SMITH COLLEGE

Department of Geosciences

Newsletter

May 2012

Greetings from the Chair

Well another year is coming to an end and this year marks the end of my three-year term as Department Chair. Duties of the Chair will be taken over by John Brady who has generously agreed to serve for the next two years. It has been an eventful 3 years as we completed the search for Jack Loveless to replace Bob Burger and, after two years, finally completed our decennial review. As part of the review we had a visiting committee composed of Rich April from Colgate University, Peter Patton from Wesleyan and our own Carol deWet (class of 1982) from Franklin and Marshall. They came for a two-day visit this past semester and provided a lot of good ideas on how we might improve our curriculum.

Over the past year the student run geology club has become very active, holding weekly lunchtime get-togethers, movie nights and a wide variety of other events. The club has helped create an inclusive community of diverse students that, in my unbiased opinion, makes us one of the best departments on campus. I salute the Department Liaisons, as well as all of the seniors for helping to create this wonderful environment. I would also note that virtually all our students are actively pursuing some form of independent research as evidenced by the 7 senior honors theses that were done in the Department this year.

This spring marks the end of the Science Center Renovation project that has significantly improved our teaching and research facilities. We now have a microscope room in the area that was the geomorphology lab. The geomorphology lab has moved to the old geochemistry lab and it has been designed as a flexible space that can be used as a classroom for any of our courses. Adjacent to the geomorphology lab is the new Spatial Analysis Lab (SAL). This occupies some of the space that was the former general chemistry lab. The new SAL has a permanently installed geowall that allows for the projection of 3D imagery using a variety of software packages. Now you can see 3D images of air photo stereo pairs by simply putting on a pair of 3D glasses! The new Center for Aqueous Biogeochemistry Research (CABR) is now fully operational and includes a new teaching lab, instrument room and research lab. Marc Anderson, the new ITI for the Center is proving to be an excellent resource person who not only maintains the equipment but also instructs both students and faculty in its use and develops new analytical methods. The other major change associated with the renovation is the move of the "cave" (computer room) from SR126 to the old petrology lab. Although the new space did not get fully renovated, students have put it to good use and now enjoy a space with natural light so a new name would seem to be in order (grotto?).

Other news, congratulations are in order to Bosiljka as she was recently promoted to Full Professor. A well-deserved promotion!

Finally, we all look forward to seeing you and hope that you will visit us during reunion or any time that you are in the area. It's always good to catch up on what's new in your life. If you want to learn more about what is going on in the department, you can check out the web page at www.science.smith.edu/geosciences/.

Sincerely,
Bob Newton,
Chair, Department of Geosciences

The GEO-STARS and Schalk Funds – Great Ways to Support Geosciences at Smith College

GEO-STARS is an endowed Smith College fund that was initiated in 2009. The endowment yield from this fund is used to support a range of geo-activity extras that require funding beyond what our always tight departmental budget will allow.

A primary goal of the fund is to assist our students with travel and other expenses related to research, field courses, and attending professional conferences. The fund also can be used to support the Departmental Luncheon Seminar Series, enabling guest speakers, students, faculty, and alumnae to share their educational, research, and professional experiences, and can provide support for alumnae social gatherings at annual Geological Society of America (GSA) and American Geophysical Union (AGU) meetings.

Our goal for GEO-STARS is to secure sufficient funds for an endowment yield of $20,000 to $25,000 annually. We are not presently close to that goal, but the fund is growing, and that is encouraging! Gifts to GEO-STARS can be made through the Smith Alumnae Office by designating the GEO-STARS Fund (Smith Fund 544399) as the intended recipient of the gift, or by sending gifts directly to the Department of Geosciences designated for the GEO-STARS Fund. As in the past, gifts also can continue to go the Schalk Fund (Smith Fund 544847), established in memory of Professor Marshall Schalk – the yield from this fund is used primarily to support majors attending summer geology field camps.

Should you have questions or further ideas for the GEO-STARS and Schalk Funds, please contact the Department Chair. To help keep Smith Geosciences strong and moving forward, support GEO-STARS and the Schalk Fund! Thank you!

Faculty Updates

John Brady

This has been a moving year for me. My wife Nancy and I sold our house on Henshaw Avenue and moved on Halloween to a new home, still within walking distance of campus, on Hospital Hill above the Smith athletic fields. The new house is smaller, energy efficient, and LEED certified, with enough solar panels on the roof to produce all the electricity we use. It is decorated with some great rocks and currently comes with an evening serenade of spring peepers. The Experimental Petrology lab moved to a larger, first-floor space (SR-105) with windows and a hood opposite the X-ray lab. Dismantling and reinstalling all the equipment has been going on all year and there are still quite a few loads to move up from Burton B-02, which is now a rock storage room. The Mineralogy/Petrology lab has moved to a new joint Sed/Min/Pet space in Sabin-Reed 101 and 102 (formerly the Sed and Geomorph labs). SR-102 has perimeter tables with petrographic microscopes permanently in place. All the teaching materials, including all the minerals and rocks have also been moved. Surely I will one day know once again where to find things…. Finally, the old SEM moved to New Hampshire and a new FEI Quanta 450 Environmental SEM with an EDAX Team EDS system has replaced it. Dick Briggs, Judith Woperis, Mark Brandriss, and I have spent a lot of time this year making that change and are still learning about and developing procedures for the new, more versatile, more automated microscope.

John Brady in his new Experimental Petrology lab in Sabin-Reed 105.

On 20 May, I will travel to Greece with Scott Bradbury of the Classics Department and 10 students, including 4 Geosciences majors, for a 3-week-long Global Engagement Seminar, "From Labyrinth to Parthenon: Greek Myth and History in their Geological Context." This seminar will explore the relationship between the historical and cultural development of Ancient Greece and the underlying geology

of the Greek islands (Crete, Santorini, Syros, Delos) and mainland (Athens/Attica, Delphi). We will travel to all the places mentioned to view the evidence first hand. Student participants will stay on in Greece after the seminar for international Praxis internships.

Please plan to visit Northampton soon to see all the changes in the Geosciences Department space and so that we can see you!

John Brady's Petrology class. 1 April 2012. Marblehead Neck, MA. Left to Right. John Brady, Naomi Barshi, Lauren Magliozzi, Theo Sweezy, Paula Burgi, Caroline Hackett, Winter Schwaid-Lindner, Michelle Cortrite, Ngozika Onuzo.

Mark Brandriss

This has been another year full of rocks. John Brady and I attended a teaching conference in August 2011, which included a field trip to the little-known Sonju Lake Intrusion in northern Minnesota — "little known" mainly because it's 99.99% covered by thick forest and tangled underbrush. In other rock news, I'm now wrapping up a long project on the layered gabbros of the Cuillin Hills in Scotland, which may sound familiar to those of you who studied the same rocks in Petrology in 2002. My next big thing will be resumption of field work on plutons in southeastern Alaska and British Columbia. I'll spend a couple of weeks there this summer, trying to keep up with energetic young students in the Juneau Icefield Research Program as we ski across glaciers and climb rugged peaks. The landscape is well known to Juneau Icefield veterans Marian Kramer ('04), Marie McLane ('08) and Jenna Zechmann ('12).

I still live in Williamstown, where my wife, Rónadh Cox, teaches geology at Williams College. Our 12-year-old son Owen is growing up fast. His most prized possession is his catcher's mitt, and he's big and strong enough now to throw out runners trying to steal second base.

Bob Burger

This academic year has been wonderful, if a bit strange. As I officially retired on June 30, 2011, this is my first year of not being employed by Smith College after 45 years teaching at Smith. However, retirement is everything I hoped it would be – and more. The best part of retirement is that I am able to indulge my passions full time (gardening, grandchildren, model trains, reading – among many other), without feeling I am neglecting my academic responsibilities.

The Geosciences Department has been kind enough to provide me with a very nice office (Burton B14), which I am in the process of organizing and plan to use more in the future than I have this past year. I've used this first year of retirement mainly to clean up lots of household chores that were postponed during the last few years. As my co-author of An Introduction to Applied Geophysics is anxious to begin a revised edition of this popular textbook, I foresee a pretty intensive use of my new office for the next couple of years.

