landed him the ER with a badly broken humerus two days ago, he calmly told the triage nurse that he 'fell off the bike onto some bedrock!'" **Ginna Gillerman** reports a busy year with lots of new things - Ginna, congratulations and best wishes from the Geo Dept on getting married! She writes, "My new husband, Alan Dornfest, is a great guy. The wedding was last October in the synagogue in Boise. Marriage is different (but good) after so many years solo." Alan is a tax analyst for the State of Idaho, and Ginna is working for the Idaho Geological Survey and teaching. Congratulations and best wishes to **Libby Anthony**, who married R.A.D. Morton on January 6, 1999. "Carls would approve of him. I do plan to come to the class of 1975

reunion in spring 2000. It would be great to see geology friends there. 25th in 2000! Who can resist?" **Suzanna Calvo** writes, "Life is full and busy for us these days. We have a 4 1/2-year-old daughter, Sarah, whom we adopted from China when she was just a baby in 1995. (My husband, Stephen, is also Chinese-American, so I'm in the ethnic minority in the family, being Swedish-Italian). Sarah is a real joy and has inspired me to take a break from working full time as a geologist. Of course, I'm teaching her all about rocks and geological processes - she loves it. However, here in Houston there aren't any real outcrops. And also, she's taking piano lessons (Suzuki). At her pre-school I give demonstrations for the kids about rocks, maps, active growth faults (we have plenty of those even in our neighborhood) and also play the bassoon for them. We'll see what happens with my career when she reaches Elementary School full time. Meanwhile, Stephen is happy and busy with running not one but two consulting businesses."

**1976.** **Will Maze** is still in Houston, still at Exxon, still doing geochemistry and thermal modeling. That's ok, Will, things that are worth doing can't always be completed in a year! Will added that he's "finally getting a chance to look at big hydrocarbon systems in the Middle East." **Barb Rossing** says she "finally finished my doctorate (Ph.D. in New Testament, 1998) at Harvard after ten years! Two months later I broke my arm watersliding with **Dan Spencer** in Chelan, Washington. The good news is that my dissertation is being published (The Choice Between Two Cities, Trinity Press, coming out this November), my arm is healed, I got a promotion to associate professor at the Lutheran School of Theology at Chicago, and I plan to be back watersliding and hiking in Washington again this summer." **Barb Wonson-Liukkonen** is taking a year's leave of absence from the University of Minnesota Extension Service to be program director of a small nonprofit dedicated to protecting Minnesota's rivers. "**Alex Hildebrand '98** has been our program assistant since last fall, giving me a more current perspective on Carleton. At home, two new dogs are keeping us busy." **Leah Haworth Evison** and Ian and their daughter Beth, now 10, moved east last summer, "leaving the city for the suburbs of D.C, where the schools close at the first sign of a snow flake. I am still with EPA's Superfund program and like living here a lot, though it is hard to be so far away from the Minnesota canoe country." **Bill Matlack** jumped "from Winnemucca to Wall Street in one giant step! I'm working for one of the best stock research groups on the street, focusing on the gold and copper sectors, with responsibilities in coal, aluminum, steel, nickel and molybdenum as well."

**1977.** **Jim Berg** has a new baby boy as of this spring for a total of two children. He's "still exploring Min-

nesota's subsurface in the summer and mapping buried sand aquifers in the winter." **Bruce K. Nelson** is to be congratulated on being promoted to full professor at Washington! He writes, "I'm still continuing my research at the University of Washington on ocean island volcanism, spending most of my field time on Kauai and on the westernmost Canary Islands. As graduate advisor of our department I like to see the continuing connection we have with Carleton students. Next year we have two Carleton grads entering our program; Karen Gran and Alison Anders." A note from **Philipp Muessig** reports, "Suzanne Savanick '89 and I find ourselves talking across an office hallway (I'm between her and a window) about sustainable building design and other environmental issues. My most exciting project this year is with the Great Lake Commercial Center -- a whopping 1,900,000 sq. ft. of office, retail and manufacturing space in Minneapolis (an old Sears site) to be renovated by Ray Harris, the legendary urban redeveloper in the Twin Cities." By now surely everyone has heard of the discovery of the body of George Mallory on the upper slopes of Mt. Everest by a team headed by **Eric Simonson** in early May. Mallory had died in 1924 trying to reach the summit of Mt. Everest, and it is still not clear whether he actually made the summit and was the first person to climb to the top of the mountain, an honor usually ascribed to Sir Edmund Hillary in 1953. As of this writing, the adventure can be reviewed on the web at [www.mountainzone.com](http://www.mountainzone.com).

**1978.** A note last summer from **Dorothy Davis Morrow** reported she had married and had a baby within the last few years, saying, "Some of us are late bloomers!" The baby is Benjamin, who was born in the spring of 1998. Dorothy is also working on a master's degree at Bellevue University, where she works as Vice President of Development Programs. This spring

**Laura Nadelhoffer** took a new position with Citigroup in the electronic commerce area (the "e-citi division"). She writes, "My new responsibilities include developing and marketing services for the small business community. Quite a change from selling international payments to big multinational corporations!" From **Tracy Giefer Fullerton**: "We bought our first real home last August and we're loving every bit of it - even the yard work! I also really enjoyed seeing lots of folks at last year's reunion." Last summer **Craig Banister** switched from the Training Department to the Technical Writer's Group at US West Dex in Colorado. "I'm working with a large developer group responsible for the Data Warehouse Project and really enjoy the people. Last fall I finally crossed the Atlantic for the first time and spent six days in and around London and two days in Edinburgh, Scotland. Had a great time!" Hi to **Steve Ingebritsen**, and thanks for your address update! **Barb Okamoto Bach** saw a story in The New York Times about **Eric Simonson's** expedition on Everest which found the body of George Mallory who died on the mountain in 1924, and she commented, "I was pleased that the article called the discovery team 'young' climbers, because my Carleton class is even one year younger than his!" Barb's daughter Camilla was in second grade this year and played soccer with the "Tornadoes" (named after the storm that came through their town last summer), that Barb coached. **Nathaniel**, now "Nate," was in Kindergarten. **Jim Harrington** writes, "We're busy raising a 17 month old son and expecting our second child in October 1999. Fun time is spent enjoying the arts in D.C., relaxing in Virginia countryside, touring the wineries that are springing up in the Loudoun Valley, and hiking in the many State and National Parks around here (although I visit Shenandoah Park with a touch of sadness). A real

### G.R.E. Retest

Meryl Rosenfeld Haber '78 writes, "While preparing notes this morning for leading a 7<sup>th</sup> grade field trip through the lava caves near Mt. St. Helens, I found myself looking through old folders of geology papers and quizzes. Many of the papers I had no recollection of writing, but I recognize the typewriter print as my own. Within those pages of vast and yellowing knowledge I found a copy of a G.R.E. (Geology Recollection Exam), and surprised myself by still knowing a few of the answers. But some escaped me, and perhaps you can enlighten us in a subsequent volume of Geo-news. Some of the gems are:

- #4. On which trip was one of our vehicles stopped for being painted the wrong color?
- #7. Where did we threaten to eat the girl scouts we captured?
- #12. Who mooned the camera for the group picture at Elephant Rocks?
- #15. Where did we map the geology of a Coast Guard installation?
- #14. Which athletic male faculty member had danced in a chorus line?
- #18. Who attempted to place-kick a fresh cow pie on the last Black Hills trip?"

