

RANDOM SAMPLES

edited by CONSTANCE HOLDEN

New ADAMHA Director

Elaine Johnson, a 20-year veteran of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), has been named acting director of ADAMHA. She succeeds psychiatrist Fred Goodwin, who resigned last month in the wake of an uproar over remarks he made comparing inner-city youth to bands of male



Elaine Johnson

rhesus monkeys.

Johnson, a Ph.D. social worker, has directed ADAMHA's Office of Substance Abuse Prevention since 1988. If President Bush nominates her as permanent ADAMHA director, it will signal a break in tradition, since the organization has always been headed by an M.D. But Johnson's appointment would please those who have been unhappy with what they perceive as Goodwin's excessive preoccupation with basic research at the expense of services.

Goodwin, who left the ADAMHA post to head the National Institute of Mental Health, appears to have successfully ridden out the storm over his primate comments. But a long-anticipated, and in large part Goodwin-inspired, reorganization of ADAMHA—which was to incorporate the research portions of the drug, alcohol, and mental health institutes into NIH—appears to be definitively dead. The Senate passed a reorganization bill last fall, but it's been blocked in the House by Representative John Dingell (D-MI), whose feeling, according to an aide, is "If it ain't broke, don't fix it."

Smithsonian Burned by Sheep Hunt

The Smithsonian Institution is in hot water once again over a staffer's involvement in the hunting of rare Chinese sheep—2 years after this incident was reported in *Science* (27 April 1990, p. 437). The em-

ployee in question, wildlife zoologist Richard Mitchell, was helping Smithsonian researchers stalk Tibetan argali in 1987 as a detailee from the Fish and Wildlife Service (FWS). On another trip, he also helped a group of private hunters kill four argali—which were listed as an endangered species. He was later investigated by the U.S. attorney's office in Virginia for serving public and private interests at the same time. That investigation remains open.

Mitchell, now back at the FWS, has never been charged with any crime. But Congress got upset

with the Smithsonian's decision to defray the legal expenses he incurred to respond to investigative queries. These haven't been trivial: They have so far amounted to about \$650,000. Most of the reimbursement has been paid out of the Smithsonian's private funds, but \$284,000 came from a U.S. Treasury account—that is, taxpayer money.

In an oversight hearing last month before the House subcommittee on libraries and memorials, Smithsonian secretary Robert McC. Adams was raked over the coals for continuing to finance

Mitchell's legal defense. Adams argued that an employee indemnification plan in effect when Mitchell was on the staff gave him no choice but to pay the lawyers' bills. However, after being chided by committee chairman William Clay (D-MO), Adams agreed to make some policy changes. Last week, says Smithsonian spokeswoman Madeleine Jacobs, the Smithsonian repaid \$284,000 to the Treasury, "tightened up" its employee indemnification rules, and agreed to keep Clay's committee fully informed of any future actions on the Mitchell case.

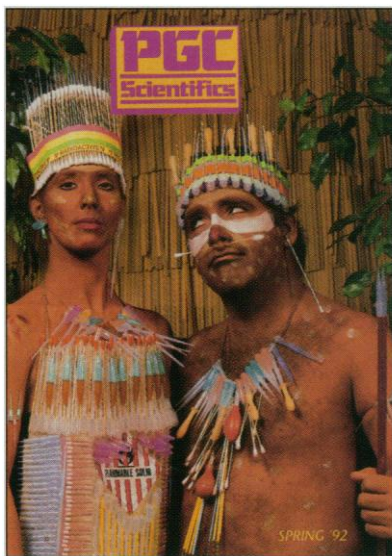
Adams also called a mass staff meeting on 30 March to respond to a series of critical articles about the case in *The Washington Post*. At that gathering, according to Jacobs, Adams conceded that the institution had been "badly burned" by the hunting incident, which he described as a "unique coming together of big game hunters and scientists." Referring to the tradition at many museums of collecting rare animal specimens by collaborating with hunters, Adams vowed to "find some other way of carrying out this kind of research."

Wolpe Farewell

While he's no John Dingell, Representative Howard Wolpe (D-MI) has rattled the cages of many an administration science official in the year-and-a-half that he's chaired the Investigations and Oversight subcommittee of the House science committee. Now those officials—at the National Science Foundation (NSF), NASA, and the Department of Energy (DOE)—are likely breathing a sigh of relief at the news that Wolpe will retire from Congress at the end of this year.

Largely quiescent since the mid-1980s, the science oversight subcommittee sprang to life when Wolpe took the helm in 1991. Since then, the committee has probed the engineering and financial backing for DOE's Superconducting Super Collider, al-

Tribal Troubles



Tasteless and racist?

paleface imitation. "Highly offensive and racist," said another in a letter to *Science* calling attention to the outrage.

When *Science* called PGC to find out what was going on, a receptionist explained that the cover models were real Amazon Indians who had been selected to publicize PGC's "rain forest" issue. Let's hope he didn't tell this to the 30 or so catalog recipients who had already called PGC's Gaithersburg, Maryland, headquarters to complain. As PGC's operations manager, Beth Stuart, readily explained, the company had asked its ad agency for a cover that would "heighten awareness" about disappearing Amazon rain forests, as well as emphasize the need for manufacturers of scientific equipment to develop biodegradable products. The agency then produced what Stuart says looks like "a takeoff on a *National Geographic* cover." Somehow, she reports, the ad managed to evade the usual managerial review process. "We are sincerely and deeply sorry," she says, adding that the company has decided to banish humans altogether from future catalog covers—and has fired its ad agency.

What do the Atlanta Braves, the Washington Redskins, and PGC Scientifics, a distributor of biological research equipment, have in common? They're all facing slings and arrows for allegedly denigrating American Indians.

