Daniel Sigman Awarded MacArthur Fellowship

Last September, Daniel Sigman (faculty) was selected as a Fellow by the John D. and Catherine T. MacArthur Foundation, one of 24 MacArthur Fellows named in 2009. He came to the department in 1998 as a Harry Hess Postdoctoral Fellow, joined the faculty in 2000, and was last year appointed the Dusenbury Professor of Geological and Geophysical Sciences.

Sigman was recognized in particular for his development and application of new methods to probe the biogeochemistry of the modern and ancient Earth using the stable isotopes of nitrogen-containing compounds and materials. He and the members of his laboratory work across a broad spectrum of approaches, including analytical method development, laboratory studies of enzymes and organisms, field studies of oceans, forests, and ice sheets, studies of sedimentary and glaciological records, and interpretation of data and testing of hypotheses using computer models.

Coming to these activities as an Earth scientist, Sigman sees the modern global environment through the window of Earth history. One of his long term goals is to understand the role of organisms in the changes in Earth’s physical environment over geological time. For example, ice ages are made more severe by the low concentration of carbon dioxide in the ice age atmosphere. It appears that these low carbon dioxide levels arose from the combined effects of ocean life and ocean circulation on the global carbon cycle. Sigman is making measurements and performing model calculations to understand exactly how this works.

In addition, Sigman is fascinated by the stability of the Earth as an environment for life. Most biologically-important elements enter and leave the environment very rapidly relative to the span of Earth history, such that the chemical conditions for life could have been far more fickle than is observed in the geologic record. Nitrogen is an excellent case for testing theories to explain Earth’s life-friendly tendencies.

Despite this foundation of interests in Earth history, Sigman spends an equal amount of time studying the modern environment and developing new tools for environmental scientists. Similarly, much of his undergraduate teaching focuses on the modern ocean environment, for which he has taken advantage of Geoscience’s growing collaboration with the Bermuda Institute of Ocean Sciences.

Following the tradition of uniformitarianism, Sigman uses these studies of the present partly to inform his interpretation of the sediment record. In return, he sees the past as a potential archive of large scale natural experiments that may reveal the sensitivities of the modern environment. Indeed, for Sigman and his contemporaries, the distinction between past and present has largely evaporated.

While the pace of research has recently increased, Sigman sees a vast need for progress in his field. “Relative to other things that we care about and that affect us every day, we know shockingly little about the global environment and how it works. The environmental sciences today are akin to biology before the double helix, or geology before plate tectonics.”

<sigman@princeton.edu>

Sigman’s Fall 2003 Freshman Seminar “Ocean Environment” class returning from a day’s field excursion in Bermuda.
The past year, 2009, was eventful for the Department of Geosciences, as well as for the University as a whole. While the economic downturn caused a slowdown in University faculty recruitment, Geo’s timing was excellent in that we had just successfully completed three faculty searches. Thus, we were thrilled to welcome two of them in 2009 and the third in 2010. **David Medvigy** (climate and terrestrial biosphere) and **Blair Schoene** (geochronology) arrived in September and July 2009, respectively, and **Stephan Feuglistaler** (climate, troposphere/stratosphere interactions) plans to arrive in March 2010. These appointments represent Princeton's continuing commitment to excellence in the area of climate research and solid Earth geology, areas of traditional strength in the department and of continuing importance to the world at large.

So despite the loss of faculty members **Tony Dahlen** (faculty 1970-2007), **John Suppe** (faculty 1971-2007), Guust Nolet (faculty 1991-2008), **Bob Phinney** (faculty 1963-2005) and the looming retirement of **Lincoln Hollister** (faculty 1968 to present), we find ourselves emerging in a very strong position. We have rebuilt the solid Earth group with four outstanding junior faculty in the area of classical geology and seismology (modern versions thereof), who represent a continued commitment to real geology at Princeton. In addition to newly-arrived **Blair Schoene** in geochronology, these folks are **Nadine McQuarrie** (faculty 2004 to present) in tectonics and structural geology, **Adam Maloof** (faculty 2006 to present) in sedimentology and Earth history and **Frederik Simons** (faculty 2006 to present) in geophysics. We see them as critical elements of our future. The two recent additions in the climate area, **Medvigy** and **Feuglistaler**, represent important growth in climate science, an emerging third center in the department, along with solid earth and environmental geochemistry.

