Green Energy Consortium

The world is facing an urgent challenge to develop new cost-effective energy sources that will meet current and future demand in an environmentally responsible manner. Keenly aware of the importance of achieving this goal, four Yale chemistry professors have teamed up to explore the possibility of creating “solar fuels” by using photons to produce clean, efficient, renewable energy. In technical terms, they aim to demonstrate the feasibility of using oxomanganese catalysts immobilized on TiO2 (titanium dioxide) nanoparticles to achieve photocatalytic water oxidation. Additional details are available at www.chem.yale.edu/~green.

Each of the four faculty members is leading a group of graduate students and postdoctoral fellows who are engaged in a different aspect of the project. Each team approaches the challenge from a different sub-discipline within chemistry. Gary Brudvig’s group studies photosynthesis—nature’s way of making fuel from sunlight—and artificial systems designed to reproduce the reactions in natural photosynthesis. Robert Crabtree, an inorganic synthetic chemist, focuses on catalysis, making inorganic complexes to speed up the chemical reactions at the heart of the process. Charles Schmuttenmaer, an experimental physical chemist, specializes in ultrafast lasers that produce extremely short pulses of light. His students examine transient photo-conductivity and electron transfer in dye-sensitized, nanoparticulate semiconductors—processes they can study on a time scale of one one-trillionth of a second. Victor Batista complements the other groups’ experimental work with theoretical studies of chemical dynamics and electronic structure calculations.

“Our research interests are each very different from the others,” says Schmuttenmaer. “This is a rather unique environment for the graduate students. They are learning a much wider range of chemistry than they would in a traditional mono-group setting.”

“I entered graduate school with an emphasis in physical chemistry,” says Rob
Snoeberger, one of Batista’s students. “While working in the group, I’ve had a chance to learn about inorganic chemistry, synthesis, and electrochemistry. At times I’ve tried to resist and stick to my chosen field, but it has been a gift to learn from the other professors and their students in their element, doing research.”

“The problem of generating fuels with sunlight is incredibly challenging,” notes James Blakemore, whose work overlaps both Crabtree’s and Brudvig’s areas. “As chemists, we need to throw everything we collectively have at the system to get it working in the end. We are well on the way.”

“Rrus collaborative work in many ways is on an on-going conversation. I seem to always have my best moments of inspiration when talking to other people involved in the project, rather than when working somewhere alone.” James Blakemore

...any one discipline, but rather in the midst of many. I have become knowledgeable on one small piece of the puzzle (electrochemistry and catalysis) and, luckily, can hand off the work to my colleagues with complementary specialties. Thus, we all get to do and learn more about the system.”

“It is definitely an advantage to be able to see the whole story,” says graduate student Laura Allen, who is in Crabtree’s photocatalysis group. “I can make something that has been suggested computationally by the Batista group and then give it to both the Schmuttenmaer and Brudvig groups for further analysis without having to send out materials and wait for months for a possible answer, which can happen when your collaborator is in another state or country. Through these meetings, I’ve also been exposed to a tremendous amount of chemistry outside my niche, for which I am very thankful. We are a tight-knit group, and I feel like I can go seek advice from any of the four of us without hesitation.”

“Our collaborative work in many ways is an on-going conversation.” James says. “I seem to always have my best moments of inspiration when talking to other people involved in the project, rather than when working somewhere alone.”

“Solar power only works when the sun is shining, but we need energy storage as essential,” says Crabtree. His group focuses on two aspects of converting solar power into a storable fuel. The first aspect involves collaboration with the Batista, Brudvig, and Schmuttenmaer groups to achieve the direct conversion of water by solar light into hydrogen and oxygen, a step that is necessary to store energy as a fuel. Oona Luca makes the catalysts that split water to produce hydrogen. James Blakemore and Nathan Schley make the catalysts that produce oxygen, and Laura Allen and Lauren Martini make the organic structures that link these components together.

The second aspect requires Crabtree’s collaboration with Batista’s group and scientists from c.r., Stanford, and Berkeley. They address the issue of storing the solar energy, “not as hydrogen, a material that’s normally expensive to store, but in the form of a liquid fuel that functions like today’s gasoline, but avoids the carbon emissions that affect climate,” Crabtree explains. “In a future automobile, the driver would use our liquid fuel to provide motive power, but carbon-emission-free.”