Meryl, I'm slightly horrified to see this resurrected, partly because I never dreamed some of these things happened as long as 20+ years ago! But anyway I'll put the answers somewhere in the back of the Newsletter-  
*Tim*

highlight this year was hearing from long-lost Geology friends as a result of the 20th year class reunion and the 1998 Geology Newsletter. Professionally, I'm working on the problems of managing data, systems, and information quality in a large Fortune 500 corporate environment (Freddie Mac). It sounds a long way from Geology, but intellectually the work has strong affinities to the classification theory of paleo and mineralogy lab, and to the deductive work of a field geologist."

**1979.** **Mark Helpenstell** is a manufacturing engineer for Boeing these days, and he coaches the high school soccer team, which had their best season ever this year. Mark writes, "my daughter is at the University of Idaho, my sons are growing up too fast. My wife, Kim, opened a health club/day spa the 1st of May on Whidbey Island - as always, Carls are welcome!" **Marie Del Toro** is busy being a Senior Engineering Associate for the Portland Water Bureau and at the same time being a full time mom for Holly, 4 years old, and Wilder, 2 and a half. "There's not much free time in my schedule, but I am managing to take time for our 20th reunion. Hope to see you all this summer!" **Dan Maturen** is getting his exercise teaching fifth and sixth grade math and science at Mounds Park Academy, and also coaching middle school soccer and basketball teams and working at a golf course in Apple Valley during the summer. Hi to **Dave Tolley** and thanks for your address update. Dave, remember the old seismic refraction outfit? Well, this week a class was using it and managed to completely destroy the handle on the sledgehammer, broke it clean in half. We can't complain too much, though, we've gotten 24 years of slamming metal plates out of it! Hi to **Tillman Farley** and thanks Tillman for your address update. Congratulations and more than best wishes to **Dan Spencer**, who was ordained into the Christian Ministry, United Church of Christ, last October after a tortuous journey lasting many years! Dan is the first out gay person to be ordained by the church in Iowa. Good work, Dan, we're proud of you! This June Dan was awarded a Distinguished Achievement Award by Carleton College during alumni reunion. Another notable event in Dan's year included attending the first-ever "Family Reunion" sponsored by Carleton College for gay, lesbian, bisexual and transgender alumni and friends of Carleton. That event was a huge success and a joyous homecoming for a lot of folks, some of whom hadn't been back to Carleton since they graduated. Almost lost among all the good things in Dan's list for this year is that he was tenured and promoted to Associate Professor of Religion and Ethics at Drake University in April - congratula-

tions again, Dan! Dan hopes to see lots of friends at his 20th reunion at Carleton this June, and then he'll spend the rest of the summer directing the teaching program at Holden Village in Washington. One of the teachers will be his former Intro to Geo lab assistant, **Barb Rossing '76**. Got a note from **Dan Hitzman** last summer saying that he had completed successful surface geochemistry surveys for hydrocarbon microseepage and traveled to Spain, Colombia, Papua New Guinea, Australia and around the U.S.A. "Have shovel, will travel!" Another note that came in last August was from **Judy Lungren**, who wrote, "After spending four years in Alaska, I've moved back to the Lower 48 in order to be warm again. My spousal equivalent, Rick Noll, and his 6-year-old daughter Sabina and I have bought a house together in Spokane. I still play fiddle as much as possible."

**1980.** **Vicki Hansen** was the keynote speaker at the annual Keck Geology Consortium symposium this spring at Carleton, presenting fantastic 3-D images of the geology of Venus. Vicki gave a wonderful talk and never revealed to her audience the trauma that was unfolding as home as **John** tried to untangle the mess



*Berit and Casey, the children of Vicki Hansen and John Goodge*

created when a burglar stalked and entered their home and stole their computer and other electronic gear. Things got worse as John and Vick subsequently received threatening phone calls and the burglar attempted to make withdrawals out of their bank account. It didn't take long, of course, for the guy to goof up and soon he landed in the slammer, but only after causing a heck of a lot of damage and angst for Vicki and John. Hope that one's over for good! Thanks to **Ed Secor** for a nice box of mineral specimens he cleaned out and threw our way last fall.

**Mark Timmerman** and Peggy are building a log home on their property west of Madison, Wis., and doing a prairie restoration there as well. He says, "Our new German Pointer puppy loves to roam our land. Kate is 13 and active in theater. Grace is 10 and busy at piano and violin." Mark also sends a greeting to everyone. **Bill Hughes** continues his hydrologic work overseeing cleanup at Mather Air Force Base in California. He expects to move to form a regional office at McClellan AFB to manage closed bases soon. Bill says he "learned new soccer coaching skills as I moved into competitive circles with 13 and 14 year olds and encountered the alpha male/pecking order phenomenon." He's coaching and playing different teams. **Julie Dynes King** went back to school a few years ago and got a degree in landscape and horticulture. She says she now "works full-time designing, digging and planting." Her husband, Bob, has taken a break from consulting to work on developing a software program, and their kids, Sarah, 16, Jessie, 12, and Robbie, 9, keep them hopping. **Glenn Lee** is working for a not-for-profit testing company, helping to test interesting gizmos and write consensus public health standards. He writes, "My instrument collection continues to grow. I recently adopted another wayward accordion. And, I bought a button (diatonic) accordion, which is - in my opinion - a cruel and unusual instrument to learn to play. Regards to all Death Valley alumni!" Hi Glenn - Tim. **Mindy Bell** is teaching science for both preservice and active teachers at the Science and Math Learning Center of Northern Arizona University. She writes, "Darrell, Lindsey (7) and I are enjoying Flagstaff. We get lots of snow and pines at 7,000 ft combined with clear blue skies!" She also noted that Darrell is always on the lookout for new grad students in geomorph and quaternary geology, so keep your eye out for prospects! From **Reid Fisher**: "Same salt mine. Still plumbing the depths of C&W and bluegrass music. Looking forward to seeing **Dave Swanson '79** in Fairbanks at the end of the month" (that would have been April, from the postmark). **Brian Jacobson** is still serving his community as an arborist: "my company has eight employees who trim trees on residential properties. Background in geology has been enormously valuable in helping to solve tree problems for my customer. The underground parts of trees are too often taken for granted; being able to think about soils and bedrock help me in solving problems related to disease, drainage, and structural integrity. My wife Ann ('80) just earned her master's degree in Library and Information Science, and now she works about three-quarters time at the Naval Postgraduate School in

Monterey. My older daughter Lily, 13, plays piano beautifully and is turning out to be an extremely astute observer and critic of contemporary culture. My younger daughter Zoe, 11, is a Girl Jock, and I help coach her YMCA-league soccer, basketball and softball teams. Over the last few years I've become acutely interested in Mars explorations, and last August I attended the Founding Convention of the Mars Society in Boulder. Our mission statement in a nutshell: humans to Mars! See the website, mars-society.org." From the quartzite hills of the Baraboo Range, **Muffy Barrett** writes "In an apparent attempt to join the 20th century before it ends, we hooked up our hot water heater last fall so we finally have running hot water, and got an e-mail account over Christmas. Otherwise not much has changed... interest in native plants is continuing strong, and we are getting something of a reputation for ourselves as propagators of stubborn plants. Sometimes I think that the reputation is deserved, but mostly I think that it isn't that we know so much as that others know so little."