The past year was marked by international recognition of several members of the department, including these most notable achievements: **Danny Sigman** (faculty 2000 to present) is a 2009 MacArthur Fellow (see feature). The MacArthur Fellows Program awards unrestricted fellowships to talented individuals who have shown extraordinary originality and dedication in their creative pursuits and a marked capacity for self-direction. There are three criteria for selection of Fellows: exceptional creativity, promise for important future advances based on a track record of significant accomplishment, and potential for the fellowship to facilitate subsequent creative work. We are very proud, but not at all surprised, that **Sigman** has been recognized by these criteria for his accomplishments and faith in his future.

**Michael Bender** (faculty 1997 to present), was awarded the Roger Revelle Medal from AGU in 2008, and **Jorge Sarmiento** (faculty 1980 to present), received the same honor in 2009. This is an unprecedented evidence of the outstanding contributions by both of these individuals and to the predominance of Princeton in atmospheric and ocean sciences.

**François Morel** (faculty 1994 to present) was elected to the National Academy of Sciences, and his accomplishments in marine chemistry were appropriately celebrated in the department with French champagne (is there any other kind?). **Morel** was also awarded the Urey Medal in Geochemistry and recognized with a Distinguished Alumni Award from Caltech in 2009. Truly a banner year for geochemistry!

Congratulations to **Adam Maloof** (faculty 2006 to present) on his selection by the Alfred P. Sloan Foundation as a Sloan Research Fellow. These two-year fellowships recognize early career scientists and scholars for “distinguished performance and a unique potential to make substantial contributions to their field(s).”

Kudos also to **Bill Bonini** (faculty 1953-1996) on official recognition for his role in Alumni education (no news to us here!) As the 2010 Recipient of the Princeton Alumni Council Committee on Academic Programs for Alumni Award for Excellence in Alumni Education, **Bonini** will be honored at the Alumni Council Awards Luncheon during Reunions. He is recognized for his service as leader of numerous alumni education programs (especially those Alumni Colleges at the YBRA field camp in Red Lodge, Montana), editing *The Smilodon*, and his tours of the department during Reunions and Alumni day.

The Department had less positive news as the entire University suffered from the long term effects of the international financial crisis. The most immediate effects were a general tightening of the belt and a staff reduction that necessitated a rearrangement of duties. We are pleased, however, to move forward with a very strong and talented office staff and without serious changes to our resources for teaching and support of research. <bbw@princeton.edu>
When a researcher encounters an engineering problem that requires a simple repair or major technical assistance, often it is a machinist that comes to the rescue. Since the mid-1960’s, the Geosciences Machine Shop has done just that for undergraduate and graduate students, postdoctoral fellows, faculty, as well as other staff members. Until his retirement is the 1980’s, Ted Foresman ran the shop. He worked closely with, among others, the late Robert Hargraves ’59, faculty 1961-1994), on magnetometry equipment, and with Susan Brantley ’80, *87 and the late David Crerar, faculty 1973-1994, on high-pressure geochemistry projects. George Rose was hired as machinist in 1987 and his initial work was primarily for Crerar and staff associate Maria Borcsik, Tullis Onstott ’81, faculty, and Alexandra Navrotsky, faculty 1985-1997.

With the addition of computer-based approaches to research, demand changed and several machine shops in the university and the local area closed. Shortly after Rose was hired, however, the Geosciences Machine Shop instead expanded and added a CNC (George spell this out here), milling machine, precision lathe, surface grinder, and several other pieces of machinery. This modernization enabled Rose to execute the high-precision work needed for Navrotsky’s Calorimetry Laboratory. In addition, the Plasma Physics Laboratory started using the Geosciences Shop in the 1990’s for machining super alloys and hard ceramics, and has been a steady customer ever since.

Since Tom Duffy joined the faculty in 1997, he has actively engaged in research using diamond anvil cells for his high-pressure experiments. This type of research began in the 1950’s and is conducted world-wide, but the manufacture of the cells has never an attractive venture for commercial companies. Most of the manufacture of diamond anvil cells has therefore been done in university machine shops, and the Princeton Geosciences Shop has cornered a piece of this market.

With the arrival of faculty members Frederick Simons and Adam Maloof, we anticipate an increase in machine shop use for departmental research. Machine shops and machinists are a crucial part of any major research university, and the Geosciences Shop is an invaluable resource utilized for problems and projects within the department, the University, and beyond.