At weekly meetings, members of all four teams share their latest results and present any problems that they have encountered. “The meetings range anywhere from one to two hours,” says Rebecca (Becky) Milet, a member of Schmuttenmaer’s group. “Each week three or four people present a few PowerPoint slides about the progress they have made since their last presentation. The presentations are not overly formal and are meant to stimulate discussion. We spend the bulk of the time discussing data, answering questions, and planning future experiments.”

“In addition to exposing me to other chemistry sub-disciplines, the meetings help me to maintain the focus of my research,” Becky says. “Without the structure of the group and the constant reminder of our long-term goals, I think that I would be very easy to get side-tracked.”

The collaborations continue beyond the meetings. “We often stop by each other’s offices and labs to coordinate experiments, talk about papers we are writing together, or just ask questions that we did not address during the meeting,” she says.

During each of the past three summers, the collaborators have held a solar symposium at which faculty, postdoctoral fellows, and graduate students present their research on solar fuel production, photo-chemistry, chemical methods of reducing carbon dioxide, and related topics.
Teaching Science Scientifically, continued

of students, regularly assessing learning, and redesigning classroom strategies based on the interpretation of data.

"Imagine if music schools trained pianists to play with only the right hand, leaving them on their own to figure out the left hand’s responsibility. Ridiculous?"

"Research universities should raise a generation of future scientists who, like pianists who play with both hands, practice their art with a dynamic component of skills to the great benefit of society," says Handelsman.

"Building the new Center for Scientific Teaching here is an exciting opportunity to take our work in science education to a new level and for Yale to position itself as a leader in reforming college science education," says Jennifer Frederick, associate director of the Center for Scientific Teaching at Yale and of the Graduate Teaching Center. Teaming up with Handelsman and Frederick to lead the Center is James Young, executive director. Scientific teaching aims to bring a philosophy and framework to instruction that makes the process more rigorous, reflective, and evaluative. "The teaching of science should be faithful to the nature of science" by replicating the dynamics of discovery in the classroom, Frederick says. Research has shown that the lecture method is one of the least effective ways for students to learn, according to Handelsman. It is even less effective at advancing higher-level thinking skills like analysis, evaluation, and creative synthesis, but when students actively process information and ideas, lectures can become highly effective teaching tools. To engage students, scientific teaching often uses audience response systems, or "clickers," which enable student participation and provide the instructor and students with instant feedback. Electronic quizzes administered before class allow the instructor to assess what concepts and skills the students have mastered, so that class time can be spent more effectively. Even low-tech tools like short writing assignments, small group discussions, and debates can be used to engage students.

The first cohort of Yale Scientific Teaching Fellows was trained during the fall semester in graduate courses co-taught by Handelsman, Frederick, and Carl Hashimoto, professor of Cell Biology. “Theory & Practice of Scientific Teaching I and II” covered fundamental learning theory and practical strategies for teaching biology. Students taking the first course learned research-based methods for effective and inclusive teaching and practiced teaching challenging biology concepts to one another and managing classroom dynamics. In the second course, they developed and evaluated instructional materials for a college-level biology course. Some of these students and postdocs are now serving as TTFs for a new undergraduate course taught by Handelsman and Hashimoto.

At Yale, Handelsman’s lab in mCDB focuses on understanding diversity in microbial communities and their role in infectious diseases. In January, she was one of 11 individuals selected by President Barack Obama to receive the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. Before coming to Yale in January 2010, Handelsman led for many years the National Academies Summer Institute for Undergraduate Education in Biology at the University of Wisconsin-Madison, which trains faculty at research universities in the principles of scientific teaching. Some of the programs she developed have been replicated at hundreds of other colleges and universities. The HHMI recently funded Handelsman to expand the summer institute model; a northeast Regional Summer Institute will be held at Yale in August 2011.
Dancing the Night Away

Capacity crowd + outrageous desserts + live music and DJ for dancing = Winter Ball, February 12, 2011.
LIFE @ YALE

LESSONS FROM 127 HOURS

In the movie 127 Hours, Aron Ralston gets himself into a life-threatening situation in a canyon in the remote desert. The movie is based on a true story, with Aron portrayed by James Franco (English). In February, graduate and professional students were privileged to attend a free screening of 127 Hours followed by a Q&A session with the star, organized by the fellows and staff of McDougall Graduate Student Life. The movie is a gripping story of survival in the face of immense obstacles, rather like graduate school itself. Here is some 127 Hours-inspired advice for those researching and writing a dissertation.