Ann and I were fortunate to be able to travel for Smith this year on a cruise to the Lesser Antilles. I presented two lectures (*The Magic of Sand: From Ancient Environments to Forensic Analysis* and *Living on the Edge: The Geologic Setting of the Lesser Antilles*). Both lectures were well received – likely because the Lesser Antilles provides such a wonderful example of an arc/accretionary wedge system and because the sands on the islands vary so much in composition.

The major downside of retirement is that I miss the constant contact with all the wonderful geoscience majors and my superb geoscience colleagues. What I do not miss, however, is grading! My best wishes to you all.

Al Curran

I continue to enjoy retirement and many of my activities this past year were geo-travel related. I am actively pursing my research and publishing interests and projects on trace fossils, Bahamian geology, sea-level change, and the geology of fossil and modern coral reefs, with emphasis on all-carbonate areas. The culmination of much work on late Pleisto-

cene sea-level change as revealed by Bahamian fossil coral reefs came last fall with publication of a paper in Nature Geoscience on new dates and interpretation from the fossil reefs on Great Inagua and San Salvador with Bill Thompson (WHOI), Mark Wilson (College of Wooster), and Brian White (Smith).

My big geo-related international trip this past year was back to Spain for another ichnofabrics workshop meeting, this time to the beautiful Asturias region of northern Spain. We were located on the coast of the Bay of Biscay, and the scenery and Jurassic strata there are absolutely superb. In October, I attended the annual GSA meeting in Minneapolis, and it was great to visit there with many Smith geo alums, all doing well. It is really a super time to be a geologist, with so many of our planet's geo-environmental problems requiring creative thought, hard work, and real solutions.

Al Curran on San Salvador, Bahamas - January 2012:
"Nothing could be better than a snorkel dive in Fernandez Bay!"

Jane and I spent nine weeks this past winter in the Bahamas and Florida. I helped Bosiljka Glumac again this year with our Geology 270j class on San Salvador. The course had a full enrollment, and all did a really great job with the class. Bosiljka and I have several Bahamas projects with students and other colleagues in various stages of development. After the course, Jane and I stayed on San Sal for another week, and we then went to Little Exuma to work on a project there with colleagues. When we arrived in Florida, we were in real need of R&R time, and we spent a month in Crescent Beach, just south of St. Augustine – most enjoyable!

I'm still very much involved with the Coral Reef Ed-Ventures program in Belize. This year the project is transitioning to new leadership by Professors David Smith and Denise Lello. I will be in San Pedro in June to help with the transition. We have a great Coral Ed Team-2012 lined up, and this will mark our 13th summer for the program. I'm also serving on the Trustee Board of the Paleontological Research Institution and Museum of the Earth in Ithaca, NY. If you are ever in Ithaca, make it a point to visit the Museum – it is a truly wonderful and inspiring place. I continue to enjoy tennis, outdoor activities, and visits to Wellfleet, on Cape Cod. Our two grandkids on the Cape and three on the west coast keep us running!

To all geo alums, when you make a visit to the Smith campus, do drop by the Geo Department. I'm in Burton B-11, and I will be very glad to see you.

Bosiljka Glumac

In 2011/12 I returned to my "normal" schedule after a year long sabbatical. In the Fall I submitted the materials for promotion to Full Professor, and I am glad to say it will become official on July 1. Besides teaching (Sedimentary Geology, Tectonics and Earth History, Archaeological Geology of Rock Art and Stone Artifacts), I kept busy with serving the College (as a member of the Library Committee, Library Master Plan Feasibility Committee, Archaeology Advising Committee) and the greater professional community (Co-Chair for the June 2012 Symposium on Geology of the Bahamas and Other Carbonate Regions on San Salvador; SEPM Vice-Chair for the May 2013 AAPG ACE in Pittsburgh, and Secretary/Treasurer of ES-SEPM). I also enjoyed participating in the year long Faculty Seminar on Teaching and Learning sponsored by the Sherrerd Center where I learned a lot about the pedagogical concept of Knowledge Building. I traveled to present my work, accompany students, host SEPM receptions, meet with colleagues, and especially to see our alumnae at GSA Meetings in Minneapolis MN, Hartford CT, and Asheville NC, and the AAPG Meeting in Long Beach CA. In January I also went to San Salvador to teach and direct our interterm course on Carbonate Systems and Coral Reefs of the Bahamas. My research this year mainly focused on various aspects of carbonate sedimentology of strata

from the Bahamas and Croatia. Besides all of this, I enjoy spending as much time as possible with my family. Alex (8) and Yelena (6) are now both at the Smith College Campus School. Alex loves to perform, play flute and various sports. Yelena is into ballet and gymnastics. Tony keeps very busy with providing computing support for the Sciences at Smith. He says hello to everyone. We like to hear from you, so please keep in touch and come to see us!

Bosiljka Glumac's 2012 Senior Seminar Tectonics and Earth History students on the last day of classes.

Jack Loveless

Hello Geosciences community! I am finishing my first year at Smith and am settling in thanks to a lot of support from colleagues and students in the department and across campus. I grew up in Northampton and am having a great time reacquainting myself with the area. My wife, Claire, and I have a year-old daughter, Simona, and it's been extremely nice to have grandparents in town to help with our transition!

I took over Bob Burger's courses, teaching Natural Disasters this past fall and Introduction to Geographic Information Systems and Structural Geology this spring. The occurrence of notable earthquakes in Japan and Virginia, Tropical Storm Irene in the northeast, and tornadoes in Massachusetts within the past year provided plenty of relevant information in Natural Disasters. About a third of the students in GIS are Environmental Science and Policy majors, and it's been great to get to know a bit more about that program through teaching. Structure is a very small class this semester — just 5 students — and I'm having a lot of fun integrating geologic maps, hand samples, computer programs, and field trips into the course.

My research interests are focused on using observations of recent deformation to constrain tectonic processes, primarily fault slip rates, then compare the modern deformation to that expressed in the geologic record. I served as the on campus adviser for Naomi Barshi's senior honors thesis stemming from her Keck field research last summer. She has been examining the kinematics of the Salerno Creek Deformation Zone, a Grenville shear zone in southern Ontario, and it's been great to learn more about very old deformation through her project.

I am excited to work with three SURF students this summer to get my active tectonics program spun up. We will be examining how variations in crustal strength affect our estimates of fault slip rates in southern California (funded by a grant from the Southern California Earthquake Center), how and why faults and fractures differ in northern vs. southern Chile, and how computer graphics cards can be used as a cost-effective means of speeding up our simulations of crustal deformation. I look forward to providing an update on this research and more in next year's newsletter!

Jack Loveless with his daughter Simona.

Bob Newton

Another academic year is coming to a close and my big news is that I will be on sabbatical next year. I look forward to having time to write up the results of 3 different projects that I have been working on. I also plan to spend some of my time visiting a number of different research watersheds around the country to get new ideas on monitoring and processing real-time hydrologic and geochemical data that I can use at Avery Brook. The Avery Brook project is expanding and we plan on adding spread spectrum radio telemetry to the gage station by the end of the year so that we

can directly connect to the site at any time through the internet.

This past year we continued monitoring beaver ponds and their inlet streams as well as the gage station. Tropical Storm Irene provided a unique opportunity to sample the effects of an extreme hydrologic event and we were able to collect hourly samples from just prior to the start of precipitation until the return to base flow conditions 42 hours later. Students working on the project included Katy Broadwater (Environmental Science and Policy), Lauren Magliozzi (Chemistry), Suzanna Michael (Chemistry), Ngozi Onuzo (Geosciences), Renee Ricci (Geosciences) and Julia Signell (STRIDE). Suzanna completed an Honors Project that examined the origin and chemical characteristics of Dissolved Organic Carbon (DOC). Lauren did a Special Studies on soil mercury, while Renee's Special Studies evaluated the hydrologic response of the stream to precipitation events. Ngozi and Katy both did Special Studies that continued the work on the chemistry of the beaver ponds and their associated inlet streams.

A new aspect of the study was a series of experiments that we did to evaluate the potential impact of invasive worms on the organic horizons of the Avery Brook soils. This work was done with Anna Martini at Amherst College and was incorporated as part of Suzanna's project. Basically we found that if worms get into these soils they will likely release tremendous amounts of DOC and mercury! The new Howard Hughs Medical Institute Grant, if funded, will include funds for a new mercury analyzer to be housed in the CABR that will allow us to expand this research.