**1981. John Hankins** finds that "Some things never change... My geologist colleagues presented me with an April Fool's 40th birthday cake on April 1. On the second slice I encountered the toe of my running shoe, which had been baked into the confection." **Bonnie Rohr** sent a note last summer, saying, "Juggling my medical practice and the kids (4, 6, and 9) keeps me completely occupied. Of course, then there is the dog, the house, and husband. Oh well." You could add a year onto the ages of each of the kids now, and maybe 2 or 3 onto Bonnie's? **Cathy Villas-Horns** is "very much enjoying my life as a mom/wife/hydrogeologist. My 4.5 and 1.5 year old girls are a lot of fun. We've got Zoe helping out with a vegetable garden in the hopes that she'll actually be interested in eating some of her produce. Zoe is also in the 'why?' phase, which requires a lot of creativity on the part of her parents. Martina is a climber so we're getting into shape trying to keep up with her. My job is very interesting because it involves the regulation of agricultural chemicals in soil and ground water, which will always be a challenge!" In February we received the following crushing news from **Heyo Van Iten**: "I have bad news for your department: The cost of luring me away from here to join your group has increased substantially, as a result of a decision by the Hanover College Administration to grant me early tenure." Oh well, maybe in our next life... Heyo and Tanya also wrote they planned to take a trip to Paris to celebrate Heyo's 40th birthday - Hope you had a great trip, Heyo! **Dave Bice** and **Jenn Macalady '91** were married this summer,

twice! The first time was in Northfield during alumni reunion weekend (but at Dave's own house), and the second time was the legal ceremony in Italy a week or so later. Dave was too modest to mention this in the letter at the beginning of the Newsletter, but another notable event in his life was his promotion to full professor this spring. Congratulations, Dave!

**1982.** Peter Wiegand got a new position with the largest property management company in the Steamboat Springs, CO, area, Steamboat Resorts. Pete says, "Things are going well considering the tough business conditions in the ski industry here. Recently I spent a week in Canada (sorry Pete, I couldn't make out the name of the town-Tim) and tried heli skiing - Amazing!" From Heidi Bredenbeck Wells, "After a rough year in the business, life is settling down again with an excellent '99. Our second child, Evan, was born last June and is a real trip - boys ARE different than girls! I should know, now that I live with three of them (OK, Brad is 40 and may not be considered by some to still be a boy). Generally things are good and family puts all those business ups and downs into perspective." Dave Becker writes that he fills 3 jobs. "As EH&S Coordinator I try to make sure that our local management have their heads in the right places. I also work to maintain our environmental permits, raise EH&S consciousness, and make sure that we do what is right (morally & ethically, as opposed to the minimal legalistic approach that many take). I also am "Systems Coordinator," responsible for managing the business system software that our local operation uses. Finally, I somehow ended up with the accounting (huh?) responsibility for the site. Kendra and I have two children (Dylan, 6, and Madeline, 3). The rest of our menagerie includes 8 chickens, 9 sheep, 3 cats, 1 dog, 1 potbellied pig, 2 rabbits, and one horse. To help feed the sheep and horses, I bale a little hay (800 bales last year, 450 this year before I broke the haybine). We also make our own maple syrup in the spring (and we take orders!). From April through October, Kendra manages Camp Hi Canoe Livery, a business that her family has operated for over 30 years on the upper Cuyahoga River. Somehow, we still find time to recreate! I usually get away around Easter and head south to kayak some whitewater in the southern Smokies (Tellico, Ocoee, Nolichucky, Chattanooga, and Tallulah Rivers). In the fall, I head for the Gauley River in W. Virginia." Last fall, Lisanne Percy and her partner Jason pulled up stakes and moved to Corvallis. She said, "Of course, Corvallis is my hometown, but it was still a difficult decision to leave Bend after I'd lived there

seven years. I am the Office Manager and Accountant for Bend Tech, the company Jason started while we were in Bend. Jason and I are now general partners in the firm. The primary service we offer is hosting of web sites on the Internet. If you need a web site (or know of any web-site designers we could do business with), please let us know! You can look us up at <http://www.bendtech.com>" Pete Whiting writes, "Everything is fine here on the North Coast (of Ohio). Zack (4 3/4) and Emma (almost 2) are happy and healthy. Cindy (mom) and I (dad) are spending lots of time at playgrounds, riding bikes, and driving the kids to various activities. I am busy with several new projects including one on the Yellowstone River." Pete's old roomie, Tim Schoonmaker, says he's still floating down the river of life, and "at this point, my river trip still finds me in Portland, a proud father of Sarah Mae (aged 2 years, 9 months) and Jacob Ryun (aged 5 months). Sarah's just an average kid who appears to be taking after me in two regards: she picks up rocks everywhere she goes, and she enjoys jumping off things that are outrageously high off the ground. Jake just smiles. I've been told he's the smilingest kid people have ever seen, which I think will get him far in life if it holds up. Sherry, my wife, continues to work half time as a computer programmer. I continue to make the world safe for someone in my job as a special agent for DEA. In January of 2000 we all go to Washington DC for 6 months of Spanish Language School for me after which we will be leaving for Santa Cruz, Bolivia where I have been assigned for a 3-6 year tour. Needless to say, I am very excited at the prospect, especially drooling at the opportunity to do some climbing in the Andes. In my spare time (?), I am entering my 17th year in pararescue and just finished my 13th year as a pro-ski patroller at Mt. Hood."

**1983.** Kathleen Duffy may be heading for some changes in her life now that she's finished her Masters in Education Administration, but for the moment she's still teaching 8th grade science. In the meantime, her family of two children is looking forward to a well-earned vacation this summer, maybe even including Minnesota! Amy Zacheis writes that she's "still plugging away in grad school at the University of Alaska in Fairbanks, but I hope to be done by next spring. Our daughter Hayley is walking, talking, and always a lot of fun. It's sure a lot harder to concentrate on school now that she's around!" Dave Purkey writes, "After finishing my Ph.D. in hydrology from UC-Davis I worked for a research institute investigating the potential for groundwater banking in California.

