**Organic brew puts green back into Yard**

By Corydon Ireland
Harvard News Office

Eight-month soil restoration project begins to take root

Soils under human care require maintenance that is “adaptive,” he said — meaning flexible, comprehensive, sensitive, and complex. Last year, his holistic view (and expert direction) inspired an eight-month soils restoration project in Harvard Yard.

“It’s not product-based,” said Fleisher about the approach. “It’s knowledge-based.” Just adding chemicals denies the biological, chemical, and structural complexity of soils, he said. Better to study them, care for them — and restore them — from the bottom up.

In a world of plant care still seduced by the power of single chemicals, landscapers have to embrace the idea that there is “no one single answer,” said Fleisher, and that healthy plants begin with healthy soils.

The Harvard project was modeled on Fleisher’s work as director of horticulture at Battery Park City Parks Conservancy in Lower Manhattan. Since 1989, the 57-acre swath along the Hudson River has been New York City’s only fully organic public landscape.

The Harvard soils project of 2008 bloomed into an organic landscaping operation that since last May covers the 16 acres of Harvard Yard and adjoining Tercentenary Theatre.

This spring, more of the University’s landscape footprint was added to the organic column, including the GSD, Harvard Kennedy School, and the Harvard Graduate School of Education. Behind the greening of the greenery is Harvard’s Facilities Maintenance Operation (FMO), a division of University Operations Services that

(See Soil, page 32)

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**Chance favored expedition leader in ‘missing link’ discovery**

By Alvin Powell

Harvard News Office

A graphic in an undergraduate geology textbook serendipitously led to the 2004 discovery of the missing link between fish and land animals far in the Canadian Arctic, one of the creature’s discoverers said during an April 16 lecture at Harvard.

Neil Shubin, a professor at the University of Chicago and leader of the expedition that discovered *Tiktaalik roseae*, dedicated his career to finding an intermediary between lobe-finned fishes, which existed some 380 million years ago and early land animals, the first evolution of which is thought to have existed 365 million years ago.

After years of work fruitlessly seeking fossils of the right age — about 370 million years old — in outcappings in Pennsylvania, Shubin realized the fossils he was finding were a bit too young. Rather than finding examples of the transition from fish to land animals, he was finding early land animals. He needed to find outcroppings that were a little older.

In the winter of 1998, Shubin was arguing a point with Ted Daschler, a graduate student who would accompany Shubin on the *Tiktaalik* expedi- pions, and pulled out an undergradu- ate geology textbook. As he flipped through the pages, he found a graph- ic that showed where major Devon- ian era rock outcroppings lie. Two were well-known to him — in Penn- sylvania where he was currently working, and in east Greenland, which was well-explored. The third site was in the Canadian arctic and was largely unexplored.

(See Tiktaalik, page 8)
This month in Harvard history

April 10, 1950 — Ralph J. Bunche — AM ’28, PhD ’34, Director of the United Nations Trusteeship Department, and future winner of the 1950 Nobel Peace Prize — is appointed to a government professorship. He is the first black named to the Faculty of Arts and Sciences.

Bunche expects to do teaching and research in international relations, international law, and colonial administration. But U.N. duties prevent him from teaching a single class. He resigns in 1952.

From the Harvard Historical Calendar, a database compiled by Marvin Hightower

MEMORIAL SERVICES

Wood memorial April 26

Carroll Emory Wood Jr., 88, a Harvard University professor of biology and curator of the Arnold Arboretum, died March 15. He was teacher and mentor to many botanists and students at Harvard and at the University of North Carolina. A specialist in the flora of the Southeastern United States, he initiated, supervised, and edited a comprehensive flora of that region, “The Generic Flora of the Southeastern United States.” A “Celebration of Carroll” will be held on April 26 from 3 to 5 p.m., at United South End Settlements, 566 Columbus Ave., Boston.

POLICE REPORTS

At its 11th meeting of the year on April 22, the Faculty Council reviewed the proposed Extension School courses for 2009-10; considered a proposal for a new Department of Human Evolutionary Biology; and discussed Google and the Harvard College Library.

The council’s final meeting of 2008-09 will be on May 13. The preliminary deadline for the May 19 Faculty meeting is May 4 at 5:30 a.m.

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A colorful salad bar as seen from above in the Harvard Graduate School of Design café, called the Chauhaus.

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PRESIDENT’S OFFICE HOURS 2009

President Drew Faust will hold office hours for students in her Massachusetts Hall office on the following dates: Thursday, April 23, 4:5 p.m.

Sign-up begins at 2:30 p.m. Individuals are welcome on a first-come, first-served basis. A Harvard student ID is required.

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Want a dose of reality? Even at a place like Harvard, rejection and failure are regular visitors. Everyone has a story of a job, a paper, a fellowship application that failed to make the grade. Some rejections sting even years later.

Consider Xiao-Li Meng. He’s a Harvard Ph.D., chairman of a prestigious Harvard department (Statistics), and until this year was editor of one of his discipline’s strongest journals.

But Meng has suffered setbacks, including a rejection letter from one graduate school in his native China (despite near-perfect grades).

As matter of probability, he would be the first to tell you that the odds of rejection, for all of us, are perfect.

And he would be the first to tell you that failure is sometimes the pathway to new opportunity.

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Meng was part of a panel last week (April 15) aptly called “Reflections on Rejections,” sponsored by Harvard’s Bureau of Study Counsel (BSC).

Those brave enough to come to the session at the Office of Career Services (around 20 listeners) got a reward: a pink button stamped “Rejected” and a booklet of 28 Harvard stories of personal failure.

The essays include one by a Harvard grad turned down by Starbucks. Others tell tales — softened by the mercy of passing time — of being rejected as novelists, column writers, business school students, lawyers, and jewelry makers.

Then there’s George Church. He repeated ninth grade and flunked out of a Duke University Ph.D. program.

But revenge is sweet. Church enrolled at Harvard the following year, earned a doctorate in 1984, and went on to write the first automated DNA sequencing software, win 10 patents (with others pending), and serve on 22 scientific advisory boards. He’s now a professor of genetics at Harvard Medical School and director of the Center for Computational Genetics.

Despite present-day success, all of the Harvard essayists had experiences with rejection “that stayed with them years and years,” said booklet editor Abigail Lipson, who is the BSC director.

The staying power of rejection was evident to the panelists.

Meng remembers a single flubbed test in college that kept him from eating or sleeping for days. But he remembers, too, what landed him at Harvard: his rejection from graduate school in

(See Rejection, next page)
China. “I’m really thankful they rejected me,” said Meng. “That’s why I’m here today.”

The panel took for granted that failure is sometimes the nudge you need to send your life in another, more fruitful, direction.

Patricia Hernandez ’04, a research associate at Harvard Business School, came to Harvard with her sights set on medical school — then hit a wall of C-plus grades in her science courses. “I should have realized my passions were elsewhere,” she said — as in the passion she is cultivating now for research and psychology.

“Rejection,” said Hernandez, “is a great signaling tool.”

Lipson called those redirecting moments of rejection “a sharp left” along a career path.

Panelist Lowry Pei ’67 is a professor of English at Simmons College. His first novel was a smash hit — and the next six were all turned down.

“I have harvested a hell of a lot of rejections,” he said, reflecting on the fickle publishing world. “Eventually you decide it’s not about the product, but about the process.” (Pei ended up posting all his novels online.)

Meng is a department administrator and was until recently a journal editor — positions that have allowed him to understand the process of rejection “from the other side,” he said.

“Once I became an editor, I became incredibly brutal” — obliged to review 400 papers a year and still maintain a 15 percent acceptance rate.

With perspective from both sides, Meng offered those suffering rejection what he called “three F-words” of advice: Forget it for 48 hours. Find a way to improve. And “forgive those who rejected you,” said Meng. “Sooner or later, with all your good intentions, you will reject others.”

Meng’s contribution to the booklet was a two-page “statistical theory of rejection.” Its five theorems were a wise invitation to relax.

“For any acceptance worth competing for,” one offered, “the probability of a randomly selected applicant being rejected is higher than the probability of being accepted.”

Another theorem stated what is both obvious and hard to accept: “The probability that you will be accepted for everything you compete for is zero.”

In the audience for the 90-minute panel were students standing at ground zero of a troubled economy, including several seniors 60 days from graduation (and still jobless).

One had been applying for work since February — and the rejections were piling up. She learned one thing, at least, she said. A Harvard degree is no guarantee of landing employment.

Lipson agreed. “There is no one,” she said, “who has never been rejected.”

Scholars take a look at decision making

By Corydon Ireland
Harvard News Office

Decisions, decisions. We all make them, starting with which side of the bed to get up on in the morning.

But on a personal and public scale, many decisions have grave consequences for health, financial well-being, and — true enough — the fate of the planet.

As important as it is, decision making has been the subject of very little intellectual inquiry. Experts from many disciplines are just starting to untangle the intellectual, social, emotional, and anatomical factors that relate to making choices.

A lot of this untangling took place during “Improving Decision Making: Interdisciplinary Lessons from the Natural and Social Sciences,” a symposium last week (April 17) at the Radcliffe Institute for Advanced Study.

The symposium “spans multiple disciplines,” said Rosalind A. Segal, director of the science program at the Radcliffe Institute. Scholars from Harvard alone, she said, represented business, government, medicine, and the sciences. (Segal, one of the event organizers, is a professor of neurobiology at Harvard Medical School.)

The same interdisciplinary approach is employed at the new Harvard Decision Science Laboratory, which opened last December at the Harvard Kennedy School.

Decision science is in its infancy, but at its scholarly core are two older disciplines, economics and psychology. The resulting hybrid of “behavioral economists” are starting to make their voices heard, especially in public policy.

Take health care, for instance. Lots of evidence of bad decision making there, said Carnegie Mellon University Professor George Loewenstein, a pioneer among behavioral economists.

From 1960 to 2000, rates of U.S. obesity more than doubled, he said — and 71 percent of Americans are either obese or overweight.

The social consequences: One-third of all deaths are now linked to lifestyle factors controlled by personal decisions.

And what about personal finance? A similar mess, said Loewenstein. Americans have low savings rates and high debt rates. The typical U.S. household staggers under $9000 in credit card debt and pays $1,000 a year just to service it.

Meanwhile, public policy attempts to reverse these sad trends are failing because they rely too much on simply imposing better information, a tactic that evidence shows doesn’t work. “Knowledge increases,” he said, “but without similar changes in behavior.”

Nearby two decades of nutrition labeling is a flop — people are getting fatter. And recent municipal efforts to limit fat in New York City restaurants have — perversely — led to more supersizing at mealtimes.

Loewenstein urged new pathways to public policy on debt, diet, and other social problems. He suggested using typical human “decision errors” — laziness, short-sightedness, an aversion to losing money — to improve behavior.

For one, reset default options — like 401(k) savings plans that people have to opt out of rather than sign up for.

For another, “incentivize” behavior change. Loewenstein likes weight-loss programs that require monetary “deposit contracts,” for instance. Fail to lose the number of pounds you contracted for and you lose your money. This triggers “loss aversion,” he said. “People really hate losing money.”

A similar insight is at work on the areas of the brain that affect behavior, said Yale University’s Dean S. Karlan. He’s a behavioral economist who studies economic and health behaviors in the developing world.

In Peru, Bolivia, and the Philippines, Karlan tested a low-tech way to increase savings rates: frequent reminders via cell phone text messages or letters. Within a year, he said, savings rates increased by 6 percent.

Complex neural systems affect decision making, a fact that has prompted a new world of inquiry — “decision neuroscience” — that sometimes gets down to the level of single cells.

Antoine Bechara, who teaches neuropsychology and psychology at the University of Southern California, outlined his recent work on the areas of the brain that affect decision making. He proposed a “somatic marker framework” for understanding the neural networks controlling emotions, impulse control, and craving.

Decision science investigates the personal, the public, and the medical — and it also has a role in the realm of work.

Carnegie Mellon economist Linda C. Babcock considered the rapid decisions women have to make when negotiating for higher pay, benefits, or promotions in a working world still dominated by men.

Her studies investigate the efficacy of various “scripts” women can follow during negotiations. But in every scenario, she said, women face social backlash for being too aggressive or too timid. Babcock called this decision dilemma “a tightrope.”

In brief concluding remarks, Harvard College Professor Daniel Gilbert — a social psychologist — swung back to decision making’s wider frame.

“We are the only species that actually has a chance of dying by its own hand,” he said — and bad decisions “are the only enemy we have.”

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The human colonization of Australia and the Americas examined

By Amy Lavoie
FAS Communications

A recent symposium about the prehistory of Australia and the Americas brought together scholars from 10,000 miles apart. But that’s nothing compared to the journey early humans made to populate Australia and the Americas tens of thousands of years ago.

The “Harvard Australian Studies Symposium: People Colonizing New Worlds” took place on April 17 and 18 at the Gutman Conference Center. The symposium brought together 27 scholars from Australia and the Americas to examine issues surrounding the colonization of these two landmasses, the last populated by modern Homo sapiens. Humans first inhabited Australia about 50,000 years ago, while the Americas were colonized about 15,000 to 20,000 years ago.

With presentations from archaeologists, biological anthropologists, and geneticists, symposium participants discussed the circumstances under which people came to inhabit these continents, and what the early populations might have looked like.

The symposium’s topic was conceived by Iain Davidson, visiting chair of Australian studies at the University of New England in Australia, who co-hosted the program with Harvard’s Noreen Tuross, Landon T. Clay Professor of Scientific Archaeology. The program was supported by Harvard’s Australian Studies Committee, which is chaired by David Haig, professor of evolutionary biology. It was the first Harvard Australian Studies symposium in what is intended to be an ongoing annual series.

“The parallels and differences between the Americas and Australia are so extreme,” Haig argued, “that in many of these research topics, it is the American case that is a good example of the American case.”

Petraeus talks of lessons learned, challenges ahead

By Colleen Walsh
Harvard News Office

Gen. David H. Petraeus, chief of the United States Central Command, spoke at Harvard April 21, offering his perspective on leadership and lessons learned in Iraq, and his take on the United States’ strategy for the future security of Afghanistan and Pakistan.

His appearance at the John F. Kennedy Jr. Forum was a special ticketed event under tight security. Outside, a handful of protesters with signs stood in the rain on the sidewalk along the Littauer Building. But inside, the mood was foreign affairs friendly as Petraeus engaged in a conversation with David Gergen, professor of public service at Harvard’s John F. Kennedy School of Government (HKS) and director of its Center for Public Leadership.

“When you went to Iraq people said it was hopeless ... and it turned around,” said Gergen. “What leadership lessons did you learn from Iraq?”

“We sat down and we tried to get the big ideas right,” responded Petraeus.