This year we also continued to monitor sediment accumulation in Paradise Pond. Beth Gillespie (Environmental Science and Policy) did a survey of sediment accumulation and the impact of operating the gate at the base of the dam on sediment release. This summer the pond will be lowered to repair the dam and replace the dike on the side adjacent to the athletic fields. The pond is already full of sediment even though the last dredging was completed only 4 years ago.

Finally, I worked with Jenna Zechmann (Geosciences) who did an honors project involving the development of a glacial erosion model to simulate the evolution of glaciated valleys in the area of the Juneau Icefield. Jenna spent part of last summer with the Juneau Icefield Research Project.

This year the geomorphology course returned to Popham Beach in Maine for our weekend field trip. We were accompanied by Jon Caris from the Spatial Analysis Lab who brought the latest in kite-born aerial photography equipment that we used to capture images of the current beach morphology. The kite was equipped with a camera that wirelessly connected to an iPad so that you could see the photos as they were being taken. Traffic cones were set out on the beach and their positions were determined by GPS so that the images taken by the kite could be georeferenced and a composite mosaic image could be created using GIS. Popham Beach has continued to undergo dramatic changes as a result of channel migration of the Morse River and there is still a danger that the new bath house could be damaged or destroyed.

Bob Newton, Jon Caris and Marc Anderson testing kite photography on Campus.

Finally this year saw daughter, Molly, take a job as a residential director at Bard College at Simon's Rock while son, JT is finishing at Greenfield Community College after which he will move on to UMass where he plans to major in economics. Jill is taking time off from her job at Williston and we plan to do a number of projects together during my sabbatical. The dogs, Wendy and Lilly (aka. Spawn of Satan) are doing well although Lilly did have an episode involving a sock last summer (you will need to visit to get the full story).

I hope this newsletter finds you well and that you will stop and see us if you are in the area.

Sara Pruss

I am now in my fifth year in the Department of Geosciences. This year has been another exciting year, filled with exciting science and lots of fun. Professionally, I had a productive sabbatical semester in the Spring of 2011, during which I was able to publish a few projects on which I had collaborated with Smith Geo students (please see list of publications). Last summer, I returned to Newfoundland with Katie Castagno '12 and Monica Rolls '12, and we examined the Middle Cambrian March Point Formation and Cambro-Ordovician Cow Head Group. This marks the second trip to Newfoundland for Katie Castagno, who has now nearly completed her senior thesis work. At the Annual GSA meeting in Minneapolis this Fall, three of my students presented their work (Lilly Dalton '12, Katie Castagno '12, and Monica Rolls '12), and they were very well received. In fact, one student was offered a postdoc!

Evening hike on the Noonday Formation, watching the full moon rise. Outside Death Valley National Park, eastern California, January 2012. Sophie Westacott '13, Kaylyn Oates '12, Lilly Dalton '12, and Sara Pruss (left to right).

In January, Jack Loveless and I took 3 students to southern Nevada and eastern California (Lilly Dalton '12. Kaylyn Oates '12, and Sophie Westacott, '13), where we spent part of our time perusing the Early Triassic and then meeting up with Harvard undergraduates led by Professor Francis Macdonald to explore the Neoproterozoic. This was a fantastic field experience for all involved! Shortly after returning from this trip, I left for a week of the Bahamas J-term trip, making the switch from ancient to modern carbonates! In my research lab this year, the students mentioned above were joined by Wanda Feng (STRIDE student) and Kiara Gomez (recent recipient of the prestigious 2-year Mellon Mays Fellowship). Their work spans much of geologic time and ranges from geochemical to paleobiological; I feel so fortunate to continuously learn from their work. As the Class Advisor for 2012 graduating seniors, the first class I have advised at Smith, I feel such a mix of pride and sadness at their impending graduation. As consolation, this summer, I look forward to working with many of these graduating students on papers that will feature their work.

On a personal note, I continue to enjoy living in Easthampton with my husband, David DeSwert (who works in the finance office at Smith), and son, Ethan (2 years old). We enjoy gardening and working on our house. We are fortunate to see both sets of Ethan's grandparents regularly, in spite of long distances, and we look forward to a summer filled with visits from family and friends. I feel so lucky and grateful to have the work/life balance that my life at Smith permits.

Jurassic Aztec Sandstone, Valley of Fire State Park, southern Nevada, January 2012. Sara Pruss, Sophie Westacott '13, Kaylyn Oates '12, and Lilly Dalton '12 (left to right).

Amy Larson Rhodes

Hello everyone. This May-June, I will teaching for a second time one of Smith's new Global Engagement Seminars titled, "Costa Rica at a Cross Roads: Examination of Globalization and Sustainability." I am

co-teaching the course with Prof. Gary Lehring of the Government Department, and we have 9 students participating this year who come from a variety of majors, primarily outside of the sciences. The course examines how Costa Rica's biodiversity, climate, history and politics relate to its changing economies, resource use, conservation practices, and environmental protection. Following the 4-week seminar, the students will remain in Costa Rica through August working as interns for a variety of organizations related to the countries' sustainability initiatives.

Below are a few photos from last year's trip! While staying with the Zapatón indigenous community, we hiked through beautiful rain forest. We visited Volcan Poàs and Volcan Arenal, observed different farming practices—primarily organic, family farms—and we conducted a water quality investigation of the Rio Guacimal watershed in the Monteverde region of Costa Rica. This program in part funded by generous gifts from Smith College alumnae, and we look forward to an exciting and fun learning experience!

Students and professors in the Global Engagement Seminar "relax" on a suspension bridge in the rainforest in Zapatón, Costa Rica, Summer 2011.

Otherwise, I have been having a great sabbatical this year, continuing to pursue my research about nutrient cycling in soils located at the Ada and Archibald MacLeish Field Station, on Smith's property in Whatley, MA. The new Bechtel Environmental Classroom will be completed this year, and we are hopeful it will earn one of the few "Living Building Challenge" designations in the U.S., due to its energy performance, low water demand, and choice of building materials, some of which are locally derived. Over the past few summers, many geology majors have assisted with trail building on the property, and they are wonderful! Be sure to make MacLeish a destination during your next return to campus!

The Global Engagement Seminar class poses in front of Volcan Arenal, La Fortuna, Costa Rica. Summer 2011.

Student/Faculty Publications

(* denotes Smith student)

*Barshi, N., Markley, M., and Loveless, J.P., 2012, Conflicting kinematics of the Salerno Creek Deformation Zone, Grenville Province, Ontario, Geological Society of America Abstracts with Programs, Vol. 44, No. 2, p. 100.

Bosak, T., Lahr, D. J. G., Pruss, S. B., Madonald, F. A., Dalton, L.*, and Matys, E., 2011, Agglutinated tests in post-Sturtian cap carbonates of Namibia and Mongolia, Earth and Planetary Science Letters, v. 308, p. 29-40.

Bosak, T., Lahr, D. J. G., Pruss, S. B., Madonald, F. A., Gooday, A. J., Dalton, L.*, and Matys, E., 2012, Possible early foraminiferans in post-Sturtian cap carbonates, Geology, v. 40, 47-50.

*Brisson, S., and Glumac, B., 2012, Distinctive features of subaerial seeps in Holocene carbonate eolian strata from Cat Island, Bahamas: Northeastern Section, Geological Society of America Meeting Abstracts with Programs, v. 44(2).

Curran, H.A., *Schultz-Baer, M., *Durkin, K., and Glumac, B., *in press*, Recovery of carbonate sand beaches on San Salvador Island, Bahamas from damage by Hurricane Frances (2004), in Gamble, D.W., and Kindler, P., eds., Proceedings of the 15th Symposium on the Geology of the Bahamas and other Carbonate Regions.

Glumac, B., 2011, High-resolution stratigraphy and correlation of Cambrian strata using carbon isotopes: An example from the southern Appalachians, USA: Carbonates and Evaporites, v. 26, p. 287-297.

Glumac, B., Curran, H.A., *Weigner, M.M., *Motti, S.A., and Pruss, S.B., *in press*, Distribution of oolitic sediment along a beach-to-offshore transect, Pigeon Cay, Cat Island, Bahamas: New insights into modern ooid formation, in Gamble, D.W., and Kindler, P., eds., Proceedings of the 15th Symposium on the Geology of the Bahamas and other Carbonate Regions.