Recently I joined with my major professor at UC-D to start a consulting firm to develop hydrologic models. Our first contract is with the Bureau of Reclamation to develop a model of the Klamath River system." **Brian Leonard** writes of enjoying hiking and trips to the beach with his four- and six-year old children, but another hobby is reserving interesting sounding domain names which he hopes to develop. "My favorite is 'law-o-rama.com,'" he says. So, Brian, for just a tiny fee we can rent the name, right? **Jeff Pipes** was thrilled in June to have his permit for an addition to his winery approved after a long hard fight. "We finally have a positive decision from the County Government to officially open our winery and tasting room to the public. As many of you know, it has been a long and frustrating 2 year process. Today, we really blew the opposition out of the water. Our plans were approved by an unheard of unanimous decision! If you see me soon, you may even detect a smile on my face, something lacking for quite some time. Now 'all' we have to do is pay the permit fees and build the approved addition to the winery!" From **Keith Knudsen**: "As Chris Hinze '83 would say 'We're just ducky.' Kids (5 and 8 years old) are doing great. Casey, the 8-year old, regularly embarrasses me in chess and Sydney (5) talks like a broken record - or CD. The dog is too old to go on walks, and I'm too tired to take her. I'm still at William Lettis & Associates - it will have been 6 years as of this summer - and I still enjoy the Quaternary geology and geomorphology people pay me to do. Annie continues to be a French teacher extraordinaire" (is that the French spelling?). A nice winter letter from **Dan Packer** and **Ruth McDonald** reports they are in good health and spirits, and Ruth and Dan are staying buff chasing their three overlords (kids) around the house. Kinchen, 4, is struggling to hold his own against the increasingly sophisticated competition of his younger siblings, elf A and elf B (two-year old twins Ruby and Seth); little does he know the battle was lost the day they were born. Dan, you would love how buff Clint is these days from swinging the hammer for his class's seismic refraction lab!

**1984.** **Mary McMillan** sends a greeting, noting that she is searching for a new housemate and her 15th reunion this summer. Mary, it was great seeing you at reunion! **Carolyn White** writes that she is "Enjoying life in Houston - it's growing on me. So is my 2 3/4-year-old son, Jasper! We are excited about starting Suzuki violin this fall. Looking forward to a visit to Michigan in July." We'll be there ourselves in October, Carolyn, for the fall departmental field trip, but I expect you'll be keeping warm

down in Houston while we freeze our tootsies up there in Marquette. Oh well, it's beautiful any time of year, you just have to stoke up with a pastie once in a while when it's cold. **Rudi deZoeten** says, "Nothing changes, nothing stays the same. Still in Thailand, however, I'm now working for the Thai national oil company, PTTEP, exploring for hydrocarbons in the former disputed area with Vietnam. The kids are growing fast and I try to keep pace. Hope everyone is doing well." **Jack Dunn** writes "We have been moving every two years or so - California to Bolivia to Calgary to Bolivia to the San Francisco bay area. The international lifestyle has been broadening and exciting. We had our second girl, Rebecca, in Bolivia and she's a little silly girl now - age 5. Hannah, 7, is enjoying the process of learning to read and looking forward to a summer of swim team. Still working for Chevron in a consulting project management role. Sometimes I miss doing geology, but I have generally found that I am still learning in my job and it remains stimulating. A fair amount of international travel is part of my job - I have been lucky to have traveled to China several times and I am on my first trip to Indonesia now." From **Mark Gordon**: "After getting married last June, Cecilia and I have used vacation time to visit our families around this country and in Romania. I continue to weather the changes in the oil industry while working for GX Technology. I am working in the exciting new field of depth imaging which requires an integration of geology and geophysics." An e-mail from **Linda Schalch Eickhoff** reports that she, her husband Steve and their three daughters are doing well. She said, "Amazingly, our oldest girls (Emily and Leah) just turned six. Miriam is fast coming up on two and a half. Being a stay-at-home-Mom is my top priority, but I've been branching out more and more. In a quest to better incorporate exercise into my life, I traded my business suits in for spandex about a year ago, and started teaching fitness classes around our area. It's not such a bad thing to be paid to stay in shape. I also do some pickup 'professional' work - mostly site assessments. Nothing tricky. I enjoy switching gears. Sometimes I surprise myself when I get into a conversation and the professional in me emerges...I actually remember and speak knowledgeably, even authoritatively, about my chosen field. In my spare time I've become an activist - my latest battle being with the local Parks and Recreation Dept. I've proposed a new theme-based summer program for 6-8 year olds. My favorite is 'Earth, Wind and Fire.'"





*Alexandra Dewey, daughter of Bill Dewey '85*

**1985.** Bill Dewey announces the birth of Alexandra Platt Dewey last November 23- Congratulations Bill and welcome Alexandra! Bill says things haven't Brad Werrell has a new son named Harrison James Werrell born on March 29. Congratulations Brad, and welcome Harrison! Brad has finished his second year of medical school and is doing rotations at St. John's Westshore Hospital near Cleveland, OH in August. "The rest is secret stuff to be revealed later, if at all..." C'mon Brad, don't torture us like this! Got a note from Russell Urban-Mead last summer which told of plans for his family to go to Africa for eight months so Wendy could do dissertation research in history in Zimbabwe. Russell, hope the trip went well - let us know next year! Brad Miller and Trina Blake now have two kids, Dylan, who has now started school, and Nate, who is maybe three years old now, according to a card we received last summer. They're living in Seattle. Glen Carleton writes, "Last summer my wife Lynn and I bought an old (circa 1860) house in a nice small town here in NJ (yes Toto, there are nice, small towns in NJ). It's in need of some work--although we've yet to shower in our new home we keep thinking we'll finish the painting and caulking next weekend. In the meantime we're enjoying the claw-foot tub and feeling smug

that we move much faster than glaciers. The best part is that we're on the Delaware River, 400 yards upstream from where Washington crossed on 12/25/1776, and the original hand-dug well is still intact. Seems appropriate for a hydrologist. Feel free to come visit next time you're in Trenton!" Got a note last fall from Liz Reading after she read the story in last year's Newsletter about the streakers. "In reading about the streakers I was much amused, especially as I have vivid memories of my Geo 10 final exam, during which several lab asses, including Prof. Clint Cowan himself, streaked right through the room in full force. I think it was the most positive thing that happened to me all day." Let it never be said that Clint didn't have an impact on his students! A daughter, Katherine Anna Mitchell, was born to Kris Grady Mitchell this March. Kris says, "She's beautiful and Benjamin is a proud big brother. I'm continuing to stay home with Ben and Katie Anna." Welcome to the world, Katie Anna! Recently Kris's husband, Dale, accepted a position with Schneider national in Green Bay, WI. He will be a web developer and logistics programmer.

