

# RANDOM SAMPLES

edited by Constance Holden



## Turkey's Big Dig Gets Bigger

One of the world's most ambitious archaeological digs has entered a new phase. Work at Çatalhöyük, a 9500-year-old Neolithic site in south-central Turkey, has for 10 years focused on understanding the details of life



Alabaster armband.

riously abandoned.

The most dramatic development of this summer's dig has been the opening of a new 40-meter-by-40-meter excavation trench near a small group of previously uncovered houses. Project director Ian Hodder of Stanford University in California says workers hope to expose a "snapshot" over the next 5 years of 60 to 80 contiguous buildings they expect to find in or near the trench. The new phase has already seen its first payoff: Last month traces of what appear to be two streets running through the settlement were revealed. If confirmed, this finding might modify the long-held assumption that the prehistoric inhabitants could only enter

their houses through holes in the roofs. Archaeologists last month also uncovered a group burial of at least 13 skeletons, two of them wearing copper and alabaster armbands, in the new trench.

University of Cambridge archaeologist Colin Renfrew says that Hodder's new approach will help fulfill Çatalhöyük's potential to "offer intense insights into the social life of the time." It also brings the project closer to the goal of recreating a "Neolithic town" where visitors can walk among the houses and imagine themselves in the past.

## Don't Go Off the Prozac

Antidepressants may protect the brain, according to research that has shown a link between consumption of the medication and size of the hippocampus in women with a history of depression.

Studies in both humans and animals have shown that bouts of severe depression are associated with reduced volume in the hippocampus, the seat of memory. Animal research suggests that antidepressants can counter this effect (*Science*, 13

## Bypassing Bureaucrats

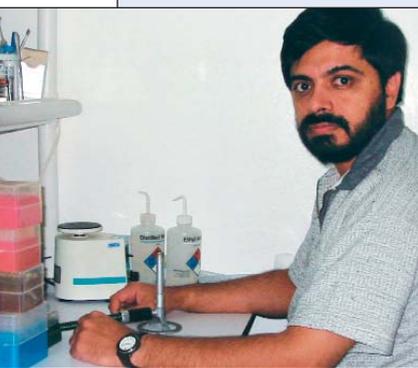
When he was in high school, Carlos Amábile-Cuevas set up a lab at his home in Mexico City with biology and chemistry kits given to him by his parents. In the 24 years since, the Harvard-trained microbiologist has turned his teenage enterprise into Mexico's first privately funded biomedical research facility, opening the country's doors to science without government support.

Since it was formally started in 1995, Amábile's Lusara Foundation has given some of the best Mexican universities a run for their money, producing

19 research publications from a three-room lab in Mexico City staffed by four scientists and technicians. Lusara earns its living by developing assays for the pharmaceutical industry. The income is channeled mainly into basic research on microbial resistance to antibiotics.

"This is a quicker and more reliable way to find money for research compared to being at a university and applying for a government grant," says Amábile, 40, who set up the foundation to bypass what he calls "a culture of bureaucracy and corruption" in Mexico's public institutions. Amábile expects more privately funded research labs to be set up across the country in the future.

Amábile hasn't let his disillusionment with public universities get in the way of another goal: improving microbiology education in Mexico. Three years ago, he and a colleague developed a card game called Bugs and Drugs to help explain the evolution of antibiotic resistance among microbes. So far, the foundation has sold 300 copies to school and college students around the country. Maybe he should make up a game about winning research money without having to go near a bureaucrat.



### DATA POINTS

**Hiring boom.** Recruiters at Sandia National Laboratories are breathing easier these days. A few years ago, leaders of the Albuquerque, New Mexico, nuclear weapons center worried that competition from industry, onerous new security rules, and discrimination and espionage controversies would hamstring recruitment efforts to replace a large wave of retiring scientists and engineers. But post-9/11 patriotism and a slumping economy have helped yield a bumper crop of new hires, Sandia chief C. Paul Robinson told *Science* last week. September 11 "has made recruiting joyous," he says. "People are standing in line to sign up."

The lab has hired about 800 technical staff over the last 2 years, mostly to replace retirees, says B. J. Jones, Sandia's human re-

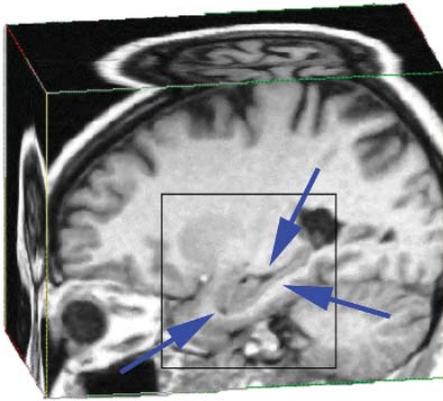
sources director. Many are top scholars, she adds: Newcomers with advanced degrees often boast grade point averages of 3.75 or better. She predicts that the hiring spree will last a bit longer, with the lab needing to fill perhaps 350 slots annually for the next few years. "

### JOBS



**Another chance.** Former head of CERN Chris Llewellyn Smith is taking over as director

of the U.K.'s Culham fusion laboratory, replacing Derek Robinson, who died last December. As head of the \$1.6 billion facility, located near Oxford, the 60-year-old



**3D brain image shows hippocampus (arrows), which is about 10% smaller in people with a history of depression.**

October 2000, p. 258).