David Medvigy Joins Faculty

David Medvigy joined the faculty as an assistant professor in September, 2009. Originally from Carteret, New Jersey, he received his BS degree in physics from Rutgers College, New Brunswick, and his Ph.D. degree in applied physics from Harvard University in 2006. From then until 2009 he was a Postdoctoral Fellow at Harvard and at Duke University.

Seeking to understand and describe the fundamental relationships between the atmosphere, the land surface, and the carbon cycle, Medvigy is particularly interested in methods of assimilating observations spanning a wide range of spatio-temporal scales into numerical models of the Earth’s atmosphere and terrestrial biosphere. He uses these observationally-constrained models to understand the linked meteorological and ecological consequences of such drivers of global change as increasing atmospheric carbon dioxide concentrations, deforestation, and fires.

Medvigy’s research focuses on regional-scale phenomena in diverse places including the temperate forests of New England, the shrinking areas of rainforest in South America, and the mosaic of forests and development in New York City’s watersheds. Through his work, he aims to develop a framework for understanding the interplay between anthropogenic changes, changes in regional climate, and changes in terrestrial ecosystems’ composition, structure, and functioning. <dmedvigy@princeton.edu>
News

Sybil Hargraves *59 called the other day and wanted to say hello by way of The Smilodon to all of Rob Hargraves *59 and her friends. She continues to live and thrive in Princeton at 747 The Great Road, Princeton 08540, and would be pleased to hear from any of their old friends. <Sybil747@verizon.net>

Mike Purucker *84 works for Raytheon, in the Planetary Geodynamics Lab at Goddard Space Flight Center/NASA. He’s involved in a number of missions including Swarm (as NASA’s representative on this ESA Earth science mission), Mercury MESSENGER (as Participating Scientist on this NASA Planetary mission), CHAMP (as Investigator on this German-US mission), Orsted (as Co-Investigator on this Danish-US mission), and Serpent (as PI on this proposed NASA suborbital mission). His research involves mapping and understanding the variety of magnetic fields encountered around the terrestrial planets and their moons. He is also a regular visitor at several European universities and research institutes, including the University of Nantes (France), IPGP (Paris), and GFZ (Potsdam).

Randy Hay *86 is the Research Leader for Ceramics at the Air Force Research Laboratory Materials and Manufacturing Directorate, where he studies high temperature materials for turbines and spacecraft, ceramic materials for lasers, high energy density capacitors, and catalysts for rocket fuel. In 2007, Hay was elected a fellow of the American Ceramic Society, and ran the 2007 Gordon Conference on Solid-State Studies in Ceramics. At that conference, by tradition, the banquet speaker is supposed to be “off-topic,” so he invited Ken Deffeyes *59, faculty 1967-1998, to speak on “Peak Oil.”

Harold Stowell *87 is recovering from nine years as chair of the Department of Geosciences at the University of Alabama. He is happy to be back to full-time research and teaching, and is currently working on accretionary tectonics in the Pacific northwest, garnet granulite metamorphism and partial melting in Fiordland, New Zealand and garnet porphyroblast grown at Townsend Dam, Vermont.

In March, 2009, John Chen *89 stopped by “for free coffee” as he explained. He wanted to say hello to Yajing Liu, a postdoc with Alan Rubin (faculty). Liu took her undergraduate degree at Peking University, where Chen is director of the geophysics program. Chen was on his way to a conference at Woods Hole Oceanographic Institute, johncy@pku.edu.cn

Alexandre Fournier *04 sends greetings from Grenoble, France, where he is an assistant professor at the Laboratoire de Geophysique Interne et Tectonophysique.

Laura Smith *05 sends greetings from India, her latest port of call (next is Argentina) as she travels the world working for Schlumberger. Schlumberger is keeping a number of Department graduates busy including Pam Walsh ’07 (usually on a ship somewhere), Tess Cecil-Cockwell ’08 (somewhere on the north slope of Alaska), Rachel Bernard ’09 and Nate Angell ’09.

Will Levandowski ’07 is at The University of Colorado at Boulder, and is taking his comprehensive exams this spring, then going on to Ph.D. research. He’s using seismology, gravity, flexural considerations and little bit of mineralogy to examine lithospheric density structure in the western U.S.: “basically checking out bumps and wiggles to see what makes mountains float.” He hangs around a lot with Katy Barnhart ’08 who is also finishing her Masters at Boulder then going on for a Ph.D. Her Masters research is on lower crustal xenoliths from within the Great Falls Tectonic Zone in north central Montana. Her Ph.D. work will be focused on glacial geomorphology.