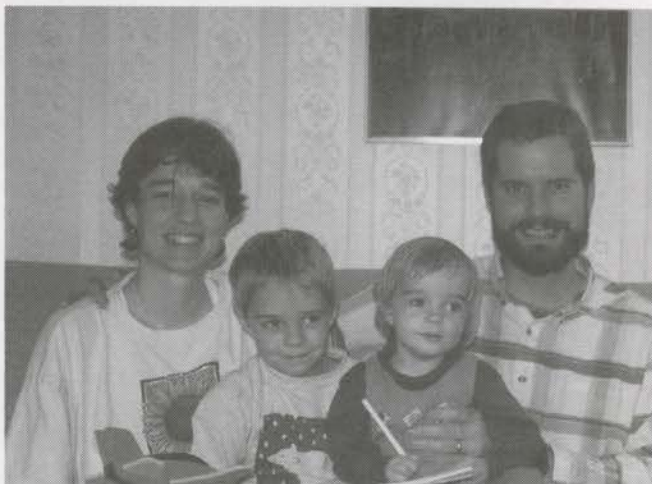


*Katie Anna, Kris Grady Mitchell's daughter, was born March 5.*

**1986.** John Woodwell sent a note right after he

returned from a trip up the Peruvian Amazon. "We saw birds, monkeys, sloths, alligators, leaf-cutter ants, and pink dolphin, caught a piranha and ate it, paddled dugout canoes, visited Machu Picchu and the Inca ruins, and had a great time. I'm back in College Park now, hope to finish up my dissertation soon, and may do some work for the USAID Africa Bureau this summer." John, eating a piranha is sort of a role reversal, isn't it? How was it?? Thanks to **Christine Massey** for your address update- Tim. **Craig McCaa** wrote that he resigned the Peace Corps after a very disappointing experience for six months. Now he's back in Fairbanks working his old job at the BLM and looking for a new adventure. Suggestions, anyone? **Roger Huddleston** writes that he's "still at CH<sub>2</sub>M Hill, doing lots of interesting things. Donna and I now have two boys, one adopted, one biological, and I have pretty much given up all hobbies and other interests as a result. Now that they're just over 2 and one years old, at least I've been able to go back to getting a full night's sleep." Got a note from **Kris Simonson** last summer saying she was spending the summer preparing to compete on the first U.S. National Canoe Polo Team. "I'll be competing in Belgium, France and Portugal in September, 1998. After that I'm planning to marry my soul mate and paddling partner of 4 years, Stew Roberts." Kris, hope it's all gone very well - good luck from the Geo Dept on both adventures! **Sean McKenna** writes, "We had a great, 4-week trip to Asia in October. We visited the kids' birth countries (S. Korea and Nepal) and then lay on the beach for a few days in Thailand. I'm continuing to work in the Geohydrology Department at Sandia. This past year I was able to begin some interesting, and fun, collaborative work with researchers in the Swedish nuclear waste program." **Stu Grubb** switched jobs a year ago and has been really enjoying the new job and the short commute. He also does not have to travel as much as for the last job, which is a welcome change. **Susan** has switched jobs and is working part time for Industrial Hygiene Services Corporation as an environmental consultant/geologist. "I switched to part time to accommodate the educational needs of our 4-year old son Micah, who has been diagnosed with autism. I spend about 20 or 30 hours a week chauffeuring him to doctor appointments and speech therapy and about 20 to 30 hours per week on my consulting job. I'm also the assistant coach for our 7-year old daughter Muriel's T-ball team. My little spare time is spent on organic gardening, reading everything I can get my hands on relating to neurology, neuropsychology and autism, political lobbying on behalf of funding for autism research, working

out, and knitting (not necessarily in that order). We are currently looking for advice on how to get the skunk that has taken up residence under the chicken coop to find other lodgings. We are still raising exotic chickens (the current count is 12 hens and one very happy rooster, but we will be getting another 6 hens next week and we have one hen incubating a batch as I type this). So...free omelets for visitors. We're planning a trip to Iceland in late summer to celebrate our 10th anniversary. It's hard to believe it's been that long."



**Emily Adams Pugh** and **Graham** and kids are moving to Brussels, Belgium, in September where **Graham** will begin a new assignment with Intel. Intel is picking up the tab for a house, car, language training and private schooling for the kids, so wow! Emily says, "we are very excited, of course, although I am also sad about having to take a break from my studies, which I love so much. Tell everyone to come see us in Europe!" This past year Emily was a part time teacher's aide in the school where her son, **Alan**, was in the first grade.

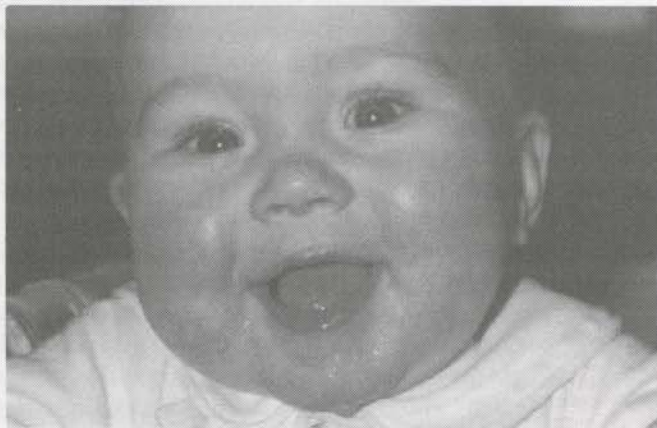
**1987.** **Kristin Hazard** sends the announcement that "I got engaged to **Don Hamilton**, a reporter for The Oregonian newspaper. We'll be tying the knot next spring, after I get settled into my new firm, where I practicing commercial litigation." Congratulations and best wishes on your engagement, **Kristin**! **Chris Carlson** writes, "The larger things in life seem to be basically in a holding pattern for me. I am still working in excess of full-time on a proposed underground zinc-copper mine in the northeastern part of Wisconsin. After over four years of effort, we are still in the information verification/analysis stage with the goal of producing a draft environmental impact statement. As it stands right now, the draft EIS may be ready early next year, which puts the permit decisions in

mid 2002. Sometimes it seems as if you have to run at full speed just to stay in the same place. Fortunately, I am continuing to learn a lot, which makes it worthwhile. In addition, I am still struggling to complete my dissertation on the hydrology/geochemistry of septic systems in the Indiana Dunes. With any luck, that will be done by the end of next academic year."

**1988.** **Binks Colby-George** announces a new arrival - Noah Colby-George born July 8, 1998. "He is a completely functional Mark I baby unit with a full complement of fingers and toes. Good lungs too. I got a chance to show him to Sharon Stern when we were in Madison last week. Judy and I bought a house last year, so it looks like we will stay in Maine for good. We acquired a dog shortly after buying the house to complete our responsibility ladder. We traveled last year in western Turkey - our last big fling pre-children. I am still working as a hydrogeologist for ABB Environmental Services, although we are now known as Harding Lawson Associates after a recent buyout. Most of my work has involved modeling and sampling groundwater on the Cape Cod sandbox." I talked with **Carolyn Carr** recently, and she's gotten a new part time job she calls "maintenance queen of 27,000 trees" with the Ecological Restoration Project in St. Paul to do while she works on finishing her master's thesis. She coordinates volunteers who are replanting forest along the big river.