Glumac, B., Curran, H.A., *Motti, S.A., *Weigner, M.M., and Pruss, S.B., 2011, Polygonal sandcracks: Unique sedimentary desiccation structures in Bahamian ooid grainstone: Geology, v. 39, no. 7, p. 615-618.

Korbar, T., Glumac, B., Cvetko Tešović, B., and *Cadieux, S.B., 2012, Response of a carbonate platform to the Cenomanian-Turonian drowning and OAE2: A case study from the Adriatic platform (Dalmatia, Croatia): Journal of Sedimentary Research, v. 82, p. 163-176.

Lacković, D., Glumac, B., Asmerom, Y., and Stroj, A., 2011, Evolution of the Veternica cave (Medvednica Mountain, Croatia) drainage system: insights from the distribution and dating of cave deposits: Geologia Croatica, v. 64/3, p. 213-221.

Pruss, S. B., and Clemente, H.*, 2011, Assessing the role of skeletons in Early Paleozoic carbonate production: Insights from Cambro-Ordovician strata, western Newfoundland, in: Laflamme, M., Schiffbauer, J. D., and Dornbos, S. Q.,(eds.), Quantifying the evolution of early life: Numerical and technological approaches to the study of fossils and ancient ecosystems, Topics in Geobiology, Springer, p. 161-183.

Pruss, S. B., Clemente, H.*, and Laflamme, M., 2012, Early Cambrian archaeocyathan reefs of the Forteau Formation, southern Labrador, as a locus for skeletal carbonate production, Lethaia, DOI: 10.1111/j.1502-3931.2011.00299.x

Pruss, S. B., Stevenson, M.*, and Duffey, S.*, 2011, Drilling predation and taphonomy in modern mollusk death assemblages, San Salvador Island, Bahamas, Palaeogeography, Palaeoclimatology, Palaeoecology, vol. 311, no. 1, pp. 74-81.

*Seidman, L.E. and Burger, H.R., 2011, Origin of the Enigmatic Breccia and Folds in the Turners Falls Formation, Deerfield Basin, Western Massachusetts: Geological Society of America Abstracts with Programs, v. 43, no. 5, p. 98.

Student/Faculty Research

Barshi, Naomi (Jack Loveless): Kinematics of the Salerno Creek Deformation Zone, Grenville Province, Ontario (Keck Project, Honors Thesis)

Naomi Barshi '12 on a Keck Project in Ontario, Summer 2011.

Blanchett, Samantha (John Brady): Understanding Nuclean (Special Studies)

Brisson, Sarah (Bosiljka Glumac): Distinctive features of subaerial seeps in Holocene carbonate eolian strata from Cat Island, Bahamas (STRIDE)

Broadwater, Katherine (Robert Newton): Susceptibility of the Avery Brook Watershed to the Production of Methyl Mercury (Special Studies, Fall 2011)

Katy Broadwater '13 and Renee Ricci '13 collecting water samples from one of the beaver ponds in the upper part of Avery Brook.

Burgi, Paula and Brisson, Sarah (Bosiljka Glumac: Distribution and Origin of Caliche Crusts in Ancient Sand Dune Deposits on San Salvador, Bahamas: Implications for Understanding Variations in the Patterns of Sedimentation and Climate (Celebrating Collaborations Poster derived from GEO 270J coursework)

Carbone, Emily (Mark Brandriss): The Hrafnfjordur central volcano: Petrogenesis of lavas in the early stages of a rift zone (Keck Project, Honors Thesis)

Castagno, Katie (Sara Pruss): Field and geochemical analysis of the Cambro-Ordovician Cow Head Group, western Newfoundland (SURF student, Honors Thesis)

View of the Long Range Mountains, western Newfoundland, Cow Head Peninsula, June 2011. Monica Rolls '12 and Katie Castagno '12 (left to right).

Dalton, Lilly (Sara Pruss): Investigating the Ecology of Post-Sturtian (~716 Ma) Microfossil Assemblages in a Cap Carbonate, the Rasthof Formation, Northern Namibia (NSF-sponsored fellowship, Honors Thesis)

Durkin, Kate (John Brady): Experimental Calibration of Fe and Mg Partitioning between Garnet and Biotite samples at Elevated Pressures (Honors Thesis)

Dwyer, Camille and Schwaid-Lindner, Winter (H. Allen Curran and Bosiljka Glumac): Storm-deposited Boulder Ridges on San Salvador, Bahamas: Implications for Coastal Development (Celebrating Collaborations Poster derived from GEO 270J coursework)

Feng, Wanda (Sara Pruss): Drilling Predation of Mollusk Assemblages, Alligator Point, Cat Island, Bahamas (STRIDE)

Gillespie, Elizabeth (Robert Newton): Paradise Cost: Sedimentation and Dredging of Paradise Pond (Special Studies, Fall 2011)

Gomez, Kiara (Sara Pruss): Ooid Formation at Pigeon Creek Delta, San Salvador, Bahamas (Special Studies, Spring 2012)

Gomez, Kiara; Shaw, Taylore; and Wu, Susan (Sara Pruss): Naticid Predation on Mollusk Shells in Western San Salvador, Bahamas (Celebrating Collaborations Poster derived from GEO 270J coursework)

Hackett, Caroline; Robb, Katharine; and Margaret Snelgrove, Margaret (Paulette Peckol): Target Fish Abundance on Patch Reefs off San Salvador, Bahamas (Celebrating Collaborations Poster derived from GEO 270J coursework)

Magliozi, Lauren (Robert Newton): Impact of the Mt Tom Power Plant on Mercury Concentrations in the Avery Brook Watershed (Special Studies, Fall 2011)

McMahon, Shawn and Cortrite, Michelle (Paulette Peckol): Investigating Coral Reef State of Health off San Salvador Island, Bahamas (Celebrating Collaborations Poster derived from GEO 270J coursework)

Novak, Tia and Faria, Courtney (L. David Smith): Queen Conch (Strombus gigas) Shells Serve as Microhabitats in Seagrass Beds, Graham's Harbor, San

Salvador, Bahamas (Celebrating Collaborations Poster derived from GEO 270J coursework)

Oates, Kaylyn (Sara Pruss): Sedimentology, Paleobiology and Geochemistry of a Putative Cap Carbonate,the Virgin Springs Limestone, in Neoproterozoic successions of Death Valley, CA (Praxis student, Honors Thesis)

Oliverio, Angela and Stanek, Alyssa (H. Allen Curran, Susan Etheredge and Paulette Peckol): Coral Reef Ed-Ventures: An Environmental Education Program in San Pedro, Belize (Celebrating Collaborations Poster)

Onuzo, Ngozika (Robert Newton): Impacts of Biogeochemical Processes on the Chemistry of Avery Brook (Special Studies, Fall 2011)

Ricci, Renee (Robert Newton): The Hydrologic Response of Avery Brook to Precipitation Events (Special Studies, Fall 2011)

Renee Ricci '13 measuring stream discharge at Avery Brook using an Acoustic Doppler current meter.

Rolls, Monica (Sara Pruss): Sedimentology, ichnology, and soft-bodied preservation of the Series 3 Cambrian March Point and Petit Jardin formations, western Newfoundland (Special Studies, Fall 2011, Spring 2012)

Valentine, Kerry (Robert Newton): A Comparison of the Sierra Nevada and Appalachian Mountain Systems (Special Studies, Fall 2011)

Zechmann, Jenna (Robert Newton): Modeling erosional history of the Gilkey Glacier: glacial capture? (Hornors Thesis)

News from Kathy Richardson

Kathy Richardson, our long-time, hard-working and deeply devoted Departmental Administrative Assistant, took a medical leave in the Fall of 2011 and will not be returning to her position at Smith College. Kathy writes to our GEO community "You have meant so much to me. Thank you all so very much." and sends her love. We miss you Kathy! You are in our thoughts and prayers.

Technically Speaking

Mike Vollinger (Technical Services Specialist)

I am now in my second year as the technical assistant. Time flies when you are having fun and working with great people and students. The hardest part of the past year has been trying to remember where I have moved and stored various things during the renovation/construction project. I am looking forward to the upcoming year (summer 2012, hopefully), where the hallway display cases in both Burton and Sabin-Reed will get new light fixtures (LEDs) so the rock and mineral specimens can properly be seen. I still owe Tony Caldanaro many thanks for letting me pick his brain about various things and lending me assistance when I needed it.