Four primary ideas emerged from this analysis, he said, the first and foremost of which was the notion of securing and serving the people — something that could only happen by American forces living directly with the Iraqi population.

“You can’t commute to the fight,” as we say. You can’t drive through the neighborhood a couple of times a day and go back to your big base and expect them to feel a sense of security.

Educating commanders about key strategies, overseeing their execution, and effectively exploiting lessons learned from the strategies’ employment were the other top three “big ideas,” said the general, who admitted to reading Bruce Catton’s “Grant Takes Command,” as a source of inspiration and guidance at the end of particularly difficult days in Iraq.

Clearing an area of insurgents, holding it, maintaining its security, and building up the area are other essential moves in the securing of any hostile region. Equally important is the next step: promoting reconciliation.

“You have to promote reconciliation. You can’t kill or capture your way out of an industrial-strength insurgency like that which we faced in Iraq,” noted Petraeus, adding that the process involved separating hard-core radicals who would be “part of the problem forever” from those who were reconcilable and could become part of the solution.

Petraeus took command of the multinational force in Iraq in 2007 and is widely considered responsible for the success of the troop surge and the subsequent reduction of violence and attacks on U.S. forces.

“The general, who is known for his ease at connecting with troops, praised the effectiveness of e-mail, a tool that he said enables him to communicate directly with his junior officers, a key component of good leadership.

“It’s a wonderful tool, it does allow you to reach down. It also allows them to reach up,”

Many of the lessons learned and the ideas developed from the conflict in Iraq can be applied to the situations in Afghanistan and Pakistan, said Petraeus, but not without modification.

The goal in working with Pakistan, whose Afghanistan border has become a haven for insurgents, is to help its officials understand that their country’s biggest threat comes from internal extremists, not from neighboring India, said Petraeus. He noted the difficulty of communicating this relatively foreign concept to many Pakistanis, calling it “intellectually disorienting.”

Afghanistan was the subject that raised the most questions among the forum crowd, many of whom wondered about the best way forward.

While many of the same strategies and lessons learned from Iraq apply to Afghanistan, said Petraeus, numerous other factors are at play. Understanding institutional structures and influences, important cultural differences, and the rampant drug trade (the “oxygen of terrorist movements”) are all critical.

Above all, he noted, the process of securing the country will take time. The United States is committing additional troops and financial aid and is training civilians who will complement local security forces. But the security situation won’t improve right away.

“We do believe that we can achieve progress,” Petraeus said, “but it’s going to get worse before it gets better, just as it did in Iraq.”
Australia
(Continued from previous page)

The presentations were organized thematically by topic, such as “Initial Colonization,” “Adaptation,” and “Art, Identity and Society.” Each topic featured an American and an Australian.

Presentations ranged from the extinction of megafauna — giant birds, mammals and reptiles — to the adoption of agriculture and the cultures and rituals of these early peoples. June Boss of the University of New England spoke on how different rock art traditions may have influenced the region, which is home to more than 2,100 languages.

Iain Davidson: “Genetics can tell us when people arrived on these continents. However, they can’t tell us as much about what people did once they arrived, whether they did agriculture or not, or about their social choices and organization. And they can’t tell us anything at all about art, or about ritual.”

Likewise, to cross into America from northeast Asia, housing, clothing, and storage were needed to survive harsh northern temperatures.

Over the long time I have been working with the idea that the cognitive abilities that you need to build a boat, go fishing, and perhaps cross to the other side of the ocean ... are perhaps very similar to the cognitive abilities that people had to have to set up and organize the very cold environments of the north, which you need to get across to the Americas,” says Davidson. “That for me was the breakthrough, that here is a similar cognitive process.”

Questions about the timeline for the colonization of the continents were addressed through archaeological evidence, such as stone tools, and genetic data. “Genetics can tell us people arrived on these continents,” says Davidson. “However, they can’t tell us as much about what people did once they arrived, whether they were hunter gatherer or not, or about their social choices and organization. And they can’t tell us anything at all about art, or about ritual.”

amer_lavie@harvard.edu
Crimson undaunted by Crusaders, top Holy Cross, 11-4

By Gervis A. Menzies Jr.
Harvard News Office

Disappointment struck men’s lacrosse after they dropped their midweek tilt against No. 14 Brown on April 15, which may dampen the team’s chance to make their first NCAA tournament appearance since 1998. So, when the No. 17 Crimson came out flat on Saturday (April 18) against a struggling 3-10 Holy Cross team, the Harvard men found themselves pressed to find some sort of inspiration.

After 30 minutes of play, the Crimson’s humble 2-1 first-period lead was increased by one more goal before halftime. This, compliments of Holy Cross netminder Jimmy Harrison who — despite facing 19 Crimson shots — allowed only three to rattle the net. Harrison ended the first half with eight saves, and, despite being down a couple of goals, the Holy Cross Crusaders entered the second half with a bit of confidence, while the Crimson stood in need of a little encouragement.

In his halftime speech, along with offering strategic adjustments, second-year head coach John Tillman challenged his team to dig deep in the second half. “Honestly, I said, ‘It’s not about talk right now, it’s about getting it done. It’s about someone stepping up on each end of the field, being a better leader, and doing what we do better. But no more talk, its about action.’”

The Crimson came out with a response via the stick of freshman Jeff Cohen who opened the half with his second and third goals of the game. And despite two goals by the Crusaders to cut the lead to 5-3, the Crimson tallied four consecutive goals (including two more by Cohen), that quieted the Holy Cross attack and allowed the Crimson to put on cruise control and take their sixth win of the season.

“I thought we came out a little bit flat,” commented junior attackman Travis Burr. “We weren’t too happy with how we started, but we’ve come off a couple tough losses and everyone was pretty worn out from the last three games, but as we came down, everyone kind of pulled together and we got it done.” Burr was instrumental in the Crimson’s success, tallying two goals early and adding an assist to help lead his team to victory.

“Travis Burr has, through the last couple of games, emerged as one of our leaders,” said Tillman, “especially on the offensive end, and it showed today. … The last few days, where other guys may have been a little bit disappointed, his energy has increased and his leadership has increased, and it didn’t surprise me today that he played well. Not only did he play well, he made the other guys around him play well and that’s a credit to Travis.”

Cohen, who finished the day with six goals and the best single-game performance by a Harvard player since his brother Steve in 2007, now appears to be a favorite for the Ivy Rookie of the Year award. The freshman leads the Crimson in goals and points, is fourth in the Ivy League in scoring, and was named Ivy Rookie of the Week on Monday (April 20) for the second time. Only one other Ivy Player has been honored twice (Tyler Fiorito, Princeton).

The No. 17-ranked Crimson, standing at 6-5 (1-3 Ivy League), have just two more games left on their schedule as they look to complete the season with their best record since 1998. And although the Crimson’s loss to Brown may put a damper on the team’s postseason aspirations, the talent on Harvard’s young roster appears to be ready to make an NCAA push next season.

“Our seniors have never had a winning record so I think that’s going to be a big goal for us,” said Cohen. “And also we have two Ivy League opponents, Yale and Dartmouth, obviously rivals; it would be good for our seniors to get those wins and [for the team to] get momentum going into next year.”

SPORTS BRIEFS

Men’s volleyball fall to Rutgers-Newark, split Hay title

Despite dropping the Scarlet Raiders at Malkin Athletic Center in five games a month before, the Crimson were unable to stop the powerful Rutgers-Newark attack (which hit a combined .337) in a three-game sweep of Harvard on Friday (April 17), snapping the Crimson’s five-game winning streak. For the Raiders, the win earned them a share of the EIVA Hay Division title with the Crimson as well as the No. 7 seed in the upcoming EIVA Conference Championship (April 22-May 2), while Harvard received the tournament’s No. 8 seed.

Women’s heavyweights retain O’Leary Cup

On Saturday (April 18), Radcliffe’s heavyweight crew defeated Dartmouth and Syracuse on Onondaga Lake to hold on to the Elizabeth O’Leary Cup, with wins in the second varsity eight, varsity four B, and varsity eight races. This year’s victory marks the seventh win for the Black and White in the 10-year history of the event. The Black and White return home next weekend for the Charles River Challenge. The team will race three different times, starting Saturday morning (April 25) against No. 1 Yale.

Women’s softball inch closer to North Division title

This past weekend, the Harvard women’s softball team, led by Jennifer Francis ’10 and Bailey Vertovez ’09, traveled to Providence, R.I., to take three of four games from the Brown Bears. At the plate, Francis went 9 for 13 on the weekend, while Bailey went 8 for 11. The two also had five RBI apiece, helping the Crimson to their fifth win in seven games. For her weekend play, Vertovez was named Ivy Player of the Week, and the award marks the first time a Crimson player has received the honor this season.

After a Thursday (April 23) doubleheader against Holy Cross, the Crimson will close out their Ivy League schedule with a doubleheader against Dartmouth in Hanover on Saturday (April 25) followed by a Sunday (April 26) doubleheader at home. Currently, the Crimson sit a game behind Dartmouth for the North Division’s best record. If the Crimson can manage to take three out of four from the Big Green, Harvard will win its third straight North Division title, and the stage will be set for the Ivy League’s best-of-three-championship series May 2-3.

— Compiled by Gervis A. Menzies Jr.
NEWSMAKERS

Chylock, Dowling ARVO Fellows

The Association for Research in Vision and Ophthalmology (ARVO) has named Har- vard Professor of Ophthalmology Leo T. Chy- lock and Boston Children’s Hospital’s Clara Gund Professor of Neurosciences John E. Dowling as 2009 fellows. Chylock and Dowling will re- ceive their fellowships in May at the annual ARVO meeting in Fort Lauderdale, Fla.

Both have been named distinguished Gold Fellows, the highest-ranking fellowship, determined by a rigorous point system. Fel- lows are recognized for basic establish- ments, leadership, and contributions to ARVO.

As fellows, Chylock and Dowling will con- tinue to serve as role models and mentors for individuals pursuing careers in vision and ophthalmology research and to further ARVO’s vision “to facilitate the advance- ment of vision research and the prevention and cure of disorders of the visual system worldwide.” This includes advancing basic and clinical knowledge and serving as the leading international forum for vision re- search and the primary advocate for vision science worldwide.

Seniors Buzney, Barron win Mellinger Award

Harvard-Radcliffe Orchestra (HRO) mem- bers Catherine Buzney ’09 and Christine Barron ’09 have been named recipients of the Rachel Mellinger Memorial Award.

Established by James Schlesinger A.B. ’50, A.M. ’52, Ph.D. ’56, the award recog- nizes outstanding undergraduates who have made significant contributions to the orchestra and have demonstrated leader- ship abilities and dedication to the highest ideals of the group. The award also recog- nizes the future potential of the recipients while helping to advance their interests and endeavors.

The award honors Rachel Mellinger Schlesinger, a 1952 graduate of Radcliffe and violinist in the HRO.

Two Harvard freshmen recognized by Discover Magazine

Harvard College freshmen Anastasia Roda and Isha Jain have recently been fea- tured in Discover Magazine’s “Teen Genius: 5 Promising Scientists Under 20,” which highlights outstanding young scientists who tackle some of the biggest challenges in science.

Roda was recognized for her research on the environmental impact that the oldest nuclear power plant in the United States has on the surrounding creeks. Roda found that the creeks closest to the Oyster Creek Generating Station (near the New Jersey shore) maintained higher temperatures and faster currents, and that the water further downstream had higher bacteria levels. Roda then worked to raise awareness about her findings to the public and to engi- neers who design nuclear facilities. The Lancaster, Pa., native plans to focus on environmental studies and marine biology.

Jain investigated limb growth by using a number of techniques—including fluores- cent microscopy—to look at how bone grows in zebra fish fins. Her findings may play a role in healing bone injuries and treating bone disease. Jain’s work was rec- ognized with a $100,000 scholarship at the 2007-08 Siemens competition, and her re- sults were published in the journal Develop- mental Dynamics. A native of Bethelhe- nny, Pa., Jain plans to attend medical school.

— Compiled by Gervis A. Menzies Jr. and Sarah Sweeney

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Tiktaalik

The HMNH is sponsoring this year’s Evolution Matters lecture series, at which Nei Shubin talked about “Finding Your Inner Fish.”

Photo by Tony Rinaldo

(Continued from page 1)

Looking into what little had been written about the area, Shubin discov- ered a 1974 paper that compared the rock formations there with those he was familiar with. Shubin contacted his doc- toral adviser, Farish Jenkins, the Agassiz Professor of Zoology at Harvard, who had previously worked in the Arctic. The following summer, Shubin, Jenkins, and colleagues were in the Arctic, hiking over bare rock formations under a sun that never set.

Shubin told the story of Tiktaalik’s discovery, which drew international at- tention when it was announced in 2006, before a packed audience in the Geologi- cal Lecture Hall. His talk, “Finding Your Inner Fish,” was the last in this year’s Evolution Matters lecture series, spon- sored by the Harvard Museum of Nat- ural History (HMNH). The event also marked the opening of a new permanent exhibit at HMNH on evolution, com- plete with a model of Tiktaalik.

In several seasons of challenging fieldwork before Shubin’s team found what they were looking for. The amount of gear they could carry in and the amount of fossils they could carry out was limited by the small planes and he- licopters they used to reach their re- search sites. They lived in tents on bare, wind-swept tundra, kept firearms near- by in case polar bears threatened them, and spent their days walking and looking for telltale traces of fossilized bones washing out of rock layers nearby.

They eventually found an area in southern Ellesmere Island where the washed-out bones were abundant. Though they had some difficulty track- ing the bones back to the original rock outcropping, they eventually found it, and, after extensive digging, unearthed three specimens ranging in length from 4 feet to 9 feet.

That was just the beginning of the discovery. The specimens were brought back from the Arctic still largely encased in rock. Preparers had to painstakingly remove the rock from the fossilized bone, bit by bit, to avoid damaging the fossil, before Shubin and his team could see the creature.

The result was Tiktaalik—an Inuit word meaning “large fish”—a creature that had both fishlike and land animal features. It had fishlike scales, fins, and gills, but also had lungs and robust front fins with a wrislike bony structure sim-

Related story: Missing link crawls out of muck, www.news.harvard.edu/gazette/ 2006/04/06/missinglink.html

LGBT conference on ‘Politics, Policy and Progress’ at HK5

On Friday (April 24) the Harvard Kennedy School (HKS) will host a confer- ence titled “Politics, Policy and Progress: Gay Rights as Human Rights.” Among the many guests in attendance will be Lance Black, the Oscar award-winning screen- writer for “The event, beginning at 12:30 p.m., will take place at the Kennedy School, with panels in Littauer 130, Bell Hall, Starr Auditorium, and the JFK Jr. Forum.


