

RANDOM SAMPLES

Edited by Constance Holden

Reef Therapy

Conservationists claim they have developed a system that will cure sick coral reefs through delivery of a mild electric current.

Ecologist Thomas Goreau of the Global Coral Reef Alliance in Cambridge, Massachusetts, and German architect Wolf Hilbertz have been working for decades on the scheme. They're now claiming success in Bali, Indonesia, where they have wires running out to a 300-meter stretch of artificial reefs built with iron construction bars. At the correct voltage, explains Goreau, rising pH causes precipitation of minerals from the supersaturated seawater, forming calcium carbonate that provides the limestone matrix for coral larvae. The limestone accumulates at about 1 to 2 centimeters a year. "This has tremendous applications for habitat restoration," says Goreau.

Goreau says that since the project started in 2000, "we're growing most of the world's main kinds of corals" on the electrified reef. But he hasn't won much interest from funding sources, which are "locked into other conservation strategies."

Robert Buddemeier, an environmental scientist at the University of Kansas, Lawrence, says reef electrotherapy, although not a long-term solution, might serve as intensive care. But even if it works, he says, no one has produced a "rigorous study" showing how.



New reef 3 years after getting wired.

Turtle Service

Scientists in the United Kingdom are harnessing wide-ranging leatherback turtles—the largest of the sea turtles—to monitor ocean temperatures.

Marine biologist Graeme Hays of the University of Wales, Swansea, and his team have been using satellites to track the giant reptiles as they move from their breeding grounds in the Caribbean to their stomping grounds in the North Atlantic, where they feed on jellyfish. Now the scientists have affixed new satellite tags on seven of the beasts that will relay temperature data for a year or more. Because the leatherbacks range so widely, says Hays, "this system is perfect for effectively monitoring water temperatures across entire ocean basins."



Leatherback girded for climate duty.

The leatherbacks are helping "usher in a new era of ocean monitoring," says Hays. Other animals are being enrolled in the cause, he adds: The largest such effort is an international program called Tagging of Pacific Pelagics, which will be equipping more than 100 turtles and elephant seals with the new tags.

Tibet's Ancient Flood

Geologists say they've found evidence for one of the most powerful "megafloods" ever, in Tibet's Tsangpo Gorge.

The Tsangpo River flows along the southern edge of the Tibetan Plateau before slicing through the mountains toward India, dropping a dizzying 2500 meters through a

200-kilometer-long gorge. Few explorers have visited the forbidding terrain—and paddlers have died trying to run the river.

Intrigued by reports of ancient lakeshore sediments perched high on local mountains, a team led by geomorphologist David Montgomery of the University of Washington, Seattle, this year went to look. It found evidence that glaciers had repeatedly formed rock-and-ice dams along the river over the last 10,000 years, creating enormous lakes and leaving terraced "bathtub rings" on valley walls. One dam appears to have failed catastrophically, suddenly releasing more than 800 cubic kilometers of water, Montgomery's team reports in the



September issue of *Quaternary Research*.

Although scientists have documented bigger ancient megafloods, this one was "one of the most erosive events in recent Earth history," believes Montgomery, because the waters were forced through an extremely steep, narrow valley. The findings confirm that megafloods, although rare, "are an important process in geological evolution," says geomorphologist Vic Baker of the University of Arizona, Tucson, and may help explain how the Tsangpo cut through the region's resistant rock.

Georgia Science Center Closes

SciTrek, the Science and Technology Museum of Georgia in Atlanta, announced late last month that it is suspending operations. The hands-on educational museum, which opened in 1988, suffered from declining attendance and a meager budget.

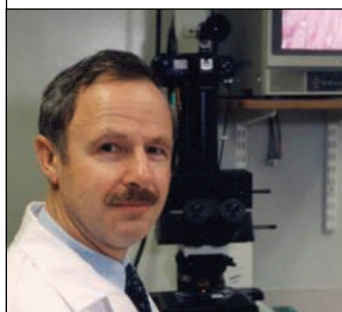
SciTrek got just 30% of its budget from the government and wasn't able to make ends meet with revenue from visitors. Paul Ohme, director of the Center for Education Integrating Science, Mathematics, and Computing at Georgia Tech, says the center's "exhibits had aged" and that without money for continuous updating, they did not attract many repeat visitors.

The board of the museum said SciTrek may come alive again in the future—as a science education center offering teacher training.

Edited by Yudhijit Bhattacharjee

JOBS

Up the coast. Assisted reproduction pioneer Roger Gosden is packing up after 2 years as head of the Jones Institute for Reproductive Medicine in Norfolk, Virginia, and heading for Cornell's Weill Medical College in New York City.