Geology Club

Another friendship- and excitement-filled year has come to a close. Geology Club enjoyed movie nights and study breaks as we have in the past. This year, we added some activities to our repertoire.

We made cards for faculty and staff. We designed a new level of department gear in the form of pint-capacity glasses with a "Bring Your Own Brunton" logo inspired by Kaila Matatt '10 (drawn by Jake Pecht, Katie Castagno, and Naomi Barshi, all '12) to add to a 2011-2012 round of shirts (with design by Monica Rolls and Katie Castagno, both '12). We held a successful lunch-bag talk with Nanci Young, who drew from her vast archivist knowledge to share stories about the early days of our department when it was housed in College Hall and, later, Lilly Hall! We welcomed a new faculty member to our department in true Club style with several pranks, including weekly delivery of a geology pun written on a punch card. To finish up a wonderful year, we put on our second Geo Senior Banquet, complete with a skit about our esteemed faculty (written and played by the seniors) and fantastic prophecies about the seniors' future adventures. We look forward to more adventures next year!

GEO seniors in front of the Peabody Museum on Yale University campus during Spring 2012 Tectonics class trip.

Building Renovations

Renovations to Burton Hall and Sabin-Reed during the past year have greatly improved our teaching and lab spaces, as the Department of Geosciences expanded into rooms vacated when the Department of Chemistry moved to a different building. Among the big changes:

• The old aqueous geochemistry lab moved into a much bigger two-room lab complex down the hall, forming part of the marvelous new Center for Aqueous Biogeochemistry.
• The Geomorphology lab in Sabin-Reed moved down the hall to a freshly refurbished classroom, which also serves as our much-improved venue for departmental talks and events.
• A permanent optical microscopy lab, serving the lab needs of Mineralogy, Petrology, and Sedimentology, has replaced the old Geomorphology lab. Microscopes are mounted permanently on tables, always at the ready for eager users.

Students enjoying the new microscopy lab in Sabin Reed 102.

• The old Sedimentology lab in Sabin-Reed has been reconfigured as a multipurpose teaching space, with movable tables that can be rearranged to accommodate lectures, discussion groups, lab projects, and seminars.
• John Brady moved his experimental petrology lab from a cramped, dungeon-like space in the Burton basement to a spacious, sunlit lab on the first floor of Sabin-Reed. The day has come: Earth's interior can now be studied at the Earth's surface.

GEO computer lab moved from The Cave into the former Mineralogy Lab.

• The Spatial Analysis Laboratory moved from Bass Hall to the first floor of Sabin-Reed, right next to our classrooms.
• And finally, we bid fond farewell to the dark and tiny old Geo computing lab ("The Cave"), which has been replaced by a spacious computer lab and student gathering space in the former Mineralogy classroom. Though the old Cave was much beloved, the new lab is even better. A lot better. Come see for yourself!

News from the SAL
by Jon Caris

The Spatial Analysis Lab (SAL) is now neighbor to the Geosciences after setting up shop this past summer in Sabin-Reed Hall (Room 104). Although the SAL is a campus-wide resource under the Environmental Science and Policy Program, Geoscience students and faculty now enjoy greater access to Geographic Information Systems technology and resources, as well as wonderful local hospitality. Additional neighborhood amenities within walking distance include the GIS Specialist down the hall to the north, the SAL equipment room in Burton Hall 106 (storing GPS units, plotter, large format scanner, etc.), and Burton 107 that is becoming home to our numerous tinkering projects (see below).

New SAL in Sabin-Reed 104.

The SAL continues support for several Geoscience classes, primarily Natural Hazards - GEO105, Introduction to GIS - GEO150, Geomorphology - GEO251, and student support for Carbonate Systems and Coral Reefs of the Bahamas - GEO270J. Geoscience majors Naomi Barshi '12 and Camille Dwyer '14 carried on the fine tradition of working in the SAL as dependable and rugged lab assistants. Seniors Naomi Barshi, Kayln Oates, and Jenna Zechmann were frequent visitors finding plenty of GIS goodness in support of their research. Finally, the SAL is spearheading new data collection techniques by developing (a.k.a "tinkering") small format aerial imagery via kite, balloon, and quad-copter platforms. Our initial tests were conducted at Popham Beach Maine during the Geomorphology spring field trip. Can scientific inquiry be any more fun?

Geomorphology (GEO 251) at the Shortridge Coastal Research Center (Bates College), April 2012. Jon Caris and Wanda Feng '15 are holding the kite camera.

Aerial photography using the kite and camera at Popham Beach Maine during the Geomorphology spring field trip. The kite camera system reached altitudes near 400ft but with more line could go higher!

The First GeoCUR Undergraduate Research Mentor Award to John Brady

In celebration of the 25-year anniversary of the Geoscience Division of the Council on Undergraduate Research, the organization has established an annual award to highlight the importance of mentoring undergraduate research activities. The award will annually recognize an individual who serves as a role model for productive and transformative student-faculty mentoring relationships and for maintaining a sustained and innovative approach to the enterprise of undergraduate research. The first recipient of the GeoCUR Undergraduate Research mentor Award is our own John Brady. To view the award citation and more photos from the Award Ceremony at the 2011 Fall GSA Meeting in Minneapolis please visit: http://www.personal.psu.edu/uxg3/blogs/geocur/geocurresaward.html

GeoCUR Undergraduate Research Mentor Award Ceremony. GSA, Minneapolis, 10 October 2011. Left to Right. Monica Rolls '12, John Brady, Lilly Dalton '12, Donna Whitney '85, Naomi Barshi '12, Stephanie Moore '06, Samantha Blanchett '13, Susan Vincent AC'00.

2012 January Interterm Trip

GEO 270J Carbonate Systems and Coral Reefs of the Bahamas course met for 12 days on San Salvador Island in January of 2012. Bosiljka Glumac directed the course and Al Curran was the main course instructor. Sara Pruss and our BIO colleagues Paulette Peckol and L. David Smith visited us on San Salvador, gave guest lectures and helped advise student projects. Ann Pufall and Tony Caldanaro assisted with trip logistics. Eighteen students from across disciplines enjoyed their time in the field with financial support from the GEO Marshall Schalk Fund and other Smith College sources. Results of six collaborative research projects were presented at the Celebrating Collaborations Science Poster Session in April. Thank you all once again for making this extraordinary learning and research experience possible!

GEO 270J students with course instructors Al Curran and Bosiljka Glumac on San Salvador Bahamas, January 2012.

Geosciences Graduates
Class of 2012

Naomi Barshi
Emily Carbone
Katherine Castagno
Lilly Dalton
Kate Durkin
Sara Gonzalez
Shawn McMahon
Kaylyn Oates
Ngozika Onuzo
Jake Pecht
Monica Rolls
Jenna Zechmann

A special rock candy cake to celebrate our 2012 GEO graduates. Congratulations seniors!!!

Alumnae News

Judy Hamilton '61
I'm still doing some consulting in groundwater hydrology, along with substitute teaching in the Denver Public Schools. But it still leaves me lots of time for traveling - I was in Tahiti and New Zealand with my sisters in November, in Spain with friends in January, and in Florida visiting friends in March, along with usual trips around Colorado and to my cottage in SW Michigan.

Sally (Sarah Stanton) Hasted ('67)
I continue to teach in a very small school for troubled inner city children in Bridgeport CT. I teach as much environmental science as possible. Last year's kids adored receiving small specimens of geodes, tumble gemstones, fossils, etc. This year's are wary of receiving gifts, and don't like them. But I teach as much geology, soil science, and mineral/rock formation as possible.
Hope to get back to solid geology when I retire. Must keep teaching as long as my mother's around to be supported (104 years old and counting). When Jack and I are finally free to be ourselves, we will skip off like spring chickens for some rock-hunting and nature-loving, and I SWEAR I'll get back to working with rocks, fossils, wetland restoration and animal rescue, wild and domestic, for as much of my time as possible. Life is to be lived outdoors, or in a lab!! Cheers and love to all!