Handel’s ‘Saul’ to be performed in memory of John Raymond Ferris

The Harvard University Choir and the Harvard Baroque Chamber Orchestra will present Handel’s magnificent oratorio “Saul” on April 26. The performance is dedicated to the memory of John Raymond Ferris, University orchestrator and choirmaster from 1958-1990, who passed away last summer.

The oratorio focuses on the last king of Israel’s relationship with his eventual suc- cessor, David, as described in the First Book of Samuel. The work features majes- tic orchestration, dramatic choruses, and vivid characterization — it is considered one of Handel’s finest creations.

A distinguished roster of profession- al soloists will join the choir and or- chestra for the performance, which is also a commemoration of the 250th an- niversary of Handel’s death.

The performance takes place at the Memorial Church at 4 p.m. Tickets can be purchased at the Harvard Box Of- fice, (617) 496-2222, www.boxoffice.harvard.edu.

Despite economy, Daffodil Days still comes up roses

With good news comes the bad news. This year’s Daffodil Days event held on March 16, raised $51,726 in funds for the American Cancer Society — the first time in its 22-year history that this year’s total did not exceed the previ- ous year’s total ($53,329). However, with the economic downturn taken into consideration, "I still think we did fabu- lously," said Daffodil Days coordinator Julie Russell.

Harvard sold 2,320 bouquets; 93 Bear and a Bunches; 524 potted bulbs; and 456 Gifts of Hope. Top sellers this year included Peter Conlin and the Alumni Affairs and Development team who collect- ed $6,430; Maura Kelley at the Law School who sold $2,810; and Martha Foley from the Kennedy School with $2,305.

Also notable is Rita Cormery, a retired Harvard staff member who donates from her home in Arlington, Mass. A breast can- cer survivor, Cormery founded Daffodil Days out of her office 22 years ago.

“Compiled by Gervis A. Menzies Jr. and Sarah Sweeney

Send news briefs to gervis_menzies@harvard.edu
Lighting fuse for Cambrian Explosion

Pre-Cambrian microfossils may be early animals

Harvard paleontologists have shed new light on one of the most enduring mysteries of life on Earth: the origins of the creatures that suddenly appear in the fossil record some 530 million years ago in an event known as the Cambrian Explosion.

In work that led to Australia and back, researchers believe that microfossils previously thought to be algae may actually be a specialized type of egg case, laid by an animal precursor for complex animal life, a potential precursor for the rapid diversification that followed.

The events occur at a time when the Earth’s atmosphere was growing richer in oxygen, which may have opened the door to larger-bodied creatures. Those first animals, Cohen said, may have predated the time of the Cambrian Explosion itself but be absent from the fossil record because their soft tissues weren’t preserved. Only later, when hard parts evolved, would they appear relatively suddenly as fossils.

Cohen had done some previous work with acritarchs, but had accepted the prevailing algae explanation until four years ago, when Knoll gave her a paper by marine biologists about recently discovered marine fossils of the resting eggs of small marine crustaceans called copepods. Intrigued, she began looking for more animal eggs to compare with the pre-Cambrian acritarchs.

“More I found, the more I realized they look astonishingly similar to these Ediacaran fossils,” Cohen said.

After examining hundreds of samples of these fossils, called acritarchs, and comparing them with both algae and the eggs of modern and fossil crustaceans — a group that includes shrimp — Cohen has come to a different conclusion. Rather than being algae, they most closely resemble a specialized egg created by modern crustaceans — called a resting stage — that is able to lie dormant for years waiting for favorable conditions before hatching.

If that is the case, the creatures that created those microfossil eggs would be tiny, but complex animal life, a potential precursor for the rapid diversification that followed.

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“The more I found, the more I realized they look astonishingly similar to these Ediacaran fossils,” Cohen said.

After comparing their size, shape, and ornamentation, Cohen went further, examining their internal structure, finding that the pre-Cambrian microfossils more closely resembled the resting-stage egg of tiny animals than they do algae.

“Many invertebrate groups make resting stages similar to these Ediacaran fossils, and in a way that no other modern creature does,” Cohen said.

Harvard nutritionists take aim at sugary drinks

By Alvin Powell
Harvard News Office

Comparing the nation’s obesity epidemic to a house on fire, Harvard nutrition experts took aim at sugar-sweetened beverages Monday (April 20), recommending the creation of a new, low-sugar alternative and urging adults and children alike to quench their thirsts the natural way — with water.

Walter Willett, chair of the Harvard School of Public Health’s Nutrition Department, and Lilian Cheung, who directs the department’s Nutrition Source Web site, said Americans are getting fat because they’re eating more, consuming about 300 calories a day more today than they did 30 years ago.

About half of that comes from soda, fruit juice, and other sugary drinks.

“We are in the midst of an obesity epidemic. The rates of obesity in children have increased three- to fourfold during the last 30 years. At this time about two-thirds of the adults are either overweight or obese,” Willett said. “This is critical, the house is on fire, because we know there are huge adverse health consequences of overweight and obesity.”

The negative health effects of obesity are well known, with links to diabetes, heart attack, stroke, cancer, high blood pressure, liver disease, and osteoarthritis, according to the Centers for Disease Control and Prevention. A study by HSPH researchers published in April showed that women who drank more than two servings of sweetened beverages a day had an almost 40 percent higher risk of heart disease than women who rarely drank them. The obesity epidemic, Willett said, could undo the gains in health and life expectancy made over recent decades.

(See Beverages, next page)
Malnutrition, obesity present global food challenges

**HIGH symposium examines unfinished nutrition agenda**

By Alvin Powell
Harvard News Office

Even as public health officials deal with the age-old problems of starvation and malnutrition, new nutritional maladies linked to Western diets and lifestyles are spreading around the world, complicating the global nutrition picture.

Experts say the expansion of obesity and diabetes around the world is presenting international health experts with a new agenda even as they struggle with the unfinished agenda of malnutrition, which remains a global health problem that underlies 44 percent of childhood deaths each year.

The abandonment of traditional diets filled with fruits, vegetables, and whole grains in favor of diets with processed foods and simple carbohydrates is taking hold even among the middle class of the world’s poorest nations, according to speakers at the Harvard School of Public Health (HSPH) on April 15.

The speakers were part of a symposium on global nutrition called “The Unfinished Agenda of Nutrition & Global Health: Challenges and Opportunities.” The event was sponsored by the Harvard Nutrition and Global Health Program at the Harvard Initiative for Global Health (HIGH).

Professor of Nutrition and Epidemiology Wafaie Fawzi said the Harvard Nutrition and Global Health Program is designed to draw on the expertise of Harvard’s various Schools and on that of local partners to understand the nutritional challenges around the world.

Speakers at the event came from as far away as India and Brazil and presented local views of the ongoing problems in their countries.

HSPH Dean Julio Frenk, who delivered opening remarks, said that some developing nations are not simply lagging behind Western nations on the path to development, but are instead off course. Such “mal-development,” as he termed it, is due to mismanagement and has some nations dealing with the problems of both malnutrition and obesity at the same time, coupled with the fight against infectious disease and new threats like the health effects of global warming.

“Many low- and middle-income countries are the victims of mal-development,” Frenk said. “The old and the new problems coexist in a complex present.” Though the problems are challenging, Frenk said that modern science has given public health workers and administrators more knowledge and tools to address them than ever before.

The event’s keynote speaker, Jaime Sepulveda, director of the Bill and Melinda Gates Foundation’s Integrated Health Solutions Development Program and former director of Mexico’s National Institutes of Health, said slow progress against malnutrition is common around the world. Though the first United Nations Millennium Development Goal would halve the number of people living in extreme poverty and hunger by 2015, just a handful of nations are on track to achieve that goal. Sepulveda said some are even backsliding from where they were in 2000 when the goals were adopted.

Sepulveda outlined the progress that Mexico has made in recent decades, where the incidence of stunting—one measure of malnutrition—decreased dramatically in recent years. He credited Mexico’s “Progress” program with focusing nutritional dollars where they’re needed most—in the rural south. One feature of the program is conditional cash transfers, which are payments to families of low socioeconomic status. The program is designed so that the payments go to women on the condition that their children are kept in school, vaccinated, and healthy. The program also provides fortified foods for pregnant women and children to improve health during the critical first months of a child’s life, up to age 2.

Despite the progress made under the program, Sepulveda said it will take Mexico 22 years at current rates of progress to attain the first Millennium Development Goal, so more needs to be done.

“Nutrition has no champion, no Global Fund,” Sepulveda said. “We need to raise the visibility of nutrition as a field and of undernutrition as a problem.”

Sustainable day-to-day changes in the behavior of the food industry and the consumers are needed to battle both obesity and undernutrition. “We as individuals ought to drink more water,” Cheung said. “This is a very serious problem; we really have to take this on directly.”

Willett and Cheung also called for a society-wide effort to reduce the consumption of these drinks, recommending that the government force companies to list the total number of calories per can—rather than per serving—on a container of soda or other beverage and levy sales taxes on the beverages. They said that schools and workplaces should offer healthy beverage choices, in smaller serving sizes, and make sure water is available. They also called on individuals to make healthier choices at home and on family food shoppers’ lists.

Willett and Cheung didn’t recommend replacing sugary drinks with artificially sweetened ones, saying those substitutes have been on the market for years and have had no impact on the obesity crisis, probably because they don’t force us to retrain our palates.

Beverages

(Continued from previous page)

“Though Willett and Cheung said water is the best beverage option, they said Americans might need to be weaned from their super-sugary tastes. After a survey of current beverages on the market, they found very few available that have a low level of sugar. They proposed the creation by manufacturers of a new class of slightly sweetened beverages having no more than 1 gram of sugar per ounce—about 70 percent less than most soft drinks today—and that do not rely on artificial sweeteners.”

Willett said the typical 12 ounce can of soda has 10 teaspoons of sugar, while the common 20 ounce size contains 17 teaspoons of sugar.

“If you could imagine gulping down 17 teaspoons of sugar, it makes you want to gag,” Willett said.

Cheung said that the key to such an effort will be for Americans to retrain their palates away from sugary drinks and toward healthier alternatives. That may take some doing, since four out of five children and two out of three adults consume the drinks daily, while a typical teen boy drinks more than a quart of sugary drinks a day.

For more information on HSPH Nutrition Source, www.hsph.harvard.edu/nutritionsource/

“We as individuals ought to drink more water. Water is free and it has no calories.” Cheung said.

The Harvard School of Public Health’s Nutrition Department has added information on sweetened beverages and new recommendations on beverages to its Nutrition Source Web site to help consumers make healthy choices.

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Rules Governing the Development and Distribution of New Medicines

Under the TRIPS agreement – part of the WTO Treaty – inventors of new medicines must be granted 20-year product patents in all WTO member states. TRIPS was added to the WTO Treaty through pressure from the Clinton Administration which, in turn, was pressured by the IP-heavy industries: software, entertainment, pharmaceutical, agribusiness.

Under Pogge/Hollis proposal, worked out under Pogge’s proposal, worked out with University of Calgary economist Aidan Hollis, affluent nations would chip in $6 billion a year, which should be a large enough pool to start the program. Each year’s pool would be divided up among the manufacturers whose drugs were listed at any given time. He foresees about 20 drugs on the list at a time.

“It’s registered and you get health impact rewards,” Pogge said. “You don’t give up any intellectual property rights.” A pharmaceutical manufacturer would, however, give up the right to a profit on the sales price. Under the Pogge/Hollis proposal, “the registrant must agree to make the new medicine available wherever it is needed at the lowest feasible cost of manufacture.”

The reward is for contributing to public health, not for selling pills, in other words. “Perverse incentives” is a phrase on the lips of many analysts of the current financial crisis. Too many actors have been rewarded for taking risks but not punished for poor performance.

But Pogge made the case that the current system of compensating drugmakers has its own perverseities as well. He explained that under the current system of international commerce, a country joining the World Trade Organization must sign on to a package of accords including the so-called Trips Agreement, which covers trade-related aspects of intellectual property rights.

This agreement obliges signatories to grant 20-year product patents for, among other things, drugs. This locks countries into the high-markup business model for medicine, and that, in turn makes it hard if not impossible to make drugs available at low cost.

The current system provides incentives for counterfeiting. Pogge said. In the pharmaceutical world, this means making knockoffs with just enough of the active ingredient to pass for the real thing but not enough to be medically effective. Instead, these underpowered fakes help create drug-resistant strains of diseases.

And by making it profitable for drugmakers to serve the poor, the Health Impact Fund would also protect against diseases such as Severe Acute Respiratory Syndrome (SARS) that fester largely untreated in the developing world for years and then burst suddenly onto the scene in the developed world. SARS apparently originated in China and spread to 27 countries, infecting thousands and killing nearly 800 during a near pandemic from November 2002 and July 2003. It could have been much worse, Pogge suggested. “We were lucky with SARS,” he said.

One challenge to the Health Impact Fund concept was raised in a question from the floor posed by Norman Daniels, Mary B. Saltonstall Professor of Population Ethics and Professor of Ethics and Population Health at the Harvard School of Public Health, who told Pogge, “A presupposition of your scheme is that we know how to measure the contribution of a specific drug. I’m not sure we do.” He went on to say that many drugs are delivered in systems, which themselves make a contribution to patient health.

Nonetheless, Pogge ticked off the advantage of the Health Impact Fund as a “local point of structural reform”. It isn’t driven only by concern for the poor — it helps benefit the pharmaceutical industry, too.

It’s scalable. The fund could be increased or adjusted in light of experience. And manufacturers could decide to transfer some drugs from the patent track to the fund track depending on whom they benefit.

The fund “strengthens those with objective interests in reform” and thus leads to “the empowerment of global poor.” It is an exemplar of realistic moral leadership, genuine moralization, and global public good. It would lead, he suggested, to “a reduction in global public evil.”

‘What Just Happened? What’s Next?’

An inter disciplinary examination of the current economic crisis

By Ruth Walker Special to the Harvard News Office

You might think of the little bits of good news that came out last week as the macroeconomic equivalent of the first crocuses of spring. There was the heartening word that the economy initial jobless claims are slowing. The stock market continues its modest rebound. And some analysts are cautiously suggesting that there might be economic growth again before 2009 is out.

But over at Two Arrow Street, participants in a daylong conference offered April 15 by the Weatherhead Center’s Project on Justice, Welfare, and the Economy are looking at the economy through a much longer lens. The conference was called “What Just Happened? What’s Next?” and its subtitle was “An Interdisciplinary Examination of Our Current Economic Crisis.”