ENJOY THE SCENERY, BUT KNOW WHERE YOU ARE HEADED.

Aron almost loses himself in the beauty of the desert. Similarly, students can get lost in the thrill of discovery in the archives or in their data and lose sight of the goal of finishing the thesis. Have a work plan and try to stick to it. Indulge in your passion for discovery, but don’t let it run your life. A dissertation is a book-length project or a series of articles. For most of us, it’s our first major work of original scholarship, not our magnum opus.

DON’T DO ALONE INTO THE WILDERNESS.

Aron cuts himself off from family and friends and doesn’t tell anyone where he plans to hike. In graduate school, dissertation writing can be a very solitary pursuit. To avoid feeling alone in the wilderness of the mind, share your work. Sign up for a Graduate Writing Center dissertation bootcamp or support group, join a research-in-progress discussion group, and talk to friends in and outside your program. Try to communicate regularly with your advisor or PI, even, and perhaps especially, when things are not going well.

BE WELL-EQUIPPED AND TAKE CARE OF YOURSELF.

Relying solely on his skills, Aron goes off alone without proper tools, food, and water. Writing a dissertation isn’t exactly like being trapped in a crevasse, but you do need to come at it prepared and ready to care for yourself when the going gets rough. That means eating well, getting enough sleep, taking time for exercise, hobbies, and stress relief, and staying in touch with family and friends. You need to have a bag of tools for surviving and thriving: perseverance, resiliency, curiosity, flexibility, reflection, and a sense of humor. And if you are stuck down a dark hole, call for help from friends, advisors, family, graduate and professional students were privileged to attend a free screening of 127 Hours followed by a Q&A session with the star, organized by the fellows and staff of McDougall Graduate Student Life.

YOU MAY HAVE TO LOSE A PART OF YOURSELF TO SURVIVE.

(SPOILER ALERT!) Aron cuts off his trapped arm to escape. Words are an extension of ourselves — our limbs, our creations, our children. Sometimes you need to cut off the excess in order to progress. Don’t be afraid to eliminate those beloved words (or paragraphs or pages) if it makes your work better. You will survive.

HAVE A PLAN FOR AFTERWARDS.

While trapped, Aron imagines the life he might have if he escapes. Graduate students should also envision the future they will enjoy after they complete the Ph.D. Use the resources and workshops of the Graduate Career Services office and engage in activities that help you discover and build skills, develop leadership, and broaden your talents. A vision for life after Yale will help motivate you to complete your dissertation and provide direction for the next phase of your life.

Comments by Hannah Mecades (History), Jennifer Neuman (Drama), Jaimie Khoo (Philosophy), and Mariane Labude (Philosophy). Compiled by Assistant Dean for Student Affairs Lisa Brandes (Ph.D. 1994, Political Science). Compiled by Assistant Dean for Student Affairs Lisa Brandes (Ph.D. 1994, Political Science).

If you’d like to contribute an essay about your life at Yale, please send it to gila.reinstein@yale.edu

IN THE COMPANY OF SCHOLARS

Next lecture in the Dean’s lecture series

Prof. Kelly Browell

“Is There the Courage to Change the American Diet?”

Thursday, April 14, 4 pm, HGS 119

THE GRADUATE TEACHING CENTER'S

2011 Spring Teaching Forum

This year’s Spring Teaching Forum will consider all aspects of the lecture course, from its history to an analysis of its effectiveness as a pedagogical tool. The event is coordinated by Nurit Greeng (Psychology) and Paul Lagunes (Political Science), along with Graduate Teaching Center Director Bill Hanks and Associate Director Jennifer Frederick. Speakers include:

THOMAS POLLAND
Dean, Graduate School of Arts and Science
Sterling Professor of MCDB

PENELope LEHANs
Master of Jonathan Edwards College
Associate Dean, Yale College
Special Assistant to the President, Department of English

FRANCe ROSENBLUM
Dames Wells Professor of Political Science
Deputy Provost for the Social Sciences and Faculty Development