Gosden, 55, is moving for reasons both professional and personal. He recently married Lucinda Veeck, Cornell director of clinical embryology. But he also faced a limited future at Jones, which drew heavy criticism and political hostility for creating a new human embryonic stem cell line in 2001 (*Science*, 25 January 2002,

p. 603). The controversy meant that scientists couldn't "effectively do stem cell research" at Jones, says Gosden.

He expects to find a less restrictive environment at Cornell, where he'll also have access to a larger patient population for his ongoing research on identifying markers for top-quality eggs for in vitro fertilization.

Rockefeller chief. Psychologist Judith Rodin, who stepped down as president of the University of Pennsylvania in June, has been named to lead the Rockefeller Foundation in New York City. Rodin, 59, succeeds Gordon Conway, who is retiring at the end of the year. She will take charge of the \$3 billion philanthropy in March.

NONPROFIT WORLD

Judicious spender. When Madeleine Jacobs took over as executive director of the American Chemical Society (ACS) in January, she inherited two Cadillac town cars

TWO CULTURES

Dalí documented. Science fascinated the eccentric Spanish artist Salvador Dalí (1904–89). He incorporated scientific themes such as psychoanalysis, relativity, and the helical structure of DNA into his paintings and met with illustrious researchers including Sigmund Freud, Ilya Prigogine, and James Watson, who were surprised to discover a keen scientific mind behind his clownish appearance. The Dalí Dimension, produced for European TV by Spanish filmmaker Joan Ubeda, documents the influence that science had on Dalí's work. It premiered at the EuroScience Open Forum in Stockholm last week.

that her predecessor, John Crum, had used for years along with a chauffeur. Within weeks, she let the chauffeur go and had the cars auctioned. "Neither I nor anybody on the board had any use for them," she says.

Those actions have won praise from the society's members, including writers of a letter

in *Chemical & Engineering News* last month asking ACS to publish the salaries of employees making more than \$150,000 and expressing outrage at Crum's 2002 compensation of \$721,000. By cutting back on travel and hotel expenses for herself and her staff, Jacobs has shown that "she has the best interests of the organization at heart," says Robert Bergman, a chemist at the University of California, Berkeley, and a co-signer of the letter. But without greater financial transparency, he says, the system remains open to abuse by senior management.

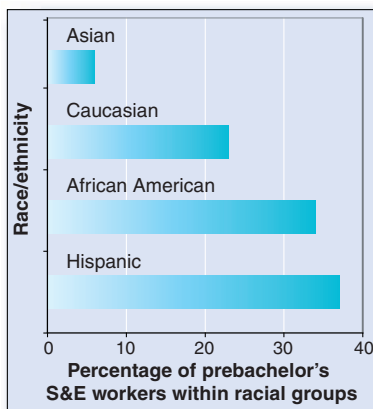
Jacobs disagrees, saying that executive salaries are determined after studying the market. Although her own salary is "significantly less" than Crum's, she won't reveal it until the fall of 2005, when ACS files its annual report with the government. Listing more than the top five earners, says ACS spokesperson Nancy Blount, would be an invasion of employee privacy.

DATAPOINT

A matter of degree. Think you need a bachelor's degree or higher for a career in science and engineering? Think again. A new study by the U.S. National Science Foundation (NSF) has found that 22% of the country's 4.6 million S&E jobs are held by people with no more than a 2-year associate's degree or simply a high school diploma.

"They're trained, but not necessarily in traditional academic programs," says NSF's John Tsapogas, who extracted the data from the U.S. Census Bureau's monthly *Current Population Survey* for April 2003 and its sample of 10,000 adults. The computer industry and engineering offer the greatest opportunities for non-B.A. degree holders, he notes, but the demographics differ: "The engineers are older and tend to have moved up through the ranks, while the computer scientists are younger, maybe hired during the dot.com boom." And minorities (see graph) represent a disproportionate share of that pool: Some 37% of all Hispanics working in S&E fields, and 34% of all African Americans, hold less than a 4-year degree.

Tsapogas says the size of the non-B.A. work force is more than twice what he would have predicted. NSF's first look at the topic also raises questions about federal training programs that assume the need for advanced S&E degrees.



Got any tips for this page? E-mail people@aaas.org

CREDITS: (TOP TO BOTTOM) WORKS OF SALVADOR DALÍ; © SALVADOR DALÍ; FUNDACIÓ GALA-SALVADOR DALÍ [FGSD] SPAIN, 2004; IMAGE RIGHTS OF SALVADOR DALÍ [FGSD] SPAIN, 2004; VMS; SOURCE: NSF