In a presentation titled “The Crisis as an Opportunity for Structural Change,” Thomas Pogge, Ph.D. ‘83, of Yale University set forth his proposal for what he calls a Health Impact Fund (HIF). It’s meant to do nothing less than revolutionize the way medicines are provided to the global poor.

Under Pogge’s proposal, worked out with University of Calgary economist Aidan Hollis, affluent nations would chip in $6 billion a year, which should be a large enough pool to start the program. Each year’s pool would be divided up among the manufacturers whose drugs were listed at any given time. He foresees about 20 drugs on the list at a time.

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Interdisciplinary program on leadership hosts a host of fellows

By Colleen Walsh

Harvard News Office

Susan Leal intends to use her public sector expertise to address issues of water management and climate change. Former astronaut Charles F. Bolden Jr. is passionate about health. They both will likely turn his business acumen to education.

The three retired professionals are back in school as part of a new University-wide, interfaculty pilot project aimed at providing a rigorous educational program for experienced leaders seeking “encore careers” in public service.

The Advanced Leadership Initiative, a yearlong program hosting 14 fellows from wide-ranging backgrounds, including finance, the military, education, and the law, kicked off in December at Harvard with a three-day orientation. The innovative leadership active program is a collaboration between the faculty at Harvard’s Schools of Business, Government, Law, Education, and Public Health.

The program resembles a variety of different Harvard Schools and programs combined to form a unique curriculum. Participants audit classes from around the University (an activity similar to that of Nieman Fellow), take part in field seminars (modeled after those offered at Harvard Business School), and attend short, intense courses and workshops where the fellows, faculty, and students converge to discuss leadership topics and relevant cases on broad social issues, as well as engage in independent study. At the end of the year, each participant will present a paper outlining his or her plan of attack.

The idea for the program developed from something of an intellectual “perfect storm” — a task force addressing Harvard’s expansion to Allston in 2003, Rosabeth Moss Kanter and other professors from the University were asked to consider and develop an educational program for things like colloquia and conferences.

The notions of shared physical space prompted the Ernest L. Arbuckle Professor of Leadership and colleagues such as the Kennedy School’s David Gergen and the Harvard School of Public Health’s Howard Koh to consider other common areas of interest across the University’s various Schools. Leadership topped the list. Also on Kanter’s mind, after discussions with colleagues such as Rakesh Khurana at the Business School, was the current demographic revolution — the growth of an active aging population — and the knowledge that, as Kanter drily commented, “the world has a lot of problems.”

“We thought, ‘Why can’t we imagine a new stage of higher education, a new kind of program for universities that involves the needs of the 21st century for leaders, one that spans sectors and disciplines, and that taps the best people who have reached the top of their professions and can actually bring skills to solve societal problems?’” she said.

Creating a new group of leaders to take on global issues like poverty, health, educa tion, and the environment is only part of the equation. The program’s funders
The architect behind Barack Obama’s successful presidential run shared his insights at Harvard Kennedy School on the strategies behind the 2008 primary efforts and the first-term senator to the White House.

Speaking at the John F. Kennedy Jr. Forum on April 15, Obama’s campaign manager David Plouffe praised the work of grassroots organizers and volunteers who helped bring new voters to the polls in innovative and effective ways. He also spoke frankly of the Clinton campaign’s miscalculations—underestimating the effect that Obama’s victory in Iowa would have on the rest of the campaign, and overestimating the impact that the larger states would have in the primary race.

“I think that there was a belief in their campaign that the race would be over on Feb. 5, which was the day of 22 primaries,” said Plouffe, referring to Super Tuesday. “But they really didn’t organize in all 22 states. They organized in big states like Massachusetts and Illinois and New Jersey and California, with the belief that it would be more of a political victory than a delegate battle. We treated it differently.

“We treated it as an aggregation of 1,681 delegates in 22 states and if we could come close to even half, we survived. ...[And] we did better than that—the won the day, we won the states and delegates. And that morning of Feb. 6 was the first time I thought we were going to be the Democratic nominee.” Plouffe continued.

Although Clinton won 11 delegates from New Jersey, the Obama campaign won smaller states like Idaho—where Obama gained 15 delegates to Clinton’s three—which made up for losses in the larger states. Plouffe said the Clinton campaign eventually learned its lesson and became much more effective campaigners in places like Wyoming.

“They campaigned in [Wyoming]. They organized it. Hillary went there. Bill went there,” Plouffe said. “We still won 58-42. But if we had gotten 62.5 percent of the vote, we would have got an extra delegate. The whole tale of the primary is one of margins. We won a lot of landslides; she won less. Landslides are how you aggregate delegates.”

Plouffe referred frequently to the critical role that grassroots efforts played in the Obama campaign in engaging an entire new sector of the electorate.

“The point about the caucus states is that if the same people that turned out to caucuses every year turned out, we were going to lose. We had to change the electorate. And I think that’s one of the great triumphs of the campaign—we didn’t accept things as they were,” said Plouffe.

“Minnesota, Colorado, Missouri, Alabama—they were not organized by our staff. They were organized by universities, organizing their communities. And so when we sent staff into Minnesota, for instance, in September of 2007, the state was already half-organized. A remarkable thing. And that happened time and time again.”

On whether or not such grassroots efforts can be replicated in future campaigns, Plouffe said, “it all depends on the candidate and his or her ability to inspire the volunteers.

“I think many of our supporters in the end believed if they spent one less hour helping out, Obama may not have won. ‘This campaign was built on the backs of people who wanted change.’ ... If people did not think that Obama was authentically interested in their role in his campaign, that our success hinged on their performance, it wouldn’t have been the engine that drove our campaign.”

“Strategist behind Obama campaign talks tactics at HKS

By Lindsay Hodges Anderson
Kennedy School Communications

also hope the new effort will become a model for other institutions looking to serve an aging baby boomer population. Another goal is the reciprocal exchange of information: Organizers said they hope the fellows bring with them.

The collaborative nature of the effort is perhaps its most critical component, said Fernando Reimers, Ford Foundation Professor of International Education and director of the Harvard Graduate School of Education’s International Education Policy Program, and one of the program’s founding co-chairs.

“The solutions to the most vexing social challenges in the 21st century are not neatly placed within the confines of the most established disciplines, but lie at the boundaries across disciplines and professions,” said Reimers. “This presents an opportunity to universities to organize productive collaborations across professional boundaries to study and find solutions to these issues, while also preparing people for the challenges of improving the quality of education in low-income schools in the U.S. or abroad, or the challenges of improving health or social and economic justice.

The fellows were selected by a subset of the program’s 13 core professors. A real desire to engage with a university and a minimum of 20 to 25 years of demonstrated leadership accomplishments, including innovations in their primary field, were essential requirements.

“We are talking about people who are going to be real change agents,” said Kantor, who heads the program. “If they haven’t shown already that they can influence public opinion, organize something, lead large numbers, lead across borders, then they are not going to be able to tackle problems like poverty in Africa.”

Leal, former head of San Francisco’s Public Utilities Commission, is amazed at how her interest touches so many Schools at Harvard. Interested in water, waste and the compounding variable of climate change, she has already worked with students in a Business School course on water; with students at Kennedy School and interacting with professors from the Kennedy School and an engineering professor in the Faculty of Arts and Sciences.

While so much intellectual capital at arm’s length is inspiring, it can also be a little overwhelming, Leal admitted. Still, the California resident said she and the other fellows will look to their years of experience running large agencies, managing thousands, and taking on equally daunting tasks, for guidance.

“We know how to figure things out,” she said, adding that part of the challenge is “taking our past experience and putting that to work, pulling the great knowledge of Harvard and the wisdom that is here and making use of that.”

“I am feeling very optimistic that this program will help not only me but my colleagues in making some real, positive improvements in many of the world’s tasks that we have ahead. I think it’s great to pull people together that have a lot of wattage still that want to put it to use.”

For Bolden, leading more than 16,000 Marines is nothing new: Deciding what compelling issue to focus on while at Harvard is.

“We’ve been exposed to so much and there are so many issues that need attention,” said the veteran of four space shuttle missions who is interested in poverty, education, and health care. Ultimately, Bolden said, he hopes to learn more and start or back an organization in his hometown of Houston to support patients afflicted with sickle cell anemia, a disease that has taken the lives of friends.

Robert Whelan woke up one morning after leaving the world of corporate finance uncomfortably aware he no longer had an office to go to, no one to report to, and no future plan. A successful investment banker with close to 30 years of experience, the empty nester looked at his dog and said, “OK, pal, what now?”

Although the plan wasn’t in place, the feeling that there was something he still needed to do was there. Over the next several years Whelan was involved in a variety of nonprofit and for-profit boards and started two consulting firms, all the while contemplating his next big venture.

Recommended to the Harvard program by a friend, he decided to apply, was accepted, and now is investigating how to address social issues like education, youth development, and health care.

“There’s something nagging at me, there’s something else out there that I should be doing,” he said. “[Something] that would have impact and maybe be large impact, and still be doing good, which at this point in my line of work is more important than doing well.”

For Whelan the Harvard program is bringing him a step closer to that goal. Interacting with professors, students, and other graduates, he has helped him shape his thinking in invaluable ways.

“All of my expectations have been exceeded so far,” he said. “I have been overwhelmed.”

Brenner named SEAS associate dean for applied mathematics

Frans Spaepen, interim dean at Harvard’s School of Engineering and Applied Sciences (SEAS) and John C. and Helen F. Franklin Professor of Applied Mathematics, has appointed applied mathematician Michael F. Brenner as the School’s first associate dean for applied mathematics.

Brenner, Glover Professor of Applied Mathematics and Applied Physics, investigates a wide range of areas across the physical and biological sciences, from understanding the limitations of self-assembly to algorithm development for atmospheric chemistry to understanding the aerodynamic mechanisms for stall-delay in humpback whales.

Brenner has long served as the director of undergraduate studies for the concentration in applied mathematics, and as a tutor in biochemical sciences. He co-developed Applied Math 50: “Introduction to Applied Mathematics” with Marie Dahleh, assistant dean for academic programs at SEAS.

In March, Brenner became the inaugural recipient of the Capers and Marion McDonald Award for Excellence in Mentoring and Advising. The letters of nomination praised his kindness, grace, knowledge, and flexibility as an adviser.

In place of a traditional departmental structure and chairs, SEAS is organized, for the purpose of research, teaching, and planning, under broad intellectual areas, each administered by an associate dean. As associate dean, Brenner will help to manage academic and course planning and faculty and staff searches; handle promotion reviews for faculty appointments; represent SEAS to the Faculty of Arts and Sciences committee on appointments and promotion; and play a prominent role in raising the visibility of the area as an intellectual endeavor.

He will join David Moore, associate dean for applied chemical/biological sciences and Gordon McKay Professor of Bioengineering, and Greg Morissett, associate dean for computer science and engineering and Allen B. Cutting Professor of Computer Science.
Newfound iron-breathing species have lived in cold isolation for millions of years.

“IT’s a bit like finding a forest that nobody has seen for 1.5 million years,” says Ann Pearson, Thomas D. Cabot Associate Professor of Earth and Planetary Sciences in Harvard’s Faculty of Arts and Sciences (FAS). “Intriguingly, the species living there are similar to contemporary organisms, and yet quite different—a result, no doubt, of having lived in such an inhospitable environment for so long.”

“Briny pond is a unique sort of time capsule from a period in Earth’s history,” says lead author Jill Mikucki, now a research associate in the Department of Earth Sciences at Dartmouth and visiting fellow at Dartmouth’s Dickey Center for International Understanding and its Institute of Arctic Studies. “I don’t know of any other environment quite like this on Earth.”

Chemical analysis of effluent from the inaccessible subglacial pool suggests that its inhabitants have eeked out a living by breathing iron leached from bedrock with the help of a sulfur catalyst. Lacking any light to support photosynthesis, the microbes have presumably survived by feeding on the organic matter trapped with them when the massive Taylor Glacier sealed off their habitat an estimated 1.5 million to 2 million years ago.

Mikucki, Pearson, and colleagues based their research on samples taken at Antarctica’s Blood Falls, a frozen waterfall-like feature at the edge of the Taylor Glacier whose red appearance first drew early explorers’ attention in 1911. Those “Heretic Age” adventurers speculated that red algae might have been responsible for the bright color, but scientists later confirmed that the coloration was due to rust, which the new research shows was likely liberated from subglacial bedrock by microorganisms.

Because water flows unpredictably from below the glacier at Blood Falls, it took Mikucki a number of years to obtain the samples needed to conduct an analysis. Finally, in April 2009, a reservoir of briny liquid buried deep beneath an Antarctic glacier supports hardy microorganisms that have lived in isolation for millions of years, researchers report this week in the journal Science.

For information, www.saps.org

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Tropical storms inject ice far into stratosphere

By Steve Bradt
FAS Communications

Scientists at Harvard University have found that tropical cyclones readily inject ice far into the stratosphere, possibly feeding global warming.

The finding, published in Geophysical Research Letters, provides more evidence of the intertwining of severe weather and global warming by demonstrating a mechanism by which storms could drive climate change. Many scientists now believe that global warming, in turn, is likely to increase the severity of tropical cyclones.

"Since water vapor is an important greenhouse gas, an increase of water vapor in the stratosphere would warm the Earth's surface," says David M. Romps, a research associate in Harvard's Department of Earth and Planetary Sciences. "Our finding that tropical cyclones are responsible for many of the clouds in the stratosphere opens up the possibility that these storms could affect global climate, in addition to the oft-mentioned possibility of climate change affecting the frequency and intensity of tropical cyclones."

Romps and co-author Zhiming Kuang, assistant professor of climate science in Harvard's Faculty of Arts and Sciences, were intrigued by earlier data suggesting that the amount of water vapor in the stratosphere has grown by roughly 50 percent over the past 50 years. Scientists are currently unsure why this increase has occurred; the Harvard researchers sought to examine the possibility that tropical cyclones might have contributed by sending a large fraction of their clouds into the stratosphere.

Using infrared satellite data gathered from 1983 to 2006, Romps and Kuang analyzed towering cloud tops associated with thousands of tropical cyclones, many of them in the Pacific, Indian, and Atlantic oceans. Their analysis demonstrated that in a cyclone, narrow plumes of miles-tall storm clouds can rise so explosively through the atmosphere that they often push into the stratosphere.

Romps and Kuang found that tropical cyclones are twice as likely as other storms to punch into the normally cloud-free stratosphere, and four times as likely to inject ice deep into the stratosphere.

"It is ... widely believed that global warming will lead to changes in the frequency and intensity of tropical cyclones," Romps and Kuang write in Geophysical Research Letters. "Therefore, the results presented here establish the possibility for a feedback between tropical cyclones and global climate."