MARK SCHNEIDER
Assistant Dean, Yale College

TOY BROADb
Assistant Professor, School of Management
Former Graduate Teaching Center staff member

STEVEN SMITH
Master of Branford College
Affiliated Fellow of Political Science

JOHN OBBINS
Professor of Physics
Reading Fantasy for Social Truths

Wan Tang (Spanish) has always been fascinated by their fantastic works. Galáns and Pardo Bazán, for instance, are best known as the foremost realist novelists of nineteenth-century Spain; she notes. But each of them wrote fantasy, too. “Galáns’s Madrid was a city marked by two opposing tendencies: one shooting forward with an eye on the future and the other firmly anchored in the past. The fantastic mode, with its mixture of age-old superstitions and newfangled science, perfectly paralleled this moment of urban transition. In a similar vein, Pardo Bazán’s fantastic writing treats the nineteenth-century religious crisis as symptomatic of a larger crisis of faith perfectly encapsulated in fantastic writing, given that fantastic tales dramatize the tug of war between the traditional beliefs of yesteryear, religious and otherwise, and the new, positivist skepticism sweeping through Spain. These authors thus establish the fantastic mode as a sort of literary funhouse mirror, through which readers might examine their reality from a different perspective.”

Wan is interested in “the intersection between the short stories at hand and the nineteenth-century Spanish phenomena: urbanization and urban development, widespread religious crisis, and the mass dissemination of literature,” each of which led to the popularization of new literary forms such as serialized novels.

“They are four authors who are all widely read and studied, but not necessarily for their fantastic works. Galáns and Pardo Bazán, for instance, are best known as the foremost realist novelists of nineteenth-century Spain,” she notes. But each of them wrote fantasy, too. “Galáns’s Madrid was a city marked by two opposing tendencies: one shooting forward with an eye on the future and the other firmly anchored in the past. The fantastic mode, with its mixture of age-old superstitions and newfangled science, perfectly paralleled this moment of urban transition. In a similar vein, Pardo Bazán’s fantastic writing treats the nineteenth-century religious crisis as symptomatic of a larger crisis of faith perfectly encapsulated in fantastic writing, given that fantastic tales dramatize the tug of war between the traditional beliefs of yesteryear, religious and otherwise, and the new, positivist skepticism sweeping through Spain. These authors thus establish the fantastic mode as a sort of literary funhouse mirror, through which readers might examine their reality from a different perspective.”

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I think the ghosts and monsters that haunt each culture tell us a lot about what those cultures fear and, alternately, what they value,” she says. “In one of Professor Noel Val’s classes on nineteenth-century realist masterpieces, she mentioned offhandedly that Benito Pérez Galdós had also penned a fantastic novella at the start of his career, and that remark got the wheels in my head turning about an overlooked corpus that might engage all the same issues as the realist fiction, but in a different way.”


“People tend to trivialize fantastic literature as escapist and frivolous, but nothing could be further from the truth,” Wan Tang notes. “In one of Professor Noel Val’s classes on nineteenth-century realist masterpieces, she mentioned offhandedly that Benito Pérez Galdós had also penned a fantastic novella at the start of his career, and that remark got the wheels in my head turning about an overlooked corpus that might engage all the same issues as the realist fiction, but in a different way.”


“People tend to trivialize fantastic literature as escapist and frivolous, but nothing could be further from the truth. For my research, I look in particular at how the fantastic short stories of these Spanish authors reflect critical changes in the social landscape of nineteenth-century Spain and dramatize some of the anxieties that these changes produced.”

Wan is interested in “the intersection between the short stories at hand and the nineteenth-century Spanish phenomena: urbanization and urban development, widespread religious crisis, and the mass dissemination of literature,” each of which led to the popularization of new literary forms such as serialized novels.

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She argues that “the fantastic mode was perfect for capturing a transitional moment in Spanish history.”

Wan earned her undergraduate degree from the University of Southern California.

Investigative Medicine

Understanding Alzheimer’s

An estimated 26 million people worldwide have Alzheimer’s disease.