Pat (Casey) Trombly ('68)
Well, here's news from a couple of generations ago! I'm Pat (Casey) Trombly, Geoalum from Class of 1968. We were the end of the Marshall Schalk era and beginning of Bob Burger's career. I recently retired from the Massachusetts Dept. of Transportation, Highway Division. I directed environmental compliance and management for all roadway & bridge projects. Geology played a significant role, dealing with glacial soils, hydrology and the varying competence of New England rock. Currently consulting part time and catching up on travel.

Donna Whitney ('85)
I am still a professor at the University of Minnesota, but this year I am on sabbatical in at the Australian National University in Canberra. My husband is also on sabbatical at the ANU, and our daughter started high school this year in Canberra. It has been particularly nice to have this year in Australia because when I get back to MN I will be the new Head of the School of Earth Sciences (the first woman to head the geology department, or any department, in the history of the College of Science and Engineering at Minnesota). I hope I can stay active in research, as my students and I currently have very interesting projects in Turkey, France, Norway, Australia, and western North America.

Heather Clark ('94)
In March 2012 I defended my masters at UMass Amherst in igneous petrology/volcanology, and I drove through Illinois on my way to Boulder Colorado to live & work.

Maria Honeycutt '95
recently completed a one-year detail to the National Park Service in Washington, DC, providing technical assistance on coastal hazards and climate change for NPS' ocean, coastal, and Great Lakes units. Maria is now back working in the Coastal Geospatial Services Division within NOAA's Coastal Services Center, involved in interagency policy and technical assistance efforts surrounding hazards and climate-related extreme events.
On the personal front, Maria and her husband, Vince Legendre, welcome their first child - a daughter, Nicole - on April 3rd. She's in good company with other 1995 classmates: Tasha Wulff Proudfoot had a daughter earlier this year, and Eva Fung is expecting one later this spring. Could these be the first members of the Smith Geosciences Class of 2034?

Maria Honeycutt '95 with her daughter Nicole.
Congratulations Maria! Welcome Nicole!

Sarah Carmichael (‘98)
I received my PhD in Earth and Planetary Sciences from Johns Hopkins University in 2006, then spent a year as a postdoc at the Universityof New Hampshire doing deep sea research and exploration at hydrothermal vents on the East Pacific Rise.
I am currently an Assistant Professor at Appalachian State University in Boone, NC. My main research areas include carbonate geochemistry, the role of microbes in ore deposits, and cave biogeochemistry. I’m a Research Collaborator at the Smithsonian National Museum of Natural History and currently work on morphological and chemical biosignatures in ores.
I live on a little farm in the beautiful mountains of western NC with my husband, son, sheep, chickens, and cat.
Hope to see some Smith alumnae at the Goldschmidt conference in Montreal this summer!

Mary (Donovan) Brittain (‘99)
I’m still working as a Hydrogeologist at a consulting engineering firm (Fuss & O’Neill) in West Springfield, MA. Lately I’ve been doing a lot of wetland permitting work. My husband and I still have our farm in Lee, MA. Pretty soon we’ll be weaning the lambs and planting pumpkins. Last summer we took a vacation to Italy to visit relatives. During our trip, we had the opportunity to watch Stromboli erupt – that was pretty amazing!

Michelle Arsenault (AC ‘01)
I am teaching geology at Northern Virginia Community College. It’s more work than I ever imagined, but it’s also fun and rewarding. I haven’t been doing much geology in the last 5 years, so it’s been great to dust off that part of my brain and relearn all the geology I’ve forgotten. I have a couple of students who are interested in majoring in geology, so hopefully I can be of help in that endeavor. I also just started a brand new job for the US Department of Agriculture, which is located in DC. I am the advisory board specialist for the National Organic Program. The program is responsible for what can and cannot be called “certified organic”. It’s a great program, and I work with really smart, terrific people.

Sooz (DeYoung) Lundmark (‘01)
I am in my fifth year living in Salt Lake City, UT, working in environmental consulting (for URS) as a geologist. I love the work and the office, and the people I work with, which is great. Incidentally, I work with Katie (Dick) Crane ‘07, who is now working part-time while she earns her MPH from the University of Utah. My husband, Kevin, is a hydrologist for another consulting firm, and he and I are also very busy chasing our son, Peter Davison Lundmark, as he is a very busy 1.5-year old!


Sooz (DeYoung) Lundmark (‘01) with her son at an Easter Egg hunt this year.

Malkah (Spivak-Birndorf) Bird (’01)
We are all good here in Ohio. I am teaching at the Ohio School for the Deaf and my husband Broxton is finishing up his post-doc at the Byrd Polar Research Center at OSU. We are 3 weeks away from having our 2nd baby...pretty exciting! And Broxton has just accepted a tenure track postion at Indiana University Purdue University Indianapolis (IUPUI). (written on April 2, 2012).

Lisa Berrios (AC ‘02)
After working 7 years as Environmental Director with United South and Eastern Tribes, an intertribal consortia, I recently started work with the EPA as Tribal Relations Coordinator. In this position, I liaison between the Agency and 6 federally-recognized Tribes in the southeast, working on their behalf to ensure Tribal interests are considered in EPA actions and deci-

sions. As for the family, after completing my MS at Vanderbilt, we settled in Nashville and enjoy trying our hand at farming (Christmas trees and chickens!). Mason is now a Jr. at the University of TN Knoxville majoring in Chemistry, and Jordan is 13 and entering high school this fall. Hard to believe my first day at Smith was her 1st birthday!

Julie Herrick ('02)

Last April, I graduated from Michigan Tech University with a master's in Geology and moved from Houghton, MI to Washington, DC. Since then, I've been working with the Global Volcanism Program at the Smithsonian Institution (www.volcano.si.edu/). This is a fun place to work! I'm a contributing writer for the monthly bulletins that focus on volcanic activity worldwide. This is a wonderful way to keep up my Spanish skills and stay connected with my Latin American colleagues who contributed so much to my master's research. My work also includes rock collection accessions and has provided a unique opportunity to pour over the handwriting of Walter Alvarez, A. F. Buddington, J. P. Lockwood, and others. Monumental dissertation collections have been handed down from Princeton University; these samples, maps, and fieldnotes need to be cataloged and organized – quite a feat! But this is rewarding work that will ultimately make available samples and data from classic geological studies. The collections work and writing will keep me busy for a while, I just worry I'm forgetting how to walk on shelly pahoehoe and a`a clinker!

Julie Herrick ('02) presenting her Master's research that focused on debris avalanche deposits from Volcan Baru, Panama.

Silvia Newell ('04)

I finished my PhD at Princeton, and I am now doing a postdoc at Boston University. I study nitrogen in the ocean, especially in hypoxic areas like the Gulf of Mexico. I'm enjoying living in Boston and would love to connect with other Geo Smithies in the area. I love cooking and I belong to three CSAs (fish, meat and veggies)!

Anna Dustira ('04)

After graduating from Smith, I spent some years in Germany; I studied Marine Geosciences in Bremen at the master level, worked part-time as a technical translator, and after getting a MSc eventually landed a job at a basin modeling software company near Cologne. This was well and good, but the mountains were calling! I dropped everything and moved to Tromso, Norway, where I am now in my last year of a PhD fellowship. Tromso is a great place to live - for being so far geographically north, its a very mild climate (though loving snow-sports is a must!), and the midnight sun in the summer months is a nice bonus. Fieldwork for my research is on Svalbard, in the Arctic, and is focused on sedimentology and geochemistry of Late Permian marine sediments; part of what I am researching is the onset of ocean anoxia around the Permian-Triassic extinction. I´ll send another update once I finish my dissertation! :)

Marian Kramer ('04)

In 2009 I got my MS in Limnology (lakes) and Paleoclimate from the University of Minnesota Water Resources Science program. The program is interdepartmental, located on two campuses (Duluth and the Twin Cities). I actually worked with Dr. Erik Brown at the Large Lakes Observatory in Duluth, right on the shores of the greatest lake, Lake Superior (in my humble opinion!). My research was with the USGS in Colorado on water availability and climate on the Colorado Plateau since the end of the last ice age. It was an interesting project and a good experience that re-affirmed my decision to pursue my career in industry.