**1989.** **Kim Felknor-Edwards**, wife of **Ben Edwards**, is an adjunct instructor at Grand Valley State University where Ben is also teaching. She writes that she's grading for the Geology Department and looking forward to building a database for the rock and mineral collection. That's a major job, Kim, good luck on it! She added "We are also trying our hand at home ownership after years of renting." **Ben**, meanwhile, e-mailed that "I'm just finishing my first year at Grand Valley State University - I taught Geochemistry and intro labs in the fall and Environmental Geology and Ig/Met Petrology this past winter. I took the petrology class to the St. Francois Mts. last weekend and had lots of flashbacks to the Carleton dept. fieldtrip I went on in spring 1988 to the same place. I'm hoping the next year will slow down a bit so I don't miss out on so much of Kaelan's and Teagan's growing up. They both love dinosaurs, and Teagan thinks all mountains are volcanoes - although we definitely aren't pushing them to be geologists!" Congratulations and best wishes to another pair of newlyweds, **Kim Hannula** and **Jay Swan**, who married in May in Vermont. Kim reports, "We had a very small outdoor ceremony (no rain, no bugs) and a bunch of

the guests hiked up Camel's Hump, a 4000 ft mountain with a small alpine zone and lots of cool greenschist facies schists, the next day. It was very laid back- rather than running around stressed out the morning before the ceremony, I went to the Ben & Jerry's factory with a bunch of friends." Kim, you'll be interested to know that your old notes from the Lyman Lakes project were exhumed and put to good use this year. We had two classes - Hydrology and Advanced Geomorph - which both were doing projects on Spring Creek this spring. Remember all those times when you went out in the rain to measure the depth of the water going over the dams? How could you forget! Got a nice note from **Holly Ewing** saying among other things, "I am still in grad school though I do hope to be done by fall of 2000 (gradual school as Ann calls it). Other than that I am gardening (early again this year), doing t'ai chi, and trying to find ways to get enough sleep and still have time for fun." **Sue Savanick** has started a new job at the MN Office of Environmental Assistance. "I also began a Ph.D. program in conservation biology and was elected to the Dakota County Soil and Water Conservation District Board. Needless to say" she says, "I never get bored!" **Sarah Gramlich Howard** sent a note recently saying she was expecting a baby soon - good luck with your delivery, Sarah! **Hilary Ward's** house was broken into and burgled last year, but the thief was caught and the restitution paid for a paint job. Hilary has been taking courses in meteorology from Indiana University's nontraditional student program while she focuses on being a mom to Karina and Benjamin. **Sonja Wolter** has been teaching earth science up at Plymouth Junior High on the northwest side of Minneapolis; once in a while she even shows up in Northfield to give us trouble. **Rowland Cromwell** returned to school and in the MBA program at the University



Georgina Cromwell

of Washington. He writes, "I left Golder Associates in September, 1998 and although I don't know exactly where I'll end up, I do know I won't be working as a geophysicist anymore. The life of environmental and geotechnical consulting finally got to me and it's time to try something else. I'm really enjoying the MBA program and will be working with Weyerhaeuser during my summer break. My wife, Krista, gave birth to Georgina Cromwell on July 22, 1998. This is our first and she is loads of fun (most of the time)."

**1990.** **Andy Garrett** is plugging through his medical internship at the Children's Hospital of Philadelphia (has the somewhat macabre acronym of "CHOP") and reports he is "getting used to Philly and learning how to live on much less sleep as my internship winds down." He will finish in two years. Hi and thanks for your address update to **Betsy Hunt**. **Rebecca Arenson** is in the graduate program at William and Mary, "spending a lot of time doing field work in forested wetlands. I'm enjoying a spectacular cool, flower-filled spring including the local daffodil festival, and putting in a garden." A note from **Sharon Stern** has bought a house! "Nothing like signing a document that says my last payment will be due on May 1, 2029." She moved to Madison in August, started a good job as an Assistant to the Dean (one of about 7 with that title) in the UW-Madison School of Pharmacy in September, finished her Ph.D. at Univ. of Kansas in December, and bought the house in May. **Drew Cromwell** says he's still flying search and rescue helicopter missions in southern California. He adds, "Kate Moodie '89 and I are expecting our first child in October!" Good luck with the birth! When **Sean McCauley** wrote last summer, he had just finished his Ph.D. at Berkeley and was working on an atmospheric chemistry project studying methyl bromide, an ozone depleting compound.

**1991.** **Catherine Inman** has founded a nonprofit for education and cultural preservation, working with people of Tibetan background in Dolpa, in Nepal's northwestern mountains. "Most of the year I'm in villages there, helping to organize school projects and other community work. Seasonally, I'm coordinating for a National Parks technical assistance project also in Dolpa, called Partnership for Biodiversity, through USDOL. This spring, I'll have Nepalese guests on an educational exchange tour of parks and schools in the USA. I might move back to the States more permanently in 2000. If any Carls get to Nepal, give me a ring in Kathmandu at 424304." We received a beautiful newsletter from the "Friends Of Dolpa," the organization that Catherine founded, explaining all the work the

group is doing. **Becky Lang** and **Alistair** are moving to Missoula, Montana, this summer, where a number of other Carleton geology folks already live. (Becky, if you want a list of names and phone numbers, let me know- Tim) She writes, "We're anxious for the fly fishing, hiking and mountain biking opportunities we'll have so close to home. And - very cool geology!! Come see us!" **Geoff Puckett** married **Holly Anderson** in July of 1997. They honeymooned in Glacier National Park, and Banff and Jasper in Canada, then bought a house last year. His work is as a consultant with Oracle DBA Vista Consulting Group in Minneapolis; Geoff says he's working nights and attending church at Abundant Life Church. We hear through the grapevine that **Pete Reiners** has accepted a tenure track position at Washington State - is that right, Pete? Congratulations to **Butch Dooley** on successfully completing your Ph.D.! Butch defended last September and graduated in December. Butch got to teach an advanced (read noncompulsory) section of earth science which was notable for the class's enthusiasm and one of the highlights of the year; **Brett** taught third grade in the same school.

**1992.** **Patricia Weston** is back in the Seattle area - Redmond to be exact - teaching at the Overlake School, a private day school for junior and senior high school kids. She's completed her MS and is playing in a bluegrass band and singing in a choir. Patty, are you the flautist in the bluegrass group or have you taken up another instrument? **Christina Vosen Ostendorf** is spending some of her free time teaching swimming at one-room rural schools. She says, "I was just 'elected' to our local rural school district with two schools and a total of seven students." In other news, Christina is playing clarinet in the community orchestra and hoping for some rain this summer. "I've been learning about the variability of semi-arid climates first hand" in the ranching business. **Nick Dewey** writes he's having "A good time substitute teaching after a rough first teaching job a few years ago. Now I'm looking forward to graduate school. I'll be entering a master's program at Humboldt State in Arcata, California, in the fall."