Typically, very little water is allowed passage through the stratosphere's lower boundary, known as the tropopause. Located some 6 to 11 miles above the Earth's surface, the tropopause is the coldest part of the atmosphere, typically 6 to 11 miles above the Earth's surface.

The new holistic emphasis, stressed Rice, whose Advancement Project aims to bring peace to urban areas and education to at-risk youths, didn’t deny that the epidemic of violence is ongoing, with estimates of 800 to 1,000 gangs in Los Angeles County and up to 80,000 gang members. "You can’t have a 20-year youth gang homicide epidemic ... without catastrophic levels of gang violence in the hot zones," she said.

"We now have the ability in 2009 to go forward with a comprehensive plan that doesn’t rely strictly on suppression or arrest," Baca said. "You don’t hand out flyswatters for a malaria epidemic; you drain the swamp; you pass out the insecticide. You train people to change the norms of their behavior. ... You get rid of the conditions, the vectors that transmit and amplify the disease."
Paulus reaches beyond boards

A.R.T. director says, ‘theater is more than just the play on the stage’

By Colleen Walsh
Harvard News Office

Clad in black and white, her brown hair loose about her shoulders, her green eyes intense, Diane Paulus sits in her office and smiles. Against the window rests a stolen treasure from her days as a Harvard freshman, a poster of the American Repertory Theater’s (A.R.T.) production of Samuel Beckett’s “Endgame.”

“This is really an amazing full circle for me and a dream come true. I have to pinch myself occasionally.”

The New York native is still incredulous that she now occupies the office of the theater man she once interviewed for her senior thesis about an experimental theater group from the 1960s. She confesses to having stalked the company’s hallways in her undergraduate days, occasionally swiping a memo- to or two for her dorm room (thus, the “Endgame” poster). The A.R.T., she admits, is in her DNA.

As the organization’s new artistic director, the diminutive Paulus ’88 brings provocative programming and a force-of-nature personality to the post.

“She is full of beans and energy and excitement and exciting ideas. She’s an electrifying person,” said Robert Brustein, the A.R.T.’s founding director. “The program is going to be very different than it has been at the A.R.T. We welcome the difference, and I think the audience will be very pleased.”

The Phi Beta Kappa alumna is known for her kinetic productions that often cross tradition-al plays and operas with pop culture, and occasionally even invite the audience to become part of the show. In a press conference at the theater last week (April 15), Paulus unveiled her plans for her inaugural season, one that will take on several classics with modern twists, and introduce a variety of new productions. Her goal, she said, in keeping with the A.R.T.’s mission, is to “expand the boundaries of theater.”

“I think perhaps arts producers need to look a little closer at what we are providing in the arts experience, and I say ‘arts experience’ quite purposefully because my belief is that the theater is more than just the play on the stage. I believe very much in the theatrical event and how that can be newly defined.”

Paulus has divided the season into three festivals each with a particular theme, an effort to make the shows into ‘cultural events’ and bring, as she puts it, a greater “synergy” to each series of productions.

‘Shakespeare Exploded!’ is a selection of theatrical events inspired by three classic plays by Shake- speare.

www.amrep.org/shakespeareexploded/

‘America: Boom, Bust, and Baseball’ explores the hopes, disappointments, and triumphs of the past American century, from the roaring ’20s to the Great Depression to the Boston Red Sox’s stunning 2004 World Series victory. www.amrep.org/boombustbaseball/

‘Emerging America’ is a landmark festival of theater devoted exclusively to supporting and launching the new American voices of tomorrow. www.amrep.org/emergingamerica/

To learn more about the 2009-10 A.R.T. season, visit www.amrep.org/2009-2010/.

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Remembering the ‘American War’ of the ’60s

By Corydon Ireland
Harvard News Office

How do nations remember? In part, they remember through monuments — public art designed to capture a national memory and carry it through the ages.

They’re also forced — by artists in every medium — to confront more contradictory and dissident memories.

How two nations remember and represent the war in Vietnam is the subject of a book-length study under way by Radcliffe Fellow Viet Thanh Nguyen. He will show how — through art and public art — Americans remember what they call the Vietnam War, and how the Vietnamese remember culture what they call the American War.

Nguyen, who teaches English and American studies at the University of Southern California, started a Radcliffe Gymnasium talk last week (April 15) with a sentiment that sums up the comparative study: “Wars are fought twice. The first time on the battlefield, and the second time in memory.”

Dissidents aside, there is for each country a “dominant narrative of memory,” he said.

Most Americans remember Vietnam as a bad war. Nguyen averred. But most Vietnamese still in Southeast Asia remember the conflict as a good war — proof of Ho Chi Minh’s popular dictum that “nothing is more precious than independence and freedom.”

Many Americans perceive Vietnam as “a failure of American exceptionalism,” he said — “a fall from innocence for the American Adam.” But the Vietnamese view the American War, Nguyen asserted, as the final stage of a colonial struggle that began against France in the 19th century.

Nguyen’s talk followed those shapes of differing memory: a bad war, a good war, and — for some — “memories against war,” he said, a time to remember “enemies and others.”

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(See Vietnam, page 18)
Harry Huff (above center), music director and lecturer on ministry at HDS, gently provides ever a class about the body of sacred music unique to the Americas.

By Colleen Walsh

Harvard University Gazette

Harry Huff, the lead professor in a course at Harvard Divinity School (HDS) that explores religious history through the lens of Euro-American music, has a new class students are learning to love: "The American Musical Epiphany." Huff, who formed the class during the 2009-2010 academic year, described his new offering as "an exploration of the roots of sacred music in New Spain (Mexico); the influences of various composers on one another; the rise of Sacred Harp music; rounds from the Colonial American tradition; the Religion in Music movement — an initiative to bring the gospel to the hip-hop community — as well as the host of the show "Hip Hop Radio.""

Huff’s recent class on sacred jazz included a moving rendition of Ellington’s "Heaven," with student Jeremy Innis on the alto saxophone and Huff on piano. After the performance, the second-year M.T.S. student said the class keeps him connected not only to music, but also to spirituality and the religious history of America. "It’s very important to the way that I approach religion because music is the way that I feel like I participate most, the way that I experience spirituality," Innis said, adding that he enjoyed learning about different forms of music and the connections and influences of various composers on one another. "One thread we traced last week was the classical composer Dvořák and how he taught and was taught by African-American spirituals and gospel music." Huff said he was able to bring Sacred Harp music; rounds from the Colonial American tradition; and Duke Ellington into the classroom.

"Rap," Hope told the class, is "parallel to spirituality at its highest level." For Huff, the class is about more than an opportunity to explore religious history and culture. He believes the class has helped his students develop a love for music and has helped them develop an appreciation for sacred music. "I feel like it’s important for me to engender a love of music and I’ve always wanted to discuss it and talk about it and be able to turn people on to it," said Huff, music director and lecturer on ministry at HDS.

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Vietnam

In all cases, memories on a national scale are “sites of struggle” in which people grapple with the historical context of war, said Nguyen. “Memory is more than what takes place in our brains.”

In the United States, a bad war is well remembered by what Nguyen called the country’s most powerful example of public art designed for war remembrance, Maya Lin’s minimalist Vietnam Veterans Memorial on the mall in Washington, D.C.

The wing of black granite, engrailed with the names of more than 58,000 American war dead, “captures the national mood about the war,” said Nguyen — “a foreign war that was at the same time a civil war in the American soul.”

Then came the supplements — the added public art representing counterpressures for other forms of national memory-making.

Frederick Hart’s “Three Soldiers” was unveiled at the mall in 1984, a bronze that “celebrates a more masculine vision of heroism,” opined Nguyen, along with “a depiction of American racial solidarity.”

In 1993, nearby, Glennia Goodacre’s Vietnamese Women’s Memorial was dedicated. It depicts two nurses and a wounded soldier. And in 2003, a Vietnam War memorial was unveiled in Garden Grove, Calif. It shows American and South Vietnamese soldiers (of equal height) in front of their national flags (of equal height).

For the Vietnamese of Orange County, said Nguyen, the site is also a “performance space” where in parades and festivals conceptions of gender and nationalism are enacted by older men in old uniforms and women in traditional dress.

“It’s their country they want to seize again,” he said — calling the Vietnamese diaspora in America “a population relentlessly gnawed by longing.”

In Vietnam itself, Ho Chi Minh’s icon is still “omnipresent,” said Nguyen, as are memorials to “martyrs” of the American War modeled on traditions of ancestor worship.

In Vietnam, memorials to the war also explicitly include “a whole new category ... incorporated into the narrative of sacrifice,” he said: civilians, of whom millions died.

The 500 noncombatants killed in 1968 at My Lai are depicted in one monument, he said, a gaudy life-size re-creation of the shooting.

The War Remnants Museum in Ho Chi Minh City, once billed as a “war crimes” museum, is still a popular tourist destination, said Nguyen.

He first visited in 2002 before the facility expanded into what he called an “ever more subtle” and politically subdued collection of artifacts. (These include a guillotine used by the French and jars of deformed fetuses damaged by exposure to dioxin from American defoliation campaigns.)

Many young Vietnamese have little interest in the war, said Nguyen, whose lecture images included posters for cinema blockbusters like “Bar Girls” and “Long-Legged Girls.” But a recent best-seller, “Last Night I Dreamed of Peace” (2006) — the diary of heroic combat doctor Dang Thuy Tram — “fits the Vietnamese collective memory,” he said.

The movie version, “Don’t Burn,” will be released on April 30, the anniversary of the day Americans left Vietnam in 1975.

Contrary memories are alive on both sides of the ocean — attempts by artists to provide “memories against the war,” said Nguyen.

In Vietnam, dissident novelist (and war veteran) Duong Thu Huong was kept under house arrest until her recent exile to France.

In the United States, artist Martha Rosler reprised her ironic “House Beautiful” collage images of Vietnam (1967-72) to express a parallel anger at the war in Iraq — with “Gladiators” in 2004.

And in 1991, Chris Burden installed his “Vietnam Memorial” at the Museum of Contemporary Art in Chicago. It gave Maya Lin’s idea an anti-war twist, listing 3 million Vietnamese names that swing gate-like from a central pole.

The names are not real, said Nguyen, since Asian casualties from the war — upwards of 6 million — “test the limits of actual memory.”

Nguyen is showing how — through art and public art — Americans remember what they call the Vietnam War, and how the Vietnamese remember what they call the American War.

Paulus

(Continued from page 15)

Night’s Dream” through the lens of the infamously self-indulgent disco Studio 54. Staged at the Zero Arrow Theater, the space will be transformed into a version of the popular New York nightclub from the 1970s, with the audience encouraged to get into the act. “Sleep No More,” recasts “Macbeth,” as an immersive theater experience, one where the audience can wander a Hitchcock-inspired cinematic installation. For the retelling of “The Winter’s Tale,” Paulus will enlist the help of local gospel choirs and R&B to recount the story of jealousy and forgiveness.

The “America: Boom, Bust, and Baseball” festival explores some of the highs and lows in America during the past century. “Gatsbys 192” takes the audience through an entire theatricalized reading of Fitzgerald’s “The Great Gatsby” (seven and a half hours to be exact), while “Paradise Lost” examines a family struggling in the Great Depression. The third show in the series, the musical “Red Sox Nation,” unravels the most notorious curse in baseball.

The final festival, “Emerging America,” a collaboration with the Institute of Contemporary Art and the Huntington Theatre Company, will introduce a number of new artists and their works.

The arts are in the blood of the 42-year-old Paulus, who grew up in Manhattan — two blocks from Lincoln Center — where she studied ballet, classical piano, and theater. As a young dancer with the New York City Ballet, Paulus watched from the wings as famed choreographer George Balanchine wove his magic. Onstage, she danced with Baryshnikov.

Though she ultimately opted for Harvard over Juilliard, her artistic impulse never faded. Initially interested in politics, her experience with the A.R.T. and the Harvard Undergraduate Drama Club, where she was involved with theater “every waking moment,” helped guide her to a life of the stage.

“I definitely feel it was this seminal moment of seeing professional theater done in such a stunning way, of having this professional institution show you what was possible,” Paulus said.

Paulus graduated with a degree in social studies and later earned her M.F.A. in directing from Columbia University’s School of the Arts. Soon she was producing shows with her husband and their small theater group, Project 400. A freelance director for the past several years, Paulus’ recent work includes the current Broadway revival of “Hair”; “Kiss Me Kate” at Glimmerglass Opera; and “Lost Highway,” a version of the popular New York nightclub from Fitzgerald’s “The Great Gatsby” (1925) about the 1920s。“Gatz Parts 0-2” takes the audience through an entire theatricalized reading of Fitzgerald’s “The Great Gatsby” (seven and a half hours to be exact), while “Paradise Lost” examines a family struggling in the Great Depression. The third show in the series, the musical “Red Sox Nation,” unravels the most notorious curse in baseball.

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Members (left) of the contemporary gospel group ‘Confirmation’ take part in the A.R.T. press conference welcoming artistic director Diane Paulus (far left), an English National Opera (ENO) co-production with the Young Vic in London, based on the David Lynch film.

Engaging with the Harvard community in new and creative ways is a critical part of her role, said Paulus. Others agree. That central philosophy, noted Provost Steven E. Hyman, who chaired the search committee, was essential in her selection: “Diane ... is absolutely committed to this,” said Hyman. “I believe that the kind of communal experiences centered on art that are provided by live theater can be transformative for communities like ours.”

Paulus is already making good on her promise. She recently invited a group of undergraduates to her Broadway producing company, Petrified Forest, to collaborate with Marjorie Garber, William R. Kenan Jr. Professor of English and of Visual and Environmental Studies and director of the Carpenter Center, on a Shakespeare course in the fall based on the A.R.T. Shakespeare festival. Paulus also hopes to be an active participant in the current discussions on creating a theater major in the College’s curriculum.

For Paulus, the potential to engage the Harvard community — as well as the broader community — with her vision of the theater is inspiring.

“I’m just obsessed,” she said, “with revitalizing the audience’s present engagement with theater.”
Events for April 23-May 7, 2009

concerts

Thu., April 23—“Prokofiev and Brahms.” (Harvard Box Office) Boston Philharmonic Orchestra conducted by Benjamin Zander. Sanders Theatre, 7:30 p.m. Tickets are $78/$60/$45/$25 general; $5 off students/senior citizens. Coolidge Corner Theatre; MTA half-price; 60/20 percent off; RUSH tickets $8 cash only, available as of 1 p.m. (2 per person for senior citizens). Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.


Fri., April 24—“Beethoven, Finzi, and Mozart.” (Harvard Box Office) Concert by Bach Society Orchestra. Paine Hall, 8 p.m. Tickets are $12 general; $8 students/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.