Anita Adhitya ’08 writes from Perth, Australia that she is enjoying fine weather and keeping herself busy as a Senior Scientist for Syrinx Environmental and volunteer teaching. She recently took a field trip to the Shark Bay area to admire those famous stromatolites. It was nice also to hear from Raleigh Martin ’08 who is in the second year of a Ph.D. program in Earth and Environmental Science at The University of Pennsylvania. He’s doing research on sediment transport through a combination of flume experiments, computer modeling, and field work (in Pennsylvania and North Carolina).

Mark Logsdon’s ’71 recent volunteer trip to northeast Guinea was sponsored by the American Association for the Advancement of Science’s Human Rights Program and the Washington, D.C., non-government organization Global Rights, to investigate water and arable land issues between local subsistence farmers and those operating a modern gold mine. His team is pictured above in the village of Lero; the 18.5 hours it took them to drive the 700 miles from the capital Conakry to Lero, included passing through 21 military checkpoints. To picture the situation, use Google Earth and navigate to 11°44’25.39”N latitude and 10°04’47.69”W longitude, then zoom out to about 1800 feet in elevation. You’ll see the intersection of the mine workings with the perennial streams, which feed the only arable land in the area.
Gabrielle Dreyfus *09 was the 2008-89 William L. Fisher Congressional Geoscience Fellow, working in the office of Senator Byron Dorgan, a Democrat from North Dakota, on energy issues. She wrote the article “Learning to Speak to Your Representatives” for Earth magazine. She is currently an AAAS Science and Technology Policy Fellow for NOAA.

Patrick Schultz *09 is working for McKinsey & Company in Munich, Germany as a Fellow in McKinsey’s “Climate Change Special Initiative.”

### Around the Department

This year’s Hess Fellows are Kevin Lewis and John Higgins. Lewis graduated from Caltech in June 2009 with a Ph.D. in Planetary Science. His primary research interest is in the geologic history of the Martian surface, but he can be convinced that other planets are interesting as well. At Princeton, he is working on a number of projects, including an investigation of the Martian magnetic field with Frederik Simons (faculty) and an analysis of proposed Milankovitch cyclicity in the Green River Formation of the western US with Adam Maloof (faculty), among others.

Hess Fellow Higgins received his Ph.D. from Harvard University. He is interested in applying both analytical and numerical methods in order to understand the processes that have controlled global climate and the chemistry of the atmosphere and oceans over Earth history. At Princeton, he is working with Michael Bender (faculty) on dating ice cores using argon isotope ratios in bubbles of ancient air trapped in the ice. They hope to extend the record of the composition of Earth’s atmosphere back beyond 800,000 years.

Other new postdocs include Ebru Bozdag and Shrvan Hanasoge with Jeroen Tromp (faculty); Yuheng Chen with Tullis Onstott (faculty); Bror Johnsson with Michael Bender (faculty); Javier Montoya with Tom Duffy (faculty); Patrick Rafter, Katye Altiere, and Julian Foriel with Danny Sigman (faculty); Ludmilla Aristilde, Frank Black and Sally Rocks (sic) with François Morel (faculty); and Ryan Ewing with Adam Maloof (faculty).

A research partnership between the Sea Around Us Project and Princeton’s Cooperative Institute for Climate Science includes Jorge Sarmiento (faculty) and graduate student Kelly Kearney. They are focused on understanding the effects of global climate change on the productivity of marine fisheries, due to changes in water temperature, ocean currents and other ocean conditions. Regional changes in fisheries’ catch potential may have large implications for global food security, particularly in vulnerable areas of the world that rely on fisheries for food and income.

After a Ph.D. and postdoc at Northwestern University, Chris Holl joined the Department in October 2009 as Collections Manager. He, along with collection specialist Jesse Chadwick ‘08, are curating the Department’s mineral collection to preserve its historical and scientific importance, and to make it more accessible to the University community. The Smilodon will now be featuring items from the collection; this issue spotlights the Franklin Suite from northern New Jersey. In addition to his collections duties, Holl is conducting research on elastic properties of mantle minerals in association with Tom Duffy’s (faculty) group.