**1993.** **Ben Surpless** defended his thesis at Stanford and taught structural geology at Colorado College with **Chris Smith Siddoway '84** this past year. Ben's plans for this next year include marriage to **Kathy Degraff** on July 24 and then teaching physics, math or earth science next year at a San Francisco high school. Good luck on your new endeavors, Ben!

**1994.** **Liz Symchych King** is starting to see a glimmer of light at the end of the Ph.D. tunnel. "I

passed all my prelims so it is just the thesis now!" She added "I'm on my way out to Utah and Nevada to get me some Great Basin granites." **Julia Daly**, listing her profession as "Slave to Salt-Marsh Foraminifera," threw a bottle in the ocean with this message in it: "It's spring in Maine and the frisbees are flying! Have also been running lots when I can escape the lab. Got funding for field-work; I'm headed for a month in Newfoundland this summer, and I CAN'T WAIT! Am also lucky enough to have found some people to play music with. We're not as good as the Dacie's group - yet." Well, another week or two and you can probably catch up, Julia! **Miranda Lescaze** has just finished her MS in Water Resources and is "living in a cabin in the woods with my sweetie Padraic and dog Millie, and realizing how great a place Carleton was/is...." **Arom Clymer** and his wife, Lauri and their two pets, Winslow and Bently moved out to the Bay Area in January. Aron says, "We are thoroughly enjoying all of the mountains, lakes, beaches and camping. Thanks God for geology!" Hey Aron, that's a catchy phrase. Maybe we should adopt it as the departmental motto? **Naomi Lubick** wrote that she's finished her first year in the science journalism program at Columbia and was about to embark on thesis work, which entails a few weeks in the field in upstate New York. **Starr Johnson** has "FINALLY received my Geologist In Training certification from the State of Idaho!! I had to give up over a year of my life to studying, but it's over... for a few years, until I go for my Professional Geologist certificate!" Good work Starr. Idaho must be too beautiful a state to leave, so keep up the good work.

**1995.** **Bryn Perkins** and **Liz Butler** have been trekking around the USA this summer and are headed to Portland in the fall, but they can be reached through Bryn's Carleton e-mail account. "E-mail us and maybe we'll drop by!" When Bryn cleaned out his closet this spring he liberated a couple of classic geo t-shirts for us which have been recycled to other students via Betty's weekly prize in the Mudd Slinger. Thanks Bryn - rest assured they have been put to good use! **Ian Wallace** and **Mike Ramage** bought a house together in Somerville, MA (near Boston) this year, and **Frankie Ridolfi** is living there with them right now. Also, **Kate Jesdale** lives around the corner. Ian says, "we've been having a great time fixing the house up and renovating. Otherwise things have been pretty low key. Hoping to return to school one of these days... for what I'm not sure, but I find myself thinking about it a lot." Frankie and Mike both work at the same company, VIS Corporation. Last fall Frankie was working for NASA doing a

web site for the Leonids Meteor Shower; he wrote, "I'm on the media/outreach team for a NASA Astrobiology mission to fly research aircraft filled with instruments and intensified cameras to observe the event. My big task for the past week and a half has been to build a web site for the mission ([www.leonids.arc.nasa.gov](http://www.leonids.arc.nasa.gov)). When you start an adventure, you never know where it will take you. On Friday morning I fly to Okinawa, Japan with the mission. I'll be updating the web site with clips of meteor footage when the planes touch down. My Dad teased me about the trip, 'Japan? That's great news! You'll be sleeping in a bed again!'" **Steve Surbaugh** writes that "Kate and I have traded dogsleds and canoes for computers. Not sure if the trade is permanent, but we are having fun for now." **Tony Moore** recently signed on with Target stores as a business analyst, and he says, "I am busy learning all the pleasures of working in downtown Minneapolis. Life is great and all is well. Hope everyone else is doing well." **Cindy Alm** and **Ofori Pearson** write of a year that "has been a fun and busy one. Ofori is continuing his Ph.D. studies at the U of Arizona and Cindy continues to teach sixth grade in a small town southeast of Tucson. 1998 brought one big change into our lives: we are now proud mortgage owners!! We've been hard at work trying to make a desert garden in our rocky backyard. Our door is always open to guests!" **Trish Gillespie** was planning her marriage to Dan Turner '95 in June when she wrote. Dan is a geologist with an environmental consulting firm named EMCON and will be starting a masters program in hydrology this fall at Princeton. Trish is in her third year of teaching bilingual special ed in the public school system. Best wishes on your marriage, Trish! This spring **Jay Stetzel** wrote that he was finishing one year now at the Hulbert Outdoor Center in Fairlee, VT teaching outdoor/experiential education to mostly middle school age children. "This summer I am working for America's Adventure leading wilderness trips in Hawaii which include sea kayaking, sailing, backpacking, and mountain biking. In the fall I plan to be in Colorado somewhere in the Denver/Boulder area." **Rowan Littell** stopped by during reunion. He finished his degree in water resources management last year and is now a computer administrator and programmer. "I guess that means I can pour water on my computers. I'm still in Madison for the time being, until Jenizie finishes her degree in math and finds a teaching job."

**1996.** Hi to **Karissa Baker** and thanks for your address update - Tim. From **Gina Michl**: "I've been working at a chocolate store (yum!) and helping with paleoclimate research in Boulder, CO, and just

## Alum News

spent a couple of months in Tucson with National Forest archaeologists. I'll start a masters program in geology at Vanderbilt in the fall. This summer I'm excited about starting geoarchaeological fieldwork in Cyprus and Greece with my advisors-to-be!" Good luck with your new program, Gina. **Justin Clarke** is enjoying his work on his masters in planning at the University of Virginia. He says, "Planning is a field with many applications in the 'real' world. My fellow students are great and have an incredible diversity of backgrounds." Justin likes that spring has brought out the dogwoods, redbuds and tulips in Virginia, and we would second that. **Sara Gran** plans to finish up her masters at the U of Vermont this fall. "It's been a fun year here with **Anders Noren** and **Josh Galster** also in the department." After finishing Sara is looking forward to some time in New Mexico with Dave Mitchell. She says, "Hey, are any of the Coldigioco '95 (RULZ) crowd interested in a Y2K reunion?" **Kevin Theissen** writes that he's "back in school doing research on paleoclimate records from Lake Titicaca in Bolivia. I recently went off on a research cruise to the Ross Sea of Antarctica as well. There are an amazing number of Carleton alums in geology and other grad studies here at Stanford!" **Andrea Stein** taught her second year of high school general science classes at Garden Grove High School in Cypress, CA, this year and she's been working on finishing up some graduate courses for her teaching credentials. After a brief spat in the consulting world which included working on a drilling crew with Anders (Noren). **Karen Bobbitt Gran** is back in school again trying to finish up a Master's at the U of M this fall. "Between now and then I'll be moving back to Northfield. Rik (did I mention I got married?) got a job teaching at Carleton, and it looks like I'm going to be Tim for a month or two. In January, I'm off to Seattle to start work on a Ph.D. at the Univ. of Washington. Come and visit!" Tim is going on a short term leave this fall to visit the Italy program and some other places, and Karen will be filling in for him. Last September Karen gave the Geomorphology class a briefing on her work on a flume at the St. Anthony Falls Hydraulic Lab at the University of Minnesota. Thanks, Karen!