Fri., April 24—“Versa est in Luctum!” (Harvard-Radcliffe Collegium Musicum) Chamber singers of the Harvard-Radcliffe Collegium Musicum perform works by Josquin, Ockeghem, Victoria, and Lassus. First Church of Cambridge, 11 Garden St., 8 p.m. Tickets in advance are $10 general; $5 students. Tickets at door are $14 general; $7 students. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.

Sat., April 25—“Harvard Group for New Music with White Rabbit.” (Music, Harvard Group for New Music) Featuring renowned composer Martin Bresnick’s “Bucket Rider,” “Be Just.,” and “Songs of the Mouse People”; also music by Christopher nasty and three works by composers of HGNM. Paine Hall, 8 p.m. Free and open to the public. Reception to follow.

Sat., April 25—“Mozart’s Requiem.” (Harvard-Radcliffe Chorus) In a collaboration with the Pro Arte Chamber Orchestra of Boston, a performance of Mozart’s ever-popular “Requiem,” featuring keyboardist Robert Levin, sopranos Mara Bonde, mezzo-soprano Deborah Rentz-Moore, tenor Lawrence Jones, and baritone Sumner Thompson. Sanders Theatre, 8 p.m. Tickets are $22/$18/$16 general; $11/$9/$8 students/senior citizens. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.


Sun., April 26—“Prokofiev and Brahms.” (Harvard Box Office) Concert by the Boston Philharmonic Orchestra conducted by Benjamin Zander. Sanders Theatre, 3 p.m. Tickets are $78/$60/$45/$25 general; $5 off students/senior citizens. Coolidge Corner Theatre; MTA half-price; 60/20 percent off; RUSH tickets $8 cash only, available as of 1 p.m. (2 per person for senior citizens). Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu.

Sun., April 26—“Handel’s Sadt.” (Harvard University Choir) Concert by the Harvard University Choir and the Harvard Baroque Chamber Orchestra on the 250th anniversary of Handel’s death. Memorial Church, 4 p.m. Tickets are $15 general; $10 students; Harvard students are free (1 ticket per person) (Continued on next page)
Thursday, April 30 — Play: "Three Days and a Country," by Howard Brenton. Directed by Jonathan Bank. Presented by Plays and Players and installed in Brownstone at the Austin Hall, 587 Commonwealth Ave. 7:30 p.m. Tickets $15 general, $12 students/senior citizens. For reservations, call (617) 536-5100. 

Saturday, May 2 — Film Screening: "Vanity Fair," based on the novel by William Makepeace Thackeray. Directed by James Ivory. Presented by Harvard University Film Office and Harvard Graduate Students of Cinema and Technology. 7 p.m. in the Quadrangle at Leverett House, 606 Massachusetts Ave. Free admission; reservations required. For more information, please contact levertt@fas.harvard.edu.
April 23

Actor and vocalist Michael Cerveris will conduct audition workshops with undergraduate actors and singers, who will learn how to audition for two workshop sessions. The workshops will take place today (April 23) in the Lower Common Room, Adams House, at 3 and 7 p.m. Observers are welcome. Free. Call (617) 495-8676 or visit www.fas.harvard.edu/ofa for more information.

Jim Brown and Rob Lane.

“Gund Hall Lobby, GSD, 48 Quincy St. Free and open to the public. www.gsd.harvard.edu/events/exhibitions/current.htm.”

“Ecological Urbanism: Alternative Practices and Patterns of the Future” is an exhibition organized around the premise that an ecologi- cal approach is needed both as a remedial device for the contemporary city and an organiz- ing frame for the practice of architecture. (Through May 17) —The Harvard Museum of Natural History, 48 Quincy St. Free and open to the public. www.gsd.harvard.edu/events/exhibitions/current.htm.

Graduate School of Education “What’s in a Name? Participating in the Arts?” features sharing from students, teach- ers, and artists in schools throughout Massachusetts who participate in Very Special Artists — a pro- gram in which experienced teaching artists collaborate with classroom teachers to help artists integrate learning for experienced students with and without disabilities. (April 27-May 22)


Harvard Art Museum

Sackler Museum “Re-View” presents extensive selec- tions from the Fogg, Busch-Reisinger, and Sackler museums together for the first time. The survey features Western art from antiquity to the turn of the last century, Islamic, South Asian, and European and American art since 1900. (Ongoing)

The Harvard Art Museum is located at 455 Broadway. The Harvard Art Museum is open daily, 10 a.m.-5 p.m.; Sun., 1-5 p.m. Admission is $9: $7 for senior citizens; $6 for college students with ID; free to Harvard ID holders, Cambridge Public Library card holders, members, and to people under 18 years old. Free admission is offered Saturday mornings 10 a.m.-noon and every day after 4:30 p.m. Tours are given Mon.-Fri. at 12:15 p.m., and Sat.-Sun. at 11 a.m. and 1 p.m. (617) 495-0400, www.harvardmuse- um.org. NOTE: The Fogg and Busch-Reisinger closed to the public on June 30 for a renovation project lasting approximately one year. The Harvard Art Museum will remain open during the renovation.

Harvard Divinity School “Faces of Buddha” features work by Virginia Peck. (Through May 2009) —Academy of Arts, 500 Memorial Drive, 2nd Floor. 18 years old; free to the public on June 26, 2009; 2-5 p.m. (617) 384-7511.

Harvard Museum of Natural History “Arthropods: Creatures that Rule” brings together unique fossils and pre- served specimens, large screen video presentations, striking color pho- tographs and artworks, electron microscopes, hands-on interac- tive games, and live creatures. It pre- sent a wide array of evolutionary his- tory and the incredible variety of their habitats, is also presented as a range of arthropod adaptations, including the evolution of wings and the remarkable capacity to maintain balance in air. (Through May 31) —The Harvard Museum of Natural History, 26 Oxford St. Free and open to the public on Saturdays 10 a.m.-noon, except for groups and tours; not open afternoons, Sept.-May, 3:30 p.m.-5:30 p.m. Free admission with a Bank of America card. (Through May 31) —The Harvard Museum of Natural History, 26 Oxford St. Free and open to the public on Saturdays 10 a.m.-noon, except for groups and tours; not open afternoons, Sept.-May, 3:30 p.m.-5:30 p.m. Free admission with a Bank of America card. (Through May 31)


Harvard Neighbors “Art Committee Members Show” features the artwork of Iris Chandler, Peter Michael, Lucy Tahhan, and other artists in schools throughout the Boston area. Free and open to the public. (Through May 31)

—Ludlow House, 17 Quincy St. Call for hours. (617) 495-4513, neighbors@har- vard.edu.

Halyoke Center “Color Forms” features photographs by George Ducharme exploring movement in nature. The photographs, bending together color and shape forming light. (Through April 29) —Halyoke Center Exhibition Space. Halyoke Center Arcade, 1350 Mass. Ave. Mon.-Fri., 11 a.m.-7:30 p.m.; Sat., 10 a.m.-5 p.m. Free and open to the public. (617) 542-5214.


“Jamestown!” features pen, pencil, and colored pencil drawings of people, age 8, of people from TV shows and people in his life. Openung reception Friday, April 3, 6-9 p.m. (Through May 12) —Halyoke Center Exhibition Space. Halyoke Center Arcade, 1350 Mass. Ave. Mon.-Fri., 11 a.m.-7:30 p.m.; Sat., 10 a.m.-5 p.m. Free and open to the public. (617) 542-5214.

Houghton Library “Ever Westward: Sir Arthur Conan Doyle” (Continued on next page)
“Digging Veritas: The Archaeology and History of the Indian College and Student Life at Harvard” shows cases from Harvard Yard, historical data, and more from Harvard’s early days. (Through Jan. 2011)

“Encounters with the Americas” includes Native American cultures of Mesoamerica before and after Spanish contact. Showcases include sculpture and plaster casts of Maya monuments as well as contemporary textiles from the Americas. (Ongoing)

“Pacific Islands Hall” features a diverse collection of objects. (Through May 2009)

“Storied Walls: Murals of the Americas” explores the spectacular wall paintings from the ancestral Hopi village of Atwatse in Arizona; San Bartolo and Bonampak in Guatemala and Mexico respectively; and the Moche Huacas of northern Peru. (Through Dec. 31, 2009)

“W仟ophylacta: Lakota Images of the Contexted West” explores the meaning of unique 19th century “artist’s book” filled with colored drawings by Indian warriors, probably Lakota Indians, recovered by the U.S. Army from the battlefield after the 1876 Little Big Horn fight, in which George Armstrong Custer was defeated by the Sioux and Cheyenne. (Through August 2011)


“Recycling Climate Change… Paintings and Journel Pages from the Arctic: Alaska and Baffin Island” features works by Elizabeth Lisk. An opening reception will be held Thu., April 30, at 5:30 p.m. RSVP to landscape@artharb.harvard.edu. (April 28-May 21)

“Landscape Institute—Eleanor M. McCleck: A Retrospective of Landscape Designs.” (Through April 23)

—Landscape Institute, 30 Chauncy St. (617) 495-8302, www.landscapeinstitute.harvard.edu.

“Through the Camera Lens: Theodore Roosevelt” features examples of boundary surveys, state maps, nautical charts, town plans, city and state atlases, topographical and geological maps, and bird’s-eye views. (Through June 30)

“Pilgrimage to a Forgotten Past” features over 100 objects depicting everyday life in Nuzi, which was located in Northeastern Iraq around 1400 B.C. (Ongoing)

“Ancient Egypt: Magic and the Afterlife” introduces visitors to the Egyptian view of life after death through colorful, dramatic, and humorous funerary inscriptions. (Ongoing)

“The Houses of Ancient Israel: Domestic, Royal, Divine” is devoted to everyday life in Iron Age Israel (ca. 1200-600 B.C.E.). Featured in the exhibition is a full-scale replica of a fully furnished, two-story village house. (Ongoing)

“Nazi and the Humains: Fragments from a Forgotten Past” features over 100 objects dating everyday life in Nuizi, which was located in Northeastern Iraq around 1400 B.C. (Ongoing)

“Semitic Museum — Ancient Egypt: The Cessola Collection at the Semitic Museum” comprises vessels, figurines, bronzes, and ivories dating from 2000 B.C. to 300 A.D. (Ongoing)

“Semitic Museum — Ancient History: The Cessola Collection at the Semitic Museum” comprises vessels, figurines, bronzes, and ivories dating from 2000 B.C. to 300 A.D. (Ongoing)

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Wed., April 29—“Ethnic Conflicts in the Islamic World.” (Islamic Legal Studies Program) Aghaser Shirazi, visiting fellow, 3:30-4:30 p.m. 607 Main Building, 12:30 p.m. Lunch is provided. For more information, visit http://people.dce.harvard.edu/~hesls.


Wed., April 29—“The Amina Lawal ‘The First Tycoon.’” (Cambridge Forum) T.J. Siles, author, discussion leader, and Cornelius Vanderbilt, First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

conferences
Fri., April 24—May 1—“Abraham Lincoln at 200: New Perspectives on His Life and Legacy.” (Harvard College Library) Event schedule: April 24 (4 p.m.-10:30 p.m.), April 25 (9 a.m.-10 p.m.), April 26 (9 a.m.-10 p.m.), May 1 (9 a.m.-10 p.m.). Registration for the confer- ence is no longer open. To view a full schedule of events, visit http://library.harvard.edu/libraries/houghton/lichtin.html.

Fri., April 24—“Frontier Research in Cultural Sociology.” (CES, Sociology) Panel 1: “Science-making and Sense- making” with Claude Rosenthal, visiting professor, Harvard University; Andrew Lakoff, manager, Harvard College Library; and Kooyoo Sato, postdoctor- al fellow, Harvard University. Panel 2: “Cultural Institutions, Interactions, and Repertoires” with Ester Hartjalg, Northwestern University; Gabriel Rosenthal, fellow, Harvard University; and Gerard Bouchardeau, WCRW. Lower level conference room, Busch Hall, CES, noon-5:30 p.m. RSVP to hitham@wjh.harvard.edu if joining the noon lunch. Free and open to the public. www.ces.fas.harvard.edu.

Fri., April 24—“The 8th Annual Jonathan Freeman Symposium.” (Department of Infectious Disease Epidemiology) This year’s symposium theme is “Strategy & Ethics in Negotiations.” Featuring keynote address by Janet Mann, author and freelance writer. Other speakers include Eric Green, Bruce Hay, Charles Craver, Charles J. Ogletree Jr. and Rosabeth Moss Kanter. http://blog.law.harvard.edu/meat/20 09/04/jonfreemanconference/.

Thu., April 30—May 1—“HMS Dean’s Symposium on Clinical and Translational Research.” (Harvard Catalyst) Two-day symposium bringing the Harvard community togeth- er to celebrate clinical and translational research. All members of the Harvard community are invited to attend. Events take place at various locations and times; see Web site for full details: http://catalyst.harvard.edu/services/d transsymposium.html. Registration strongly suggested.

Thu., April 30-Sat., May 2—“Poverty, Justice, and Jobs Think Tank.” (Housing Institute for Race and Justice, Hampshire College) Three-day symposium. For more information, visit http://catalyst.harvard.edu/libraries/houghton/doyle_symposium.html.

environmental sciences
Thu., April 30—“A Bigacelance Debate.” (Harvard College Vegetarian Society, Environmental Action Committee) Film screening of a new Australian-produced documentary on food, animal welfare, health, and the environment. Discussion with director/producer Aaron Scherbina following screening. Room 113, Sever Hall, 7:30 p.m. Snacks pro- vided. Free and open to the public.


Wed., May 6—“Beyond the Pandemic: Paradigm Why We Can’t Leave Saving the Planet to the Environmentalists.” (Cambridge Forum) Michael Shellenberger and Ted Nordhaus, authors. First Parish, 3 Church St., 7:30 p.m. Free and open to the public.

economics
Thu., April 23—“Immunization Detention and Human Rights.” (Charles Hamilton Houston Institute, DRCAS, Harvard Immigration Project) Film screening of “Detained,” on the New Bedford factory ship. Coffee is served prior to the event at 12:15 out- side the room. shannon@hms.harvard.edu.

Thu., April 30—May 1—“HMS Dean’s Symposium on Clinical and Translational Research.” (Harvard Catalyst) Two-day symposium bringing the Harvard community togeth- er to celebrate clinical and translational research. All members of the Harvard community are invited to attend. Events take place at various locations and times; see Web site for full details: http://catalyst.harvard.edu/services/d transsymposium.html. Registration strongly suggested.

Wed., May 5—“Role of Adiponectin in Ozone-Induced Pulmonary Inflammation,” (Molecular and Integrative Physiological Sciences) David Kasahara, research fellow, MIPS, Room 1302, Building 3, HSPH, 665 Huntington Ave., 9:30 a.m.