An irreversible, progressive, degenerative brain disease, Alzheimer’s slowly destroys memory and thinking skills and eventually compromises the ability to carry out even the simplest tasks. Yet, more than 100 years after its discovery, none of the existing therapies effectively stabilize or reverse the disease. “The prospect of helping to change that is incredibly motivating,” says Haakon Nygaard (Investigative Medicine). A native of Norway, he came to Yale as a medical intern and neurology resident after earning his undergraduate and medical degrees from Creighton University in Omaha, Nebraska. While interviewing for a neurology residency, he learned about Yale’s innovative Investigative Medicine Program and decided to apply. “At that point I had already developed a deep interest in neurology and felt a special connection with older patients,” he says.

His dissertation, “The Role of Cellular Prion Protein in β-Amyloid Induced Neuronal Network Dysfunction in Alzheimer’s Disease,” is advised by Stephen Strittmatter.

One of the diagnostic features of Alzheimer’s disease, first described by Alois Alzheimer in 1907, is the widespread deposit in the brain of a protein known as β-Amyloid (Aβ). The soluble form of Aβ is particularly toxic to neurons, Haakon explains, and “its elevation in Alzheimer patients is widely believed to be a major mechanism underlying the disease.”

Understanding exactly how Aβ causes neuronal dysfunction may provide a key insight into developing an effective treatment for the disease. “By the time I started my thesis work, my mentor Dr. Stephen Strittmatter and his postdoc Julie Lauren had discovered that Aβ potently binds to neurons via cellular prion protein (PrP C).”

Despite its name, PrP C is not what is usually considered a “prion” — the distorted form of the protein PrP C that is responsible for Creutzfeld-Jacob and mad cow disease. Rather, PrP C is a normal membrane protein expressed in a variety of cells.

Haakon’s dissertation involves exploring the role of PrP C in the neuronal dysfunction seen in Alzheimer’s disease. He studies the impairment of spatial memory in mice that have been exposed to a mutated human gene known to cause familial Alzheimer’s.

Haakon’s project compares two groups of old Alzheimer mice — one which had normal expression of PrP C and another where PrP C was genetically removed. “The results were encouraging. The removal of PrP C rescued the memory impairment in Alzheimer mice, suggesting a critical role of PrP C in this model system.”

In addition to memory impairment, Alzheimer patients also have a higher risk for seizures, which may significantly impair cognitive performance. As seizures can be very subtle, their true incidence in Alzheimer’s patients is not fully known, but can exceed 80% in severe familial cases.

“The underlying mechanism is thought to be similar to that of memory impairments, affecting the stability of the broader neuronal network and possibly mediated by PrP C.” To test this hypothesis, we implanted a large cohort of old Alzheimer mice with intracranial electrodes and recorded their brainwaves while in their natural state, using continuous video-electroencephalography monitoring. Again we were encouraged by the results. “The Alzheimer mice without PrP C did not develop seizures, while more than 40% of those with normal PrP C expression did.”

“Our ultimate goal is to alleviate Alzheimer symptoms, and a major step is to determine whether our findings can be translated to humans.” Based on the research so far, PrP C looks promising.
They began to shrink when a cooling climate allowed ice to form at lower elevations, thus enlarging the glaciers.

Keith Ma (Geology & Geophysics) wondered what the connection was between the ice and the size of the mountains. Might a phenomenon known as "efficient glacier erosion" be causing the mountain belt to shrink? To test the idea, he derived an equation for the height and width of a mountain belt with known plate velocities and erosion rates and then built a computer-controlled analog model to verify it.

“Our model used sand, moving plastic sheeting, and a vacuum in place of crustal rock, tectonic plates, and eroding glaciers, and we recorded this model mountain belt's evolution through glass side walls. With the equation verified, we applied it to the Andes and found that a high but plausible erosion rate is needed to drive the observed decrease in size of approximately three millimeters per year.”

The American Geophysical Union honored Elizabeth Breese (Sociology) with an Outstanding Student Presentation Award for her talk on this topic at the annual conference in San Francisco last year.

Sociology

Celebrity Gossip or Journalism?

Two pregnant teenagers, one fictional and the other real, got Elizabeth Breese (Sociology) thinking about the connection between the news media and celebrity during her first year at Yale.

She was writing a paper for Jeffrey Alexander on performance theory at the time the media announced the pregnancy of 16-year-old Jamie Lynn Spears, younger sister of Britney, and the movie Juno, a film about a pregnant high school girl and the couple that wishes to adopt her child, was released.