Right after I finished my MS I started working for Chevron in Bakersfield, CA as a Petroleum Geologist. The jump from lakes and water resources to oil wasn't as much of a stretch as I initially thought because many large lakes become involved in the hydrocarbon system, and because I had a great geology background from Smith. Chevron doesn't require a Petroleum Geology background to be considered for an internship or full-time position because new hires are enrolled in a five-year development program called Horizons. Horizons emphasizes mentoring, classes and hands-on work experience through having 3 different

jobs in the company in 5 years. I just moved to my 2nd position on the Kern River Asset Development Team and I am having a great time. As a part of my job I get to plan and drill a lot of wells, including horizontal wells, and be involved in several unique projects. I can assure you that I am never bored at work and there is always a lot to do. I am also the chair of the Chevron PRIDE employee network (affinity group) for LGBT employees and allies, as well as an active member of the Women's Network and a network for young employees. I am also involved in the AAPG Professional Women in the Earth Sciences Committee and I am running for a position on the AAPG House of Delegates. Fingers crossed! If you are interested in a career in the oil industry, or just have questions about it, please feel free to contact me at mekramer@gmail.com. I would also love to hear from other Smith Geos in energy – maybe we can start a professional network of our own.

When we can get out of town my husband, Eric, and I like to travel to Yosemite National Park (so very spectacular), other beautiful places in the Sierras, and the central CA coast. I will also be doing the Nike Women's Half Marathon in San Francisco for a second time this October with Team in Training, raising money for leukemia and lymphoma research. I did the race in 2010 but I was sidelined from most physical activity in 2011 because of a back injury. I eventually decided to have back surgery last August and now I am cleared to run again!

I am really looking forward to my 10 year (gasp) reunion in 2014 and reconnecting with everyone. In the mean time, please don't be a stranger! Find me on Facebook, LinkedIn, or through good ol' email.

Marian Kramer '04 at AAPG ACE in Long Beach, CA in April 2012

Erica (Nichols) Siddall ('04)

Can't believe it had been 8 years since I graduated.. time flies!! I do not have much new to report from last time. I am still working for Shell, in planning for the environmental and social components of exploration projects. I facilitate impact assessments and also do assessments for potential new country entries, to help make sure that environmental and social considerations are part of project decision making. It is a great job! My husband and I split our time between Bristol, England and the Hague, the Netherlands.

Emma Anderson ('05)

After working as an Environmental Educator at a small non-profit nature center in Central New York for the past three years Emma Anderson '05 will be starting a new adventure. This fall Emma is excited to be enrolling in a PhD program at the University of Pennsylvania to study how kids learn science.

Lara Kapelanczyk ('05)

I recently graduated from Michigan Technological University with a MSc in Geology as part of their Master's International program in the Mitigation of Natural Geologic Hazards. The Master's International program combines the Peace Corps with a Masters' degree. I spent two years in rural Nicaragua working with the local schools and studying nearby Maderas volcano. I am currently back in MT job searching and trying to decide what's next!

Rachel Grandpre ('05)

I just started a 6-month Developmental Assignment with the Fish and Wildlife Service working for the Papahānaukmokuākea Marine National Monument out of their main office in Honolulu. (I must complete a 4-6 month rotation as a mandatory requirement of being a Presidential Management Fellow (PMF)). I just started this week and will be there until early October when I return to my home office at the US Army Corps of Engineers Institute for Water Resources to be converted from a PMF to a full-time permanent employee.

Elizabeth Thomas ('05)

I am writing from the Royal Netherlands Institute of Oceanography on the island of Texel. I am here to analyze samples at an organic geochemistry lab as part of my dissertation research. I am in the third year of a PhD program in the Dept of Geologi-

cal Sciences at Brown University, working with lipid biomarker proxies to reconstruct past climate in the Arctic and in East Asia. I had the incredible pleasure of doing fieldwork on the Qinghai-Tibetan Plateau and on west Greenland, and am now busy analyzing all of the samples we collected. One of the best parts of my job is advising undergraduates on their senior thesis projects; the research that undergrads do today put my senior thesis to shame, and I learn so much from working with such smart students.
I ran my first half marathon earlier this year, and am signed up to run a second in May. I also recently got engaged to Jason, my boyfriend of several years! All my best to Smith Geo alums and faculty.

Sarah Pistone ('06)
Congratulations on your retirement, Bob! I remember chatting with you when I decided to learn more about geothermal and I made it :)

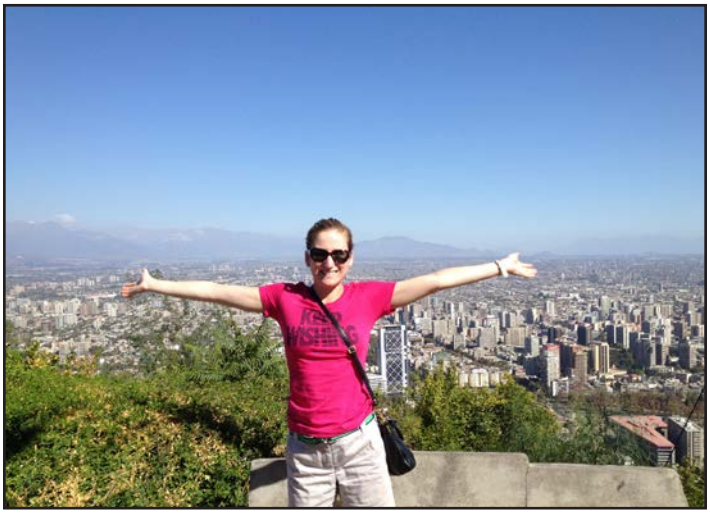
Sarah Pistone '06 next to one of the Calpine at the Geysers geothermal field steam production wells.

I finished a MS in Energy Resources Engineering from Stanford in June 2011 and have been working for Calpine at the Geysers geothermal field since September 2011. I got hired as a reservoir engineer so I help manage data that come in from well tests and field monitoring sensors, then use a computer simulator to predict future performance. The Geysers is the largest geothermal resource in the world, Calpine operates 17 geothermal power plants with a net capacity of about 700 MW. It's an exciting and beautiful place to live and work. If any Smithies or professors are out this way look me up and I can give you a tour (located about 2 hrs north of San Francisco).

Merilie Reynolds ('08)
2012 is going to be a big year of change for me! I've accepted a position in the PhD program at University of Alberta at Edmonton that will start with field work in June at the Red Dog zinc-lead deposit in northwestern Alaska. After three good years with Barrick Gold Exploration, I'm eager to get back to the academic world. Rebecca-Ellen "R-E" Farrell '04 started working for Barrick Exploration about month ago, just in time for me to pass off the Smith torch. It's such a pleasure to have another Smith geologist in northeastern Nevada! I'm sorry we didn't overlap more.
In other news, I'm getting married this summer to a mining engineer I met while playing Ultimate Frisbee in Elko, Nevada. Highlights from last year include a short term work assignment to a copper project in Zambia, Africa, and my first visit back to Smith since graduation. It was great to catch up with the geology professors and meet the current students!

Roxanne Renedo ('09)
I am currently working towards my PhD in geology at the University of Minnesota in Minneapolis where I am being advised by Donna Whitney '85 and Christian Teyssier. My research focuses on studying the ultra-high pressure Western Gneiss Region of Norway where I am specifically studying felsic gneiss shear zones that are associated with eclogite (with coesite inclusions). Through this project I have been able to go to Norway twice for field work and will be completing more field work in the future. Additionally, I have made many national and international connections with geologists. Graduate school has been a great experience overall and Minneapolis is turning out to be a great city!

Lily Seidman ('11)
I have been in Santiago, Chile as Fulbright Fellow since February 2012. I am working with the Chilean Seismological Service as well as sitting-in on two seismology classes. March was very exciting for me as I experienced the first two "temblores" of my life!



Fulbright Fellow Lily Seidman '11 on top of Cerro San Cristobal in Santiago, Chile with the Andes and the buildings of Santiago in the background.

Geosciences Department Commencement Reception May 2011

Some of the GEO Alumnae spotted at the Commencement Reception in Burton Hall in May 2011 include Roxanne Finn '96 (now at Hampshire College), Beth Hartman '96 (in Washington DC), Sara Rosenzweig '97 (NYC), Lise Easter '01 (NJ), Lynn Elkins '01 (at Bryn Mawr), Sooz DeYoung '01 (Salt Lake City UT), Liza Mattison '01 (Boston), Liz Moreland '01 (NJ), Lorraine Robidoux '01 (NOAA in Silver Springs, MD), Malkah Spivak-Birndorf '01 (Columbus OH), Lauren Seidman '04 (Hess in Houston), Amanda Trotter '01 (NY State) and Anna Marchefka '02 (Philladelphia). Thank you for your visit! Stay in touch and keep sending us your updates.