The latest study, headed by psychiatrist Yvette Sheline of Washington University in St. Louis, suggests that they work the same way in humans. Subjects were 38 women with recurrent depression. Researchers toted up the number of days they reported suffering from untreated depression and the number of days they took antidepressants during a depressive episode. Brain scans revealed that, overall, the subjects had hippocampal volumes about 10% smaller than those of undepressed controls. And those who had the most days of untreated depression had the

smallest hippocampi, the researchers report in the August issue of the *American Journal of Psychiatry*. In other words, antidepressants not only counter depression but may well prevent neural damage.

Psychiatrist Robert Post of the National Institute of Mental Health says the research bolsters the idea—shown in animals—that antidepressants can affect brain-derived neurotrophic factor (BDNF), which keeps cells healthy. Depressed patients have low BDNF levels.

Post says the research shows that antidepressants should be used the way digitalis is used for heart disease. "People would rarely recommend family members go off digitalis and see if they have a new bout of congestive heart failure," he says. "But that's what often happens" to people taking antidepressants.

## Highfliers

Ground beetles are not as earthbound as had been assumed, according to readings from a new radar technology.

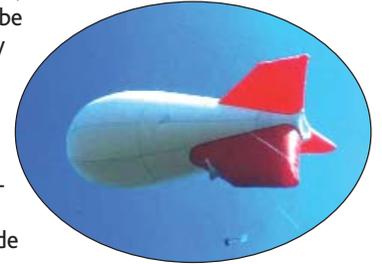
Jason Chapman and colleagues at the Rothamsted Radar Entomology Unit in the United Kingdom discovered millions of *Notio-*

*philus biguttatus*—a half-centimeter-long beetle previously thought to have limited mobility—cruising at altitudes of up to 400 meters last summer. They reported the discovery at the Royal Entomological Society meeting in Reading last week.

Vertical-looking radar (VLR) technology uses a beam that scans for insects in vertical columns about 10 meters wide. Like fighter planes, insect species can be identified by their profiles. According to Chapman, the radar revealed a

"high-altitude mass migration involving many millions of individuals over tens of kilometers." The beetles' identity was verified by insect-trapping nets attached to balloons.

VLR is "opening up a whole area that's totally unknown in terms of these altitudes," says Rothamsted's Ian Denholm. It's also now being used to investigate the navigation skills of night-flying insects.



**Insect-seeking balloon.**

particle physicist will preside over the Joint European Torus—the world's largest fusion experiment.

Smith will also have the opportunity to distance himself from his troubled 4-year stint as president of University College London, where he encountered stiff resistance to his plans for modernization before stepping down in February last year. Smith takes up his new appointment in September.

**On air.** What can you do with a Ph.D. in climatology? Be a university researcher, a federal scientist, and a TV climate forecaster like Heidi Cullen, who joined The Weather Channel last month after one and a half years as a scientist at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado.



Cullen, 33, was handpicked last year when the channel was looking for a climate expert knowledgeable about droughts and floods. Her background seemed perfect for the job: At NCAR she had been studying, among other things, drought in central Asia and flood hazard risk in the United States.

"Talk about how a phone call can change your life," Cullen says. Although her new job is keeping her busy—she's on air at least three times a week—Cullen will continue researching central Asian hydrology part-time at nearby Georgia Institute of Technology in Atlanta. But as a career choice, at least for the moment, broadcasting is the winner. "This is a nice chance for the whole climate story to be told on television, in a day-to-day kind of way," she says.

## MILESTONES

**A long road.** After 12 years as director of the National Institute of Environmental Health Sciences (NIEHS), cancer biologist Kenneth Olden has decided that the \$614 million institute needs a leadership change. Last week he announced that he was stepping down to spend more time on his research and with his family.

"Twelve years is long enough," says Olden, 65, who is credited with moving toxicology at NIEHS beyond traditional animal tests into molecular approaches. The first African American to lead an institute at the National Institutes of Health, he also promoted community-based research on issues such as envi-

# PEOPLE

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ronmental justice. Olden will also be missed as director of the National Toxicology Program. "I just think he's done an incredible job," says Bernard Goldstein, dean of the University of Pittsburgh Graduate School of Public Health.

After NIEHS finds a replacement, Olden will devote his energies to his work on tumor metastasis in a National Cancer Institute lab housed at NIEHS's campus in Research Triangle Park, North Carolina. And, he says, "I'll think about what to do with my life."

# Science

## Jobs

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