“I got home from seeing the film and wondered why there was more ‘media buzz’ about Jamie Lynn Spears than about the movie dealing with the same situation. I followed that question through literature on performance theory and celebrity and gathered and examined data, including newspaper and magazine articles and television transcripts.”

She found that entertainment news publications “did not treat Jamie Lynn Spears and her pregnancy as differently from mainstream news as the literature and our contemporary media debates would suggest.” Celebrity news and hard news converged. She presented her findings at the Konstanzer Meisterklasse in Konstanz, Germany, in the summer of 2008 and at the Center for Cultural Sociology at Yale, where she is a Junior Fellow. She followed that up with an article titled “Meaning, Celebrity, and the Underage Pregnancy of Jamie Lynn Spears” in the journal Cultural Sociology.

In the article, Elizabeth maintains that previous scholars’ analysis of fame and the role of celebrities in society “did not sufficiently explain why the pregnancy of a minor celebrity – in two senses, both underage and relatively unknown beyond her immediate fan base – occasioned debates in the media about teen sex and teen pregnancy, the responsibilities of parents, and why teen pregnancy rates in the United States are high compared to similar countries.”

She argued that celebrities are “symbolic figures” that ordinary people use to “interpret and narrate our collective experience and moral boundaries. I didn’t know it then, but that question about Juno and Jamie Lynn would lead me to many other questions and, eventually, to my dissertation work.”

Part of Elizabeth’s dissertation, advised by Alexander, examines fan magazines from the early 1930s along with mainstream news sources, including Time magazine and The New York Times. She discovered that “shocking, surprising, and scandalous news about film stars were regular features of both ‘fluffy’ and ‘serious’ news sources in the Golden Age of Hollywood.” Her analysis of the material led her to realize that the media are “regulated by a binary code of civil attributes and ideals and their anti-civil opposites. This code is larger than the ideal of objectivity, which has thus far been the focus of much of the sociological scholarship on the news. It is through this code that journalists, media critics, and scholars describe and interpret the news and judge it as either ‘good’ or ‘bad’ for the profession of journalism and for society.”

She found, in fact, that “the vocabulary and the ideals we use to describe, interpret, judge, criticize, and defend the news as a vital part of society are relatively constant over many decades in the United States.”

Elizabeth’s work not only sheds light on the role of celebrities in American culture, but also adds to the methodological and theoretical tools of the discipline of sociology.

His paper, in the Tectonophysics section, was titled “Response of a thrust belt to the onset of glacial erosion in the Patagonian Andes.”

Keith earned his Ph.D. from Brown, where he became interested in geology through what he describes as “a fantastic introductory course co-taught by Jan Tullis and Karen Fischer. I was strongly interested in glaciology (the study of ice and glaciers), but over time became more excited about the evolution of mountain belts that host glacial ice. I decided to pursue a Ph.D. that combined both interests.”

Keith went to Argentine Patagonia in the spring of 2009 with two field assistants, Nat Wilson (an undergraduate geology major, now a graduate student at Simon Fraser University) and Pei-Pei Ma, his wife. “Our goal was to measure erosion rates at the crest of the Patagonian Andes from about 10 million years ago to the present. During this period there was major global cooling, and we expected to find that glacier ice increased substantially. Because glaciers erode the mountains more quickly than rivers, larger glaciers can effectively saw off the top of the mountains. In this way glaciers can limit the height of mountain belts, an idea people in our field call the ‘glacial buzzsaw.’”

They collected granite cobbles from glacial moraines (sediment left by a glacier after it recedes) and tills (sediment that melts underneath the ice and stays in place). “These sediments are now tens of kilometers from the front of the mountain belt, deposited by tongues of ice that receded thousands to millions of years ago,” Keith explains. “The field work is mostly at low elevations, on the eastern flank of the mountains. This area is extremely dry and has only scrubby vegetation — very nice for walking! We generally camp in one of the town campiutes and make trips out to the nearby deposits. These can be up to 10 kilometers away from and 1000 meters above any roads, so we end up carrying a lot of rocks!”

“We know that the granite cobbles we picked up were originally plucked off the crest of the mountain belt. Radiocarbon decay of uranium in a few trace minerals in our granite samples — apatite and zircon — can be used to tell us the erosion rate at the range crest, and since we have samples from moraines and tills at many different ages, we can track the erosion rate over time. This method is called detrital (U/Th) He thermochronology. I have been working on this first set of samples, both at Yale and with a collaborator at U.C. Santa Cruz, for roughly one year now with the help of a senior undergraduate student, Chelsea Willett.”