Lorraine Robidoux '01, Lynn Elkins '01 and Liz Moreland '01 (left to right) at the Geosciences Reception in May 2011 celebrating their 10-year reunion.

Alumnae Receptions at GSA and AAPG Meetings

Besides various alumnae-related activities on campus, the Department always participates in Group Receptions at Anuual National GSA Meetings. This year we also hosted a table at the AAPG Annual Convention and Exhibition in Long Beach, California. It is always great to see our alumnae on and off campus!

Al Curran, Samantha Blanchett '13, Sarah Carmichael '98, Madeline Weigner '09, and Heather Petcovic '95 (left to right) at the GSA Meeting in Minneapolis, Fall 2011.

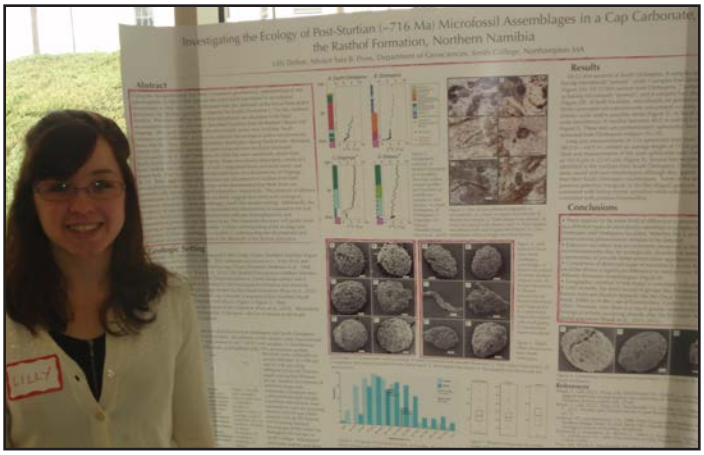
Bosiljka Glumac and Marian Kramer '04 hosting Smith College table at AAPG ACE in Long Beach, California, April 2012.

Geosciences Photo Gallery

For more photos please visit our web page at
http://www.science.smith.edu/geosciences/
or 'Friend' Smith Geosciences on Facebook

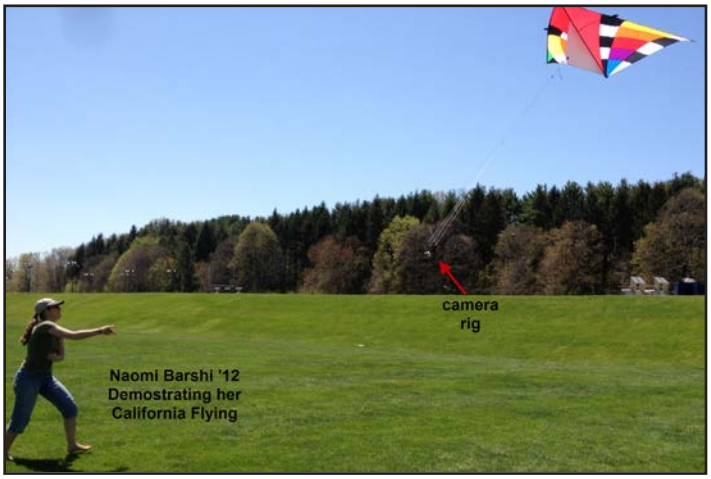
John Brady's First-Year Seminar Geology in the Field, 5 November 2011. Cape Cod, MA. Left to Right. Kelsey Moore, Mina Zahin, Reina Mitchell, Alice Huang, Monica Rolls '12 (driver), Viviana Aluia, Jessica Lillquist, Rachel Lile-King, Clementine Hamelin, Jiete Li, Louisa Hall, Sydney Van Nortwick, Michelle Anderer, Hannah Underwood, Yungjen Kung, Rachel Fulton, Maddy Niles.

Sarah Brisson '14 and many other Geosciences students presented posters at Celebrating Collaborations in April 2012.



Lilly Dalton '12 presenting her poster at
Smith College's Celebrating Collaborations in April 2012.

Structural Geology (GEO 241) visiting boudinage in the Goshen Formation along Route 9 in Cummington. From left: Sarah Brisson '14, Emma Hall '14, Renée Ricci '13, Jake Pecht '12, Camille Dwyer '14. Spring 2012.



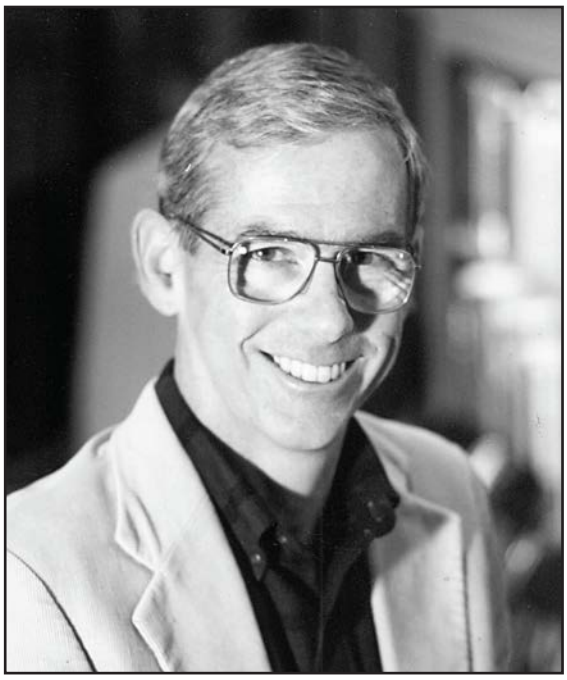
Naomi Barshi '12 demonstrating her kite
(with camera rig!) flying skills.

Layer cake geology of the Connecticut Valley in the time of the dinaosaurs by 2011 GEO graduates.

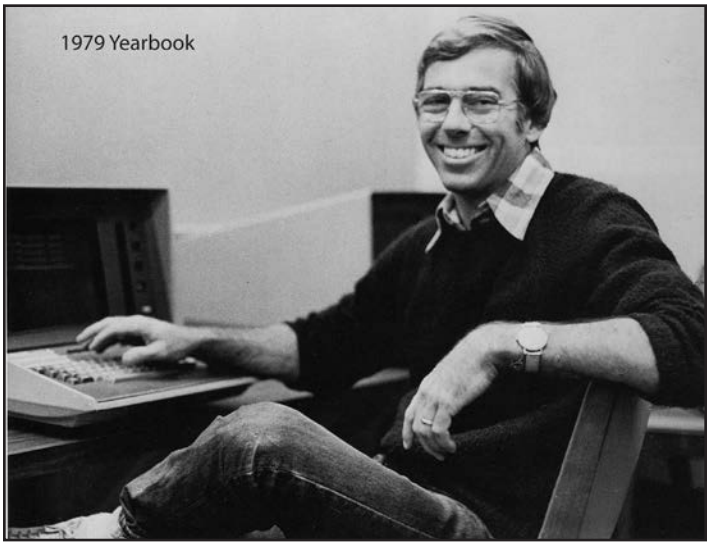
Celebration of Bob Burger's Retirement

Bob Burger, Achilles Professor of Geosciences, retired in June 2011, after 45 years of teaching Geology at Smith College. The College celebrated Bob's career at Smith by holding an afternoon symposium and dinner populated with alumnae speakers, some of Bob's former students, Maria Honeycutt '95, Christie Rowe '00 and Kori Newman '03. At the event, Bob was presented with an album full of memories, including photos and good wishes from former students. A few of the photos are included here.

Geology Faculty, 1981 Smith College Yearbook. Left to right - in back: Brian White, Marshall Schalk, Bob Newton, Ann Burger; in front: John Brady, Al Curran, Bob Burger.



Bob Burger, 1994 Smith College Yearbook.



Bob Burger, 1979 Smith College Yearbook.

Bob and Ann Burger, ~1980.

Ann and Bob Burger, 2005.