After oral presentations and poster sessions by graduate students and postdocs, the GEO and AOS departments took off for their annual winter retreat. Seventy-four faculty, students, postdocs and technical staff members headed up to Shawnee Mountain in the Poconos for a group dinner, overnight and a day of skiing and snow-tubing. Many thanks to graduate student Jenna Losh for organizing the event.

The new GEO graduate students are: Jonathan M. Husson, Harvard University; Karen E. Kimm-Ellis, University of Michigan, Ann Arbor; Garrett W. Tate, Rice University; and Audrey M. Yau, University of California, Berkeley. And in AOS: Joe Majkut, University of Delft, Netherlands; Sam Porter, University of Minnesota, Morris; Claire Radley, University of Auckland, New Zealand; and He Wang, Ocean University of China.

In the staff area we bid a fond farewell to Laurie Wanat, Susan Taxson, and Roseanne Wurst; and welcome Nicole Leszczuk, Brian Mohr, the Department’s former IT Manager, has left for a position at Johns Hopkins University.

And finally, the department suffered a tragic loss last September when undergraduate major Eliot Kalmbach died in a hiking accident in the Grand Teton. He was slated to finish his Bachelor’s degree this spring. Contributions in Kalmbach’s memory may be made to the Franklin Institute Science Museum, Development Office, 222 N. 20th St., Philadelphia, PA 19103; and/or Philmont Scout Ranch, 17 Deer Run Rd., Cimarron, NM 87714.

Local middle-school students explore microfossils with graduate student Karen Kimm-Ellis (top) and investigate the explosiveness of volcanoes with GEO103 student Evan Larson (bottom) in Dillon Gym during Princeton’s annual Science and Engineering Expo in March 2010. For this annual event, over 1000 schoolchildren rotate among four sites on campus, and interact with faculty, staff, graduate students and undergraduates to explore the fields of science and engineering.
Focus on the Gem and Mineral Collection: The Franklin Suite

The Department’s Franklin Suite is an extraordinary collection of mineral samples from the Franklin mining district of the New Jersey Highlands. Consisting of about a thousand specimens of over 120 different minerals, this historical suite owes much of its development to the efforts of Edward Sampson ’14 *20, faculty 1925-59, who collected and donated many of the pieces. Other contributions were made by noted collector Robert B. Gage (1875-1946) and prominent dealer Albert Peterite (1860-1917). Nearly all of the Franklin district minerals known at the time of Sampson’s efforts are present in the Franklin Suite, including fine examples of rare and unique species. As mining operations have ceased and the ore depleted, such specimens are generally unavailable today and largely irreplaceable.

The Franklin mining district encompasses several mines in billion-year-old metamorphic rocks in Sussex County, New Jersey, near the towns of Ogdensburg and Franklin. The area was first developed in the 1740’s for its iron deposits, primarily the minerals magnetite (iron oxide) and goethite (iron oxide hydroxide). In these early days, zinc-bearing minerals were ignored and even considered a nuisance as they clogged furnaces and diminished the quality of the iron produced.

In the 1870’s, however, zinc mining began in earnest. Both primary ores containing zincite (zinc oxide) and franklinite (zinc iron oxide), and secondary ores such as hemimorphite (hydrus zinc silicate hydroxide) produced from weathering of the primary minerals, were mined from deposits at Franklin and Sterling Hill. Multiple mining operations in the area were consolidated in 1897 into the New Jersey Zinc Company, which operated until 1986 when the last active mine at Sterling Hill was closed. During its heyday, the New Jersey Zinc Company was the leading producer of zinc ore in the United States.

From the 1897 consolidation until 1943, the New Jersey Zinc Company was under the leadership of the Palmer family. Stephen S. Palmer, president of the company at the time of consolidation, was a Princeton University trustee from 1908-1913.

Specimen from the Department’s Gem and Mineral Collection’s Franklin suite. Under ultraviolet light at left, the mineral willemite fluoresces bright green, hardys-tonite fluoresces bluish-violet, calcite fluoresces reddish-orange, and a speck of esperite fluoresces yellow. The metallic mineral franklinite does not fluoresce. At right, the minerals exhibit their colors as seen by the human eye under normal light.

His son Edgar Palmer ’03 succeeding him as president and also served as a University trustee from 1936-1949. Donations by the Palmer family to the Princeton community started with Guyot Hall’s uphill neighbor, Palmer Hall, home to the Physics Department through much of the 20th century and recently renovated into the Frist Campus Center. Other Palmer family gifts include Palmer Stadium (torn down in 1997 to make way for the current Princeton Stadium), Palmer Square in downtown Princeton and Palmer House on Bayard Lane, the former family home which now serves as a University guest house. Numerous other landmarks in New Jersey and Pennsylvania bear the Palmer name, including schools, towns, and a county.