Keith returned to the field to finish his collections during spring break. His advisor is Mark Brandon.
Outstanding Alumni

Jeffrey Herbst (Ph.D. 1987, Political Science) became the sixteenth president of Colgate University in Hamilton, NY, last summer, after serving for five years as provost and executive vice president for academic affairs at Miami University in Ohio.

Herbst’s research and teaching have focused on the politics of sub-Saharan Africa, with special interest in peacekeeping, democratic liberalization in Africa, and how the international community can further economic growth in less developed regions of the world. He is the author of several books, including States and Power in Africa (Princeton University Press, 2000; co-winner of the Gregory Lauebert Best Book Award from the Comparative Politics Section of the American Political Science Association) and New Order in Sight? The African Union, NEPAD, and the Future of a Continent (with Greg Mills of the International Institute of Strategic Studies), as well as articles in Comparative Politics, Foreign Affairs, ForeignPolicy.com, International Organization, and International Security. Herbst has served on the faculties of Princeton University (his undergraduate alma mater) and several African universities, including the University of Zimbabwe, the University of Ghana, and the University of Cape Town.

Kenneth Atchity (Ph.D. 1971, Comparative Literature) is executive producer of The Kennedy Detail, a two-hour special about the Secret Service agents assigned to protect JFK at the time of his assassination. The documentary aired on the Discovery Channel in December 2010. The film is based on the New York Times bestselling book Atchity developed with former Secret Service Agent Gerald Blaine and journalist Lisa McCalbin. Atchity also co-produced The Last Valiente, starring Betty White and Jennifer Love Hewitt, which aired on CBS’s Hallmark Hall of Fame in January. He served as executive producer of Hysteria, starring Maggie Gyllenhaal and Hugh Dancy, filmed in England and Luxembourg. Atchity, founder of Atchity Entertainment International, recently formed a new company, the Story Merchant (www.storymerchant.com), to provide strategic career coaching for writers.

Joanna Waley-Cohen (Ph.D. 1987, History) presented “Banquets and Politics in China,” the first talk of the annual Frankie Lectures at the Whitney Humanities Center, which will focus this year on the history of food and cuisine. Chair of the Department of History at NYU where she has taught since 1994, Waley-Cohen is an authority on early modern Chinese history. Her books include The Sixants of Beijing: Global Currents in Chinese History (1999) and The Culture of War: Empire and the Military under the Qing Dynasty (2006). She has published many articles on Chinese law, politics, foreign relations, and culinary culture, including “A Question of Balance: Taste and Gastronomy in China,” which appeared in Food: The History of Taste (2008), edited by Paul Freedman, the Chester D. Tripp Professor of History at Yale.

Jeffrey Herbst

Kenneth Atchity

Joanna Waley-Cohen

Notes from the Yale Graduate School
Alumni Association

On May 14, alumni all across the nation and around the world will “give back” in the Third-Annual Yale Day of Service. According to the Association of Yale Alumni, over 3,500 Yale alumni and friends participated in last year’s Day of Service at nearly 250 sites in 40 states and 18 countries.

Along with Yale College and professional school graduates, Yale Graduate School alumni have been very active in the Day of Service since its inception. Service is a great part of the Yale tradition, and that tradition is embraced by the Graduate School.

Stephen Scher (B.A. 1995, Ph.D. 1996, History of Art) reports that there are already six sites planned for New York. These include a wide range of organizations such as the Central Park Conservancy, Harleymen’s Tennis and Education Program, and Haitian Relief Efforts. Scher stresses the importance of Graduate School alumni to the success of these activities, citing the fact that 90% of last year’s participants were GSAS alumni. Across the country in Los Angeles, alumni will join forces with the non-profit organization P.F. Arts to repair a mural that was recently vandalized. The mural had been painted by students from the Grand View School in Mar Vista. Alumni efforts are, of course, by no means restricted to the coasts. Tim Damour (B.A. 1984), regional director of the Yale Day of Service in Colorado, Kansas, Nebraska, Oklahoma, and Wyoming, discussed some of the projects currently planned by the Colorado Yale Association.