Wed., April 29—“Race-Gendered Adolescence and Health.” (Women, Gender, & Health Interdisciplinary Concentration) Suzanne Alexander, fellow, HSPH, Room 411, FBX Building, HSPH, 651 Huntington Ave., 12:30 p.m. Lunch is provided. Free and open to the public.

Mon., May 4—“Epidemiology of Infectious Disease Talk.” (HSPP) Simon Meynadi, Tufts University. Talk title TBA. Room 651, Cambridge Forum, Radcliffe Institute, 651 Huntington Ave., 12:30 p.m. Lunch is provided. Free and open to the public.

Fri., May 29—“Adolescent Mood & Sex.” (Women, Gender, & Health Interdisciplinary Concentration) Lydia Shrier, physician, Children’s Hospital, Room 611, FBX Building, HSPH, 651 Huntington Ave., 12:30 p.m. Lunch is provided. Free and open to the public.

April 24
The Harvard Film Archive presents ‘Place Over Time: Recent Work by James Benning’ April 24-26, featuring Benning’s new film, ‘RR’ (U.S., 2007). Benning will be present for the screening Friday, April 24, at 7 p.m. Special event tickets are $10. See film, page 21, for more information.

humanities
Fri., April 24—“Rapid Mechanotransduction in the Cytoskeleton of the Nematode.” (Molecular and Integrative Physiological Sciences) Hong Wu, Wing, University of Illinois Urbana, Champaign. Room 1302, HSPH Building 1, 665 Huntington Ave., 9:30 a.m.

Fri., April 24—“The 8th Annual Jonathan Freeman Symposium.” (Department of Infectious Disease Epidemiology) Featuring brief talks on ongoing research by members of the ID/Epidemiology program, followed by poster presentations by HSPH students. Room G12, FBX Building, 651 Huntington Ave., 1:30 p.m.-3:30 p.m. Session 2: Poster presentations by HSPH students. Room Atrium, 677 Huntington Ave., 3:30 p.m.- 6 p.m. RSVP to tovett@hsph.harvard.edu. Free and open to the public.

Sat., April 25—“The Negotiation and Leadership Conference 2009.” (Harvard Extension School’s Service & Leadership Society, HLS’s Program on Negotiation, Harvard Association for Law & Business, HBS Caribbean Business Forum) This year’s symposium theme is “Strategy & Ethics in Negotiations.” Featuring keynote addresses by John M. Bessler and HLS; Larry Suskind, PON; and Ben Heineman, PON. Other speakers include Eric Green, Bruce Hay, Charles Craver, John Richardson, and HLS’ FBX Conference. For more information, visit http://people.dce.harvard.edu/~hesls.

Thu., April 30—Spring 2009 Middle East Strategy at Harvard Conference. “Iran: Threat, Challenge, or Opportunity?” (WCFIA, Wilbur Cross Center) Room 5020, CGIS South, 1730 Cambridge St., 4 p.m.-6:45 p.m. (617) 496-5495, attowens@wcl.fas.harvard.edu, http://blogs.law.harvard.edu/meat/20 09/04/iniranconference/.

Fri., May 1—Sun., May 3—“The People’s Republic of China at 60: An International Analysis.” (Farbearch Center, Harvard University) Concours level, CGIS South, 1730 Cambridge St. Registration required. To register and view complete list of speakers and schedule of events, visit www.fas.harvard.edu/~farbearch/events/ FBR/FRB/FRB.html.

Thu., May 7—Sat., May 9—“Sir Arthur Conan Doyle: A Sesquicentennial Assessment.” (Harvard College Libraries) Registration will be closed. For more information, visit http://htc.harvard.edu/libraries/houghton doyle_symposium.html.

health sciences
Thu., April 23—“Problems and Potentials of Epitodiagnostics Diagnosis and Monitoring.” (HMS) Balachandar Subramaniam, Belarus Israel Deacomedical Center, Room 10, Harvard Faculty Club, 20 Quincy St., 7:45 a.m. Breakfast will be served.


Medical School
Thu., Apr. 28—“What We Can Learn from Bugs.” (Molecular & Microbial Genetics) John Clardy, HMS, Room 341, Warren Averett Building, HMS, 200 Longwood Ave., 12:30 p.m. Coffee is served prior to the event at 12:15 out- side the room. shannon@hms.harvard.edu.

Thu., Apr. 30—May 1—“HMS Dean’s Symposium on Clinical and Translational Research.” (Harvard Catalyst) Two-day symposium bringing the Harvard community together to celebrate clinical and translational research. All members of the Harvard community are invited to attend. Events take place at various locations and times; see Web site for full details: http://catalyst.harvard.edu/services/d transsymposium.html. Registration strongly suggested.

Wed., May 5—“Predicting Virus Evolution.” (Molecular & Microbial Genetics) Paul Turner, Yale University. Room 341, Warren Averett Building, HMS, 200 Longwood Ave., 12:30 p.m. Coffee is served prior to the event at 12:15 outside the room. shannon@hms.harvard.edu.

School of Public Health
Fri., Apr. 24—“Rapid Mechanotransduction in the Cytoskeleton of the Nematode.” (Molecular and Integrative Physiological Sciences) Hong Wu, Wing, University of Illinois Urbana, Champaign. Room 1302, HSPH Building 1, 665 Huntington Ave., 9:30 a.m.

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April 28

John C. Cushman III, chairman of the board of Cushman and Wakefield, will speak Tuesday, April 28, in Piper Auditorium.

Apr. 29—“In Other Worlds: An International Perspective on Federal Penal Code in International Contract Law, 1941-1570” (CES) Halbert Jones, University of Pennsylvania. Room S010, Tsai Forum, 4:30 p.m. Free and open to the public; seats are limited and registration is required no later than April 27 at www.real.harvard.edu.


Wed., Apr. 29—“Dante and the Making of a Modern Author.” (Humanities Center) Catherine Beutler, Wellesley College. Room 133, Barker Center, 12 Quincy St., 4 p.m. www.dubois.fas.harvard.edu.

Wed., Apr. 29—“Power Relations and the Creation of the Shanghai City in Anyang.” (Anthropology, East Asian Languages and Civilizations, Asian Center, GSAS) Zheng, Shanghai. Room S010, Tsai Forum, 4:30 p.m. phil/aseas@fas.harvard.edu.

Wed., Apr. 29—“Indonesia at Versailles in 1788.” (Humanities Center) Catherine Beutler, Wellesley College. Room 133, Barker Center, 12 Quincy St., 4 p.m. www.dubois.fas.harvard.edu.

Wed., Apr. 29—“Pour qui écrit-on?” (Romance Languages and Literatures) J.M.G. Le Clezio, French writer and Nobel laureate. Thompson Room, Barker Center, 12 Quincy St., 4 p.m. www.dubois.fas.harvard.edu.

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April 28

"The Origin Cycle" is a classical music performance by the Firebird Ensemble (left) and soprano Jane Sheldon on Tuesday, April 28, at the Harvard Museum of Natural History, 26 Oxford St., at 7 p.m. Tickets are $12 general, $10 students/Harvard ID/HMNH members; free for Harvard students. Harvard Box Office (617) 496-2222, boxoffice.harvard.edu. 

April 29

Tue., April 28—“Negative Eschatology and Interfaith Dialogue.” (CES) Thomas F. Rabb, Center for International and Global Studies, Pepper Room, Andover Hall, 2:15 p.m. Free and open to the public. www.harvard.edu/ces/events/cala-endar.html.


Wed., April 29—“Turkey: Plans, Pipelines, and Politics.” (Seminar on Turkey in the Modern Middle East, WIOA, CES) Carol Savetz, Davis Center. Beijing, Room K354, 173 Cambridge St., 4:30 p.m.

Wed., April 29—“Children Left Behind: A Documentary about High Stakes Testing.” (HDS) Film screening and talk by Louis Garcia. Ales Lecture Hall, 13 Apian Way, 5 p.m.


Thu., April 30—“Soviet Patriotism and the Problem of Identities in the Postwar Ukrainian Intelligentsia.” (HURI) Benjamin Travers, fellow, Davis Center. Omeljan Pritsak Memorial Library, HURI, 34 Kirkland St., 4:30 p.m. No advance paper for this seminar. Free and open to the public. www.fas.harvard.edu/huri/events.


Thu., April 30—“Soviet Patriotism and the Problem of Identities in the Postwar Ukrainian Intelligentsia.” (HURI) Benjamin Travers, fellow, Davis Center. Omeljan Pritsak Memorial Library, HURI, 34 Kirkland St., 4:30 p.m. No advance paper for this seminar. Free and open to the public. www.fas.harvard.edu/huri/events.
April 30

April 30
Harvard’s Roy P. Mottehede will speak on 
Felines in 
Islamic Art and Culture: An 
Entertainment!

Thursday, April 30. 
Sponsored by the Prince 
Alwaleed Bin 
Talal Islamic 
Studies 
Program, 
the talk will take place in room 
105, Emerson 
Hall, at 5:30 p.m.

Special events

Thu., April 23—“Ancient Israelite Daily Life.” (Semitic Museum) Family program on how the Israelites made bread, and the everyday life of the average village some 2,700 years ago. Children will be invited to handle original potsherds and some 2,700 years ago. Children will be invited to handle original potsherds and to match them with whole vessels on display at Divinity Ave. 11 a.m. and 1 p.m. Registration required; limited to 15. $2 per child. Appropriate for grades 3-6. (617) 495-4631, dias3@fas.harvard.edu.

Fri., April 24—“Palestine.” (HUBA, Harvard Islamic Society, Society of Arab Students and Center for Arab Culture, Harvard College Palestine Solidarity Committee, Harvard Islamic Society, Harvard College Advocates for Human Rights, Society of Arab Students, Accent Magazine) Najia Said, an award-winning playwright and actress, performs her one-woman show. Fog Auditorium, Boylston Hall, 6 p.m. Free and open to the public. Donations for humanitarian efforts are welcome. 6 Divinity Ave., 11 a.m. and 2 p.m. Fee is $60/hr; $40/hr for HUGHP members.

Sat., April 25—“Eleganza 2009.” (BlackCAST) Student-run fashion show with the theme “Wake Up Dream. Nightmare. Awake.” All proceeds benefit the Center for Teen Empowerment in Boston. Lavietes Basketball Pavilion, Soldiers Field Rd. 8 p.m. Tickets are $12. Harvard Box Office (617) 496-2222, 495-4631, dias3@fas.harvard.edu.

Tue., April 28—“The Phillips Brooks House Association’s Auction for the Summer Urban Program.” (PBHA) Event to help support PBHA’s 12 summer camps serving more than 900 children and youth in Boston and Cambridge. Cambridge Queen’s Head Pub, 5:30 p.m. Silent auction from 5:30-7:30 p.m. with food, drinks, and live jazz; live auction of 10 items begins at 7:30 p.m. Featuring a welcome by Dean Eyllen Hammond, auctioneer Livingston Staub, and honorees Boston Councilor Sam Yoon and Cambridge Assistant City Manager Ellen Semonoff. Advanced reservations are $30; admission at the door is $20. Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu. For a complete list of details, visit www.pbha.org/auction.


Office for the Arts, Ceramics Program provides a creative learning environment for a dynamic mix of Harvard students, staff and faculty, professional artists, and the greater Boston and international community. www.fas.harvard.edu/arts.


Semitic Museum at Harvard University, 6 Divinity Ave. (617) 495-4631, http://www.fas.harvard.edu/~semiotic/index.html. (Continued on next page)
Young Women’s Group
Sekhs is a social organization of college women of Harvard with faith journeys, theological reflections, and the happenings within our lives. Meetings take place Mondays at 9 p.m. in the Buttrick Room, Memorial Church. E-mail jonathan_page@harvard.edu for details.

Undergraduate Fellowship
An opportunity for students to meet, enjoy food, and discuss faith. Meetings take place once a week at 7 p.m. in the Buttrick Room, Memorial Church. E-mail jonathan_page@harvard.edu for details.

Undergraduate Retreat
Travel to Dubuque, Iowa, for a 24-hour spiritual getaway by the shore. The retreat will begin on Saturday, April 26. To sign up, email jonathan_page@harvard.edu.

Graduate Fellowship
A new fellowship group for graduate students with discussions, food, contemplative worship, and more. Meetings take place Thursday at 7 p.m. in the Buttrick Room, Memorial Church. E-mail Robert_mark@harvard.edu.

Berkland Baptist Church
59 Brattle St., Harvard Square. (617) 828-2262, danielle@post.harvard.edu.

■ Sunday School: Sun., 12:15 p.m.

■ Worship Service: Sun., 1 p.m.

■ Berkeley Baptist Church is a community of faith, primarily comprised of young Asian American students and professionals.

Cambridge Fellowship
The First Parish in Cambridge, Unitarian Universalist, 3 Church St., (617) 495-2727, www.cambridgefellowship.org.

Christian Science Organization meets in the Phillips Brooks House every Tue. at 7 p.m. for religious readings and testimonies. (617) 870-7843.

The Church at the Gate

The Church at the Gate will see people of all nations transformed by faith in Jesus Christ as we love and serve God and people in the spiritual context of the city.

The Church of Jesus Christ of Latter-day Saints
2 Longfellow Park (located at about 100 Brattle St.), Harvard Square. Sunday Worship Services: 9:30 a.m., 11:30 a.m., 2 p.m., 3:30 p.m.

The Church of Jesus Christ of Latter-day Saints (hereafter referred to as the Church) is a community that meet at these times are composed of young, single students and professionals. Former students and graduates are welcome to attend family congregation meetings and place times and for information on other classes and events, e-mail ldsinstituteboston@yahoo.com.

Congregation Lion of Judah
Spanish/English bilingual services. 68 Northampton St., Boston, (617) 541-4455, info@lionsjuda.org, www.lionsjuda.org.

■ Sunday Worship Services: 9:30 a.m. and noon

■ Adult Discipleship School: Sundays 10 a.m. and noon

■ Kid for Children: Sundays 10 a.m. and noon

Congregation Rauch Israel
A Messianic Jewish Synagogue located at 49 Greene St., Cambridge. MA Shabbat services, Saturday morning at 10 a.m. Call (771) 449-6254 or visit www.naucharisrael.org for more information. Rides from Harvard Square available upon request.

Divinity School Chapel
45 Francis Ave. (617) 495-5778. Divinity School chapel services are held during the fall and spring terms only.

■ HDSS Wednesday Noon Service: 12:10 p.m. (617) 384-7011, jonathan_page@harvard.edu.
First Church in Cambridge (United Church of Christ), 400 Mass. Ave., Sunday morning worship service Sundays at 11 a.m. and an alternative jazz service Sunday afternoons at 5:30. Located at 11 Garden St. (617) 547-2724.