The Gem and Mineral Collection’s Franklin Suite records an essential period in New Jersey’s economic history, as well as a rare geologic occurrence. The mines of the Franklin district are known worldwide for the quality and variety of their minerals. There are 357 mineral species known to occur at these mines, 28 of which are found nowhere else in the world. Eighty of these minerals display fluorescence: the property of ‘glowing’ under ultraviolet light; it is hardly a surprise that in 1968, the New Jersey State Legislature proclaimed the town of Franklin the “Fluorescent Mineral Capital of the World”.

Fluorescent minerals from the Department’s Franklin Suite are on display just a short walk from Guyot Hall, at Morven Museum and Garden’s Rocks and Dinos! exhibit, open now through the end of May. In addition, the loan of several fine, rare specimens to the Franklin Mineral Museum in Franklin, New Jersey, is planned for the upcoming season. Plans are also being developed for Guyot Hall to house a permanent exhibit of fluorescent minerals from the Franklin Suite.
Degrees and Awards
As of Commencement June 2009

Ph.D.
Gabrielle Dreyfus, Dating an 800,000 Year Antarctic Ice Core Record Using the Isotopic Composition of Trapped Air
Patrick Schultz, Observing Phytoplankton Physiology and Ocean Ecosystem Structure from Space
Anita Adhitya, Genetic Investigation of Nitrate Assimilation in Marine Microbes
Brigette Brunelle, Nitrogen Isotope Constraints on the Biogeochemistry and Paleoclimatology of the Subarctic North Pacific

MA
Sarah E. Fawcett
Jessica C. Hawthorne
Kuan Huang
Jenna L. Losh
Yang Luo
Shannon E. Tronnick
Enning Wang

AB/BSE
Nathaniel N. Angell (GE)
Rachel E. Bernard (GE)
Robert E. Fargo (GE)
John C. Fleming
Raymond C. Lagomarsino
Christian C. Millian
Meredith L. Wall
Laura Morales (EEB major working with GEO)
Cristian Proistosescu (PHY major working with GEO)

Prizes
Arnold Guyot Graduate Student Teaching Prizes
Suki Dorfman
Brian Gertsch
Nick Swanson-Hysell

Edward Sampson, Class of 1914, Prize in Environmental Geosciences
Laura Morales
Cristian Proistosescu

Benjamin F. Howell, Class of 1913, Junior Prize
Zachary Michael Morse

Sigma Xi Book Award
John C. Fleming

Sigma Xi Associate Member
John C. Fleming

Certificates of Proficiency
Geological Engineering Program
Nathaniel Angell
Rachel Bernard
Robert Fargo

Princeton Environmental Institute
John Fleming
Raymond C. Lagomarsino
Meredith Wall

Reunions Alumni/ae Reception
Friday, May 28
3:30 pm - 5:00 pm Guyot Hall

3:30 - 4:00 pm
Go on a tour of the laboratories and research space in the Geosciences Department

4:00 - 5:00
Renew friendships with faculty, classmates, and staff in the Great Hall, Guyot Hall

Deaths
Jeffrey A. Bart ’73 *76
July 25, 2008

Robert S. Bennett ’35
February 17, 2009

Richard Edgar Funkhouser ’39
May 15, 2008

Eliot Ramsay Kalmbach ’10
September 22, 2009

John Michael Kurt Mislow ’92
June 11, 2009

Thomas Edward Simkin *65
June 10, 2009
Art Around the Department

Steven Dittmann, father of S. Tim Dittmann ’05, presented to the Department this wonderful painting of the Lodge at the Yellowstone-Bighorn Research Association (YBRA) field camp in Red Lodge, Montana, in honor of the YBRA’s 70th anniversary. The painting is by Hal C. Olson (www.rockyforkjuniper.com) and now graces the introductory undergraduate teaching lab in Guyot Hall.

Passing the Editorial Baton

After many years of service, Bill Bonini ’48 has decided to pass The Smilodon’s editorial duties on to a new chief editor, Laurel Goodell M*83, Laboratory Instruction Manager for the Department. Please send any interesting bits of news, changes of address, etc, to Laurel (laurel@princeton.edu or smilodon@princeton.edu).