**1997.** **Erica Oesting** is embarking on "a year long extended travel to Southeast Asia. I hope to 'find myself' and return with a graduate studies program in mind." Hope it works, Erica- good luck and have a great trek! **Kim Knight** sent a note this spring saying she was headed to Denmark in April to work with the Danish Lithosphere Center - Kim, I hope it's working out to be very successful and interesting! A note from **Karen Purdy**, Vice President of Jondd

Mountaineering in Santa Barbara, CA, says simply, "Work, work, and more work!" Hope there's some sort of gratification in it for you, Karen! **Geoff Ruth** stopped in Northfield on his way across the country hopping freights. He was having a good trip and it was great to see him! He wrote a note, saying "After a hectic and somewhat traumatic year teaching, I'm now working on a small environmental education farm near San Francisco. I take care of animals, fix broken pipes, wire electricity, split wood and do other physical world sorts of things. Although I love living out at the ranch and doing concrete things, I also miss teaching; I hope to return to teaching permanently in the next year or two." From Northfield Geoff headed out to Chicago.



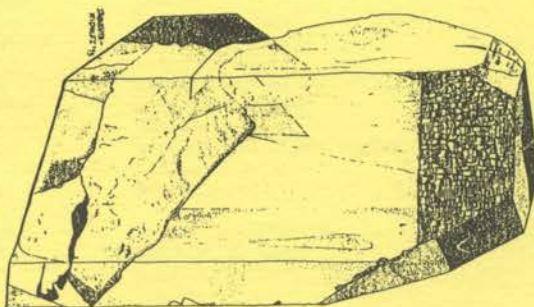
*Geoff boards a train in the yard in Northfield.*

**1998.** We still see **Todd Fleming** around campus from time to time, since he has been working for the college. "My search for a great post-Carleton job led me across the street to the Admissions office, where I not only get to travel around the country and meet alumni and see old friends, but I also get to recruit new students for the geo department. Plus, I've yet to tire of explaining how I went from being a geo

major to an admissions counselor!" Being a true Minnesotan and avoiding even a whiff of brash hyperbole, **Brian Klawiter** writes, "I'm pretty excited to have been accepted as a seasonal archaeologist for the Forest Service. I'll be getting paid to spend my summer paddling around the BWCAW looking for archaeological sites. Does that not sound like a dream job, or what? This is in addition to my fieldwork that I'll be doing for my archaeological geology thesis project, so I'll be kinda busy." Not half bad, Brian. **Anders Nilsson** is a GIS programmer at the National Operational Hydrologic Remote Sensing Center south of Minneapolis. He says he will be working on a project developing a physical snow model for the lower 48 states of the U.S. From **Aron McDaniel**, "I'm working as an Internet/Intranet developer, climbing now and then with Dave Bitner and thinking of going to grad school in sunny California!" Hi to **Alex Hildebrand** and thanks for your address update... **Pete Moore** reports no job worth mentioning, but he sends a list of other items: "-Going to begin masters degree in glaciology with Neal Iverson at Iowa State University this fall; -Will probably be field assistant for Adam Maloof's snowball-earth research in Svalbard this summer; -Considering a new pair of Carhartts soon." Careful Pete, don't rush into anything. **Adam Maloof** says "things are awesome here. We're preparing for the field season in northeast Spitsbergen. Investigating the snowball earth hypothesis and neoproterozoic tectonics." **Kurt Steffen** reports things are going pretty well for him. "I will be attending the University of New Mexico starting this summer. It looks like my research interest will combine metamorphic petrology and structural geology/tectonics to look at shear zones in the Alps. In other exciting news I will be getting married on June 10th, 1999. **Dave Bitner** will be one of the best men. This year I have been working for an environmental firm (GME Consultants) here in the cities. In a strange twist of fate I returned to sample the stuff at the bottom of Lyman Lakes, in order to determine what they could do with it after they dredged it up. I guess they have already started that work? Standing on Lyman Lakes with a auger in my hand seemed like some very strange flashback to soils class." **Meg Anderson** has been out in California working for the USGS. She says, "With our last survey down there [to San Bernardino] we managed to solve a dispute about whether a well was in the wrong aquifer or not. It's amazing what you can tell from just the gravity and a little knowledge of the geology. Some people are now heading down to the area from the earthquakes team to do a seismic study based on our gravity map.

It should be interesting to see what they come up with, because we're not sure if this "water barrier" is a transverse fault or a normal fault. I'm going down to do a little more regional work, trying to solve some questions about the nature of the interaction between the San Bernardino basin (pull-apart basin) and the San Andreas, San Jacinto, and San Gabriel fault systems. The faults interact in a messy triple junction that is mostly covered by Quaternary sediment. Outside of work, I have been swing dancing, hiking, and rock climbing. I went down to Big Sur to go on a weekend backpacking trip, great drive down along the coast and then the topography in that area is amazing (Dave... the scenery reminded me so much of the mountains in Italy!)." Got a note last fall from **Miles Mercer** saying, "These days I'm living in Washington DC and working for the Senate Committee on Commerce, Science, and Transportation. I'm learning about Congress and am enjoying all of the free Washington museums and monuments during my time off. DC is a good place for me at this time in life, lots of excitement." **Carrie Elliott** and **Kati Szramek** stopped by in June to say hi and commiserate about the plight of geology department technical support staff. Carrie has spent the past year as the Tim of the Pomona Geology Department and we had lots of fun swapping tales of departmental politics straight out of Dilbert scripts. Carrie was good enough to write a note to you all, saying, "It was fun to be a part of a similar liberal arts college geology department from a very different perspective. Packing and driving and going on field trips was the best part of the job, spending time in some of sunny southern California's geologic sites. Next year I am moving to Logan, Utah, to begin a masters program in fluvial geomorphology at Utah State. Hope to also see some of the beautiful nearby places, although after a year of working 8-5 and going on field trips or camping weekends I've been spoiled and will have to get used to studying again!" Kati also wrote a note (thanks Kati!) although maybe I should have read it before she left so I could be sure I got it right, but I think it says "The year after graduation I was living large in Oregon. I spent time working at Hancock Field Station, taking classes at OSU and opening taxes for the hard working Oregonians. After taking my early retirement I will be heading out to the University of Michigan in Ann Arbor to study aqueous geochemistry. Anyone is welcome to stop by if Ann Arbor is on your list of cities to visit."

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