Luthern — University Lutheran Church, 66 Winthrop St., at the corner of Dunster and Winthrop Sts., holds Sunday worship at 10 a.m. through Labor Day weekend and 9 and 11 a.m. Sept. through May. Unility Shelter: (617) 547-2841. Church: (617) 876-3256, www.unl.org.

Old Cambridge Baptist Church, 1155 Kirkland St. (behind the Barker Center and the Inn at Harvard), holds Sunday worship at 10:30 a.m. Please join this inclusive, progressive congregation in the American Baptist tradition. www.oldcambridgebaptist.org, (617) 864-8068.

Swedenberg Chapel: Church of the New Jerusalem, (617) 563-2240, http://sweden-bergchaapel.org/, located at the corner of Quincy St. and Kirkland St.

Support and Social groups are listed as space permits.

The Broman Center for Internet and Society Thursday Meetings @ Berman, 1-EAP-Bromansharvard.edu for more information.

The Harvard Trademark Program has redesigned its Web site to better meet the needs of the public and members of the Harvard community who are seeking trademarks information about the Harvard’s name and insignias. trade-mark.harvard.edu.

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COACH Program seeks Harvard college and graduate students to serve as mentors to the Boston Public Schools to assist young people in applying and developing plans for after high school. COACH is looking for applicants interested in spending about three hours per week working with high school juniors and seniors in West Roxbury. Interested students should call (617) 257-8676 or e-mail a COACH volunteer coordinator. Harvard’s EAP (Employee Assistance Program) provides free, confidential assessment and referral services and traditional counseling to help you work through life’s challenges. Harvard faculty, staff, retirees, and their household members access the free and confidential services throughout the U.S. and Canada 24 hours a day, 7 days a week: confidential counseling, consultation service, referral to community services, and follow-up care. In addition, Harvard’s EAP can help with workplace conflicts, personal and family relationships, career planning, legal consultations, financial counseling and more.

Harvard Student Resources, a division of Harvard Student Agencies, employs a wide range of professionals to provide comprehensive student services. Harvard Student Agencies, employs a wide range of professionals to provide comprehensive student services. Harvard’s EAP (Employee Assistance Program) provides free, confidential assessment and referral services and traditional counseling to help you work through life’s challenges. Harvard faculty, staff, retirees, and their household members access the free and confidential services throughout the U.S. and Canada 24 hours a day, 7 days a week: confidential counseling, consultation service, referral to community services, and follow-up care. In addition, Harvard’s EAP can help with workplace conflicts, personal and family relationships, career planning, legal consultations, financial counseling and more.

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April 30

The 2009 Harvard Arts Medal ceremony honoring poet John Ashbery will take place Thursday, April 30, in the New College Theatre, 10-12 Holyoke St., at 5 p.m. Presented by the Office for the Arts and the Board of Overseers of Harvard College. Free admission but tickets are required (limit two per person) and are available through the Harvard Box Office (617) 496-2222, www.boxoffice.harvard.edu. See special events, page 27, for details.

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Harvard Veterans Alumni Organization is open to all members of the Harvard University community who are, or have served, in the U.S. military. Visit www.hvava.harvard.edu for information and to participate.

LifeRat is an ongoing drip-in support group where people can talk about their own or others’ life-threatening illness, or about their grief and bereavement. Life Rat is open to anyone connected with the Harvard Community: students, faculty, staff, retirees, and families. Life Rat is free and confidential and meets on Wednesdays, noon-2 p.m. in the Bunting Reading Room on the ground floor of the Memorial Church. Come for 10 minutes or 2 hours. Call (617) 495-2216, bgiml@sfas.harvard.edu.

Office of Work/Life Resources offers a variety of programs and classes. (617) 495-4100, worklife@harvard.edu, http://harvard.edu/worklife.

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Health and Exercise: The Harvard Student Spouses and Partners Association (HSSPA) hosts a group for couples to get used to your new situation as a Harvard student. COACH is looking for applicants interested in spending about three hours per week working with high school juniors and seniors in West Roxbury. Interested students should call (617) 587-8476, ochs@fas.harvard.edu, www.fhc.org/resources/family-students.

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Harvard is strongly committed to its policy of equal opportunity and affirmative action. Employment and advancement are based on a personal and professional evaluation, including such factors as performance, ability, and relevant experience, without regard to race, color, creed, sex, sexual orientation, disability, national origin or status as a disabled or Vietnam-era veteran.

The salary ranges for each job grade are available at http://www.employment.harvard.edu. Target hiring rates will fall within these salary ranges. These salary ranges are for full-time positions and are adjusted for part-time positions. Services & Tradecraft requirements are not assigned grade levels for these positions. The relevant union contract determines salary levels for these positions.

Job Search Info Sessions: Harvard University offers a series of information sessions on various job search topics such as interviewing, how to target the right positions, and navigating the Harvard hiring process. All are welcome to attend.

Academic
Research Fellow (Postdoctoral) Req. 36426, Gr. 050 Harvard School of Public Health/Biostatistics FT (4/2/2009)

Alumni Affairs and Development

Arts
Assistant Technical Director (Mechanical) Req. 36318, Gr. 055 American Repertory Theatre/A.T.R. Scene Shop FT (3/12/2009)

Athletics
Assistant Coach of Women’s Basketball Req. 36456, Gr. 055 Faculty of Arts and Sciences/athletics FT (4/9/2009)

Communications
Research Administrator/Science Editor Req. 36291, Gr. 056 Faculty of Arts and Sciences/Molecular & Cellular Biology FT (3/5/2009)

Facilities
Area Manager in the House Req. 36376, Gr. 057 Faculty of Arts and Sciences/FAS Physical Resources & Planning FT (3/26/2009)
Auxiliary Operating Engineer Req. 36410, Gr. 029 University Operations Services/Engineering & Utilities Union: ATU/SOE Local 8/7, FT (4/2/2009)

Faculty & Student Services
Assistant Dean of Students and Alumni Affairs for the Division of Continuing Education Req. 36259, Gr. 058 Harvard School of Continuing Education/Dean of Students FT (4/23/2009)

Finance
Sponsored Research Administrator Req. 36306, Gr. 050 Faculty of Arts and Sciences/STEM Call & Regenerative Biology FT (3/12/2009)
Information Security Project Manager and Analyst Req. 36422, Gr. 057 Faculty of Arts and Sciences/FAS Office of Finance FT (4/2/2009)
Financial Analyst Req. 36527, Gr. 056 Faculty of Arts and Sciences/FS/CI  
Microbes

(Continued from page 13)

the right place at the right time, she was able to capture some of the subglacial brine as it flowed out of a crack in the glacial wall, obtaining a sample of an extremely salty, cold, and clear liquid for analysis.

“When I started running the chemical analysis on it, there was no oxygen,” she says. “That was when this got really interesting. It was a real ‘Eureka’ moment.”

The fluid is rich in sulfur, a geochemical signature of marine environments, reinforcing suspicions that the ancestors of the microbes now beneath the Taylor Glacier probably lived in an ocean long ago. When sea level fell more than 1.5 million years ago, the researchers hypothesize, a pool of seawater was likely trapped and eventually capped by the advancing glacier.

The exact size of the subglacial pool remains a mystery, but it is thought to rest under 400 meters of ice some 4 kilometers from its tiny outlet at Blood Falls.

The research team based their analysis on samplers from its tiny outlet at Blood Falls. Mikucki’s analysis showed that the sulfur below the glacier had been uniquely reworked by microbes and provides insight into how these organisms have been able to survive in isolation for so long.

The research answers some questions while raising others about the persistence of life in such extreme environments. Life below the Taylor Glacier may help address questions about “Snowball Earth,” the period of geological time when large ice sheets covered Earth’s surface. But it could also be a rich laboratory for studying life in other hostile environments.

Mikucki and Pearson’s co-authors are David T. Johnston and Daniel P. Schrag at Harvard, Alexandra V. Turchyn at the University of Cambridge, James Farquhar at the University of Maryland, Ariel D. Anbar at Arizona State University, John C. Priscu at Montana State University, and Peter A. Lee at the College of Charleston.

The research team based their analysis on samples taken at Antarctica’s Blood Falls, whose red appearance first drew early explorers’ attention in 1911.

Photo by Peter Ruseck/National Science Foundation

Marking a century since North Pole discovered

Harvard Foundation’s Counter ensures that African-American explorer is remembered

The 100th anniversary of the discovery of the North Pole was marked this year on April 6. For more than 20 years, Harvard Foundation Director S. Allen Counter has made it a mission to bring to light the work of Matthew Henson, the African-American Arctic aide of Robert Peary, the sole explorer credited for reaching the North Pole in 1909.

Both explorers served in the U.S. Navy — Peary was a commander, and at the time of the North Pole exploration, he was on a military mission of geographic discovery; while Henson was a messenger and a field assistant (the highest positions that a “colored” man could hold in the Navy at that time, Counter explained).

“Henson, who by some accounts reached the North Pole first, and of whom Cmdr. Peary has said, ‘I cannot make it without him,’ was ignored by the press and left out of the history books because of racial attitudes in the United States toward African Americans at that time,” explained Counter.

“During the ceremony, I presented the explorers’ 80-year-old sons to the United States to meet the American Henson family and to attend a reinterment ceremony as Counter’s request to remove Henson’s remains from a common grave in New York’s Woodlawn Cemetery was approved.

Henson’s body was reinterred in Arlington National Cemetery adjacent to Peary’s grave with a fitting new monument and full military honors. The story captured the American imagination and was national news. It is covered in Counter’s book “North Pole Legacy: Black, White, and Eskimo” (University of Massachusetts Press, 1991).

Founding what is now called the Harvard North Pole Discovery Centennial Commemorative Project, Counter promised the explorers’ sons, who are now deceased, that he would travel with members of their Inuit families to the North Pole on the centennial commemoration of the North Pole discovery by their American fathers.

In the village of Qaanaaq, Greenland, about 40 descendants of Henson and Peary gathered in the local schoolhouse on April 6. Using the explorers’ Navy history, Counter arranged for the USS Annapolis to travel to the North Pole carrying a sealed memorabilia case honoring the two explorers.

During the ceremony, Counter presented the families with the case containing an American flag; a Holy Bible from Harvard’s Memorial Church, signed and dedicated to the North Pole centennial by the Rev. Professor Peter J. Gomes; Peary’s 1910 book, “The North Pole”; Henson’s 1910 book, “A Negro Explorer at the North Pole”; a letter from President Ronald Reagan in recognition of Peary’s and Henson’s achievements and their sons’ visit to America in 1987; Counter’s book chronicling the events; and Inuit ephemera, as well as photographs, letters, and poems from others associated with or touched by the story of Peary, Henson, and their Greenlandic descendants.

“This is presenting the families with a letter sent to me by President Barack Obama to mark the occasion,” said Counter.

An excerpt of Obama’s letter reads: “I am pleased to join all who are commemorating the last hundred years of Arctic exploration. … It is only fitting that we honor all those who have risked their lives and well-being to expand our knowledge of our continuously evolving planet.”

The research team based their analysis on samples taken at Antarctica’s Blood Falls, whose red appearance first drew early explorers’ attention in 1911.

Photo by Peter Ruseck/National Science Foundation
New wheels on campus spin for sustainability

By Caitlin Rotman
Special to the Harvard News Office

There are some new wheels on campus, and they come attached to the new fleet of VeriFast Cycles, the first bicycles in a pilot bike-share program based out of Harvard's undergraduate Houses. The program will officially be launched during Harvard's Earth Day Celebration "Block Party" on Saturday (April 25), hosted by the Environmental Action Committee (EAC).

"The results are there," said Carbone, a 28-year landscaping veteran. "The first tests on the soils beneath the Harvard Yard test area contained only 25 to 50 pounds of nitrogen per acre. (Healthy soils hold about 150 pounds.) FMO landscapers, with training from Fleischer, amended the soils with custom-made compost "tea." The rich, dark liquid was brewed in 5-gallon vats fitted with aerated pumps, then sprayed onto needy soils.

"You're applying something that's a living material," said Fleisher -- so fresh and ready it has a shelf life of only two hours. The first tea formulations in April last year -- 500 gallons worth -- encouraged colonies of fungi and increased protozoa. (Protozoa, single-cell organisms, eat bacteria and excrete nitrogen into the soil.)

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"The results are there," said Carbone, a 28-year landscaping veteran. Roots grew fast, but grass grew slowly. Once cut twice a week, it was not cut only once a week. Deeper roots in healthier soil retain moisture better; irrigation rates dropped to half that of Harvard's conventionally landscaped plots. At that rate, less watering in Harvard Yard could save more than 2 million gallons of water a year.

Yard soils were once so compact that aerating them was like punching holes in a parking lot, said Carbone. After restoration, it was like poking into butter.

Meanwhile, last year's test plots turned into living classrooms and soil labs. Fleisher and Carbone trained Harvard landscapers about tea brewing, composting, and sophisticated soil diagnostics.

In October, Arnold Arboretum senior research scientist Peter Del Tredici visited the test plots with a class. Anne Pringle, an assistant professor of organicism and evolutionary biology at Harvard, used soils data in a bioinformatics lab employed 29 landscapers. FMO maintains most of Harvard's lawn, shrub, and tree assets.

The soils restoration project, guided by Fleisher, also drew on Michael Van Valkenburgh, Charles Eliot Professor in Practice of Landscape Architecture at GSD; the physical resources and planning office at the Faculty of Arts and Sciences; and New York arborist James Sollito of Tree Wise Inc.

Organic methods will be used exclusively on FMO-maintained properties within the next two years, said FMO landscape services manager Wayne Carbone.

Last year's pilot project started in March on an acre of grass and trees between Massachusetts Hall and the Phillips Brooks House. (A control plot was behind Gray's Hall.)

Initial soil testing -- for biology, texture, and nutrient content -- revealed that, in landscape terms, the patient was sick. Soil compaction just beneath the surface made it hard for root systems to penetrate to rich zones of water and food. Organic matter was low; bacteria levels were high (since their protozoan predators were too few), and healthy fungal colonies barely had a subsurface foothold. (Threadlike fungi hold water close to roots, and provide a nutrient reserve.)

Most telling, the soils beneath the Harvard Yard test area contained only 25 to 50 pounds of nitrogen per acre. (Healthy soils hold about 150 pounds.) FMO landscapers, with training from Fleisher, amended the soils with custom-made compost "tea." The rich, dark liquid was brewed in 5-gallon vats fitted with aerated pumps, then sprayed onto needy soils.

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