On the cover of PGC's spring equipment catalog is a photo of a man and a woman, both Caucasians, made up to look something like Brazilian natives. The duo are hamming it up with facial paint, as well as headdresses and necklaces made of cotton swabs, pipettes, and microcentrifuge tubes. And that has some catalog recipients on the war path: "Amazingly tasteless," one scientist called the

leged mismanagement and political interference in NSF's statistical analyses of science indicators, and contracting problems in a series of troubled NASA-designed weather satellites known as GOES-NEXT. The subcommittee has never made the kind of headlines Dingell's team has with its work on indirect costs and scientific fraud, however—perhaps because Wolpe has always emphasized his desire to reform agencies rather than terrify their managers.

Wolpe says he's retiring because a court-ordered redistricting plan has "dismembered" his district, which means he would have had to run on unfamiliar, and heavily Republican, turf.

FAUST Blows a Fuse

When a technical problem last week knocked out the Far Ultraviolet Space Telescope (FAUST) aboard the space shuttle Atlantis, derailing about half its planned observations, the result could have been a disaster for a mission that had already been put off since 1983. But scientists seem to be more than satisfied with half a loaf. "With 20 observations, it's hard not to be delighted," says project director Stuart Bowyer, an astronomer at the University of California, Berkeley.

FAUST—a telescope with an extremely wide field of view designed to observe the far ultraviolet emanations of stars and galaxies in huge swathes of the sky—has always been a hard luck mission. In 1983, the shuttle Columbia lofted it into orbit as part of Spacelab-1, but launch delays and the incompatible demands of the other Spacelab instruments combined to crowd FAUST out of needed viewing time. For the past 9 years, it's been waiting for a second try.

This time, astronomers anticipated smoother sailing. But on 30 March, after scientists had completed 20 of 34 planned observations, the instrument blew a fuse that couldn't be repaired in orbit. Bowyer says the biggest casualty

Top 10 Universities in Chemistry

Ranked by Citation Impact			
	Papers, 1984-90	Citations, 1984-91	Citations per paper
1. Caltech	873	16,101	18.44
2. Harvard University	856	15,035	17.56
3. University of Chicago	729	11,709	16.06
4. Univ. of California, Santa Barbara	691	10,519	15.22
5. MIT	1415	21,405	15.13
6. University of Colorado, Boulder	698	10,373	14.86
7. Yale University	732	10,809	14.77
8. Stanford University	952	14,049	14.76
9. Univ. of North Carolina, Chapel Hill	722	10,648	14.75
10. Northwestern University	871	12,328	14.15

Source: ISI's Science Indicators Database, 1984-91

According to *Science Watch*, a publication of the Institute for Scientific Information (ISI), Caltech chemistry papers have been among the hottest in the field, averaging more than 18 citations each. ISI examined 377,790 articles, reviews, or notes appearing between 1984 and 1990, and ranked only the universities that had published at least 250 papers. On average, Caltech papers were cited about twice as often as the typical U.S. paper, and nearly four times as frequently as all chemistry papers in the ISI database. What's the secret of Caltech's success? "We're fortunate to have good colleagues and a good environment for doing science," says Ahmed H. Zewail, a femtochemist at Caltech whose laboratory published 21 of the 65 Caltech papers that were cited at least 50 times. In comparison, only 2127 chemistry papers in the ISI database had been cited 50 or more times by the end of 1991.

was probably a project to map distant galaxies. (Researchers had counted on three observations, but got only one.) But data gained so far should help answer some of the hottest questions in astronomy—how galaxies are formed, what kind of material makes up the ubiquitous clouds of interstellar dust grains, and how the grouping of galaxies into clusters influences the birth rate of new stars. These data will keep scientists busy, Bowyer says: "For the first year or two [of analysis] we'll be constrained mostly by our imaginations and time."

Merci—A New Mersenne Prime

Cray computers and a 17th-century monk have regained brag-

ging rights for the world's largest prime number—in a big way. Researchers at AEA Technology's Harwell Laboratory in Britain recently turned a Cray-2 supercomputer loose for 19 hours. The result: a new "largest" prime that leaves the previous record-holder trailing in its decimal dust.

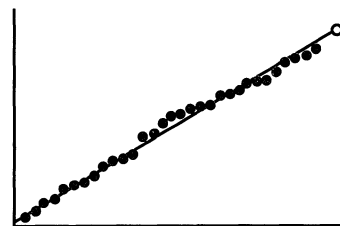
The new prime belongs to a class known as Mersenne numbers, named after the 17th-century monk and mathematician Marin Mersenne. These numbers have the special form $2^q - 1$, where the exponent q is itself a prime, and for a long time, it seemed as though Mersenne numbers had inalienable rights to primacy in the world of primes. Between 1952 and 1985 no fewer than 18 of them succeeded one another as

king of the hill.

In 1989, a team of researchers at the Amdahl Corp. in Sunnyvale, California, deposed a Mersenne "primate" by a puny margin—but the big news was that the anointed 65,087-digit prime— $391581 \times 2^{216193} - 1$ —was not a Mersenne number. And for nearly 3 years, a certain 17th-century monk must have been turning in his grave.

Brits to the rescue. The Harwell group blasted the non-Mersenne interloper from its precarious perch by 162,745 digits! Combining sophisticated algorithms for doing fast arithmetic with a simple method for testing the primality of Mersenne numbers, the Brits showed that for the exponent $q=756,839$, the corresponding Mersenne number—a monster with 227,832 digits—is, in fact, prime.

The newest entry brings to 32 the number of Mersenne numbers known to be prime. Number theorists point out, however, that while the other 31 are in fact the first 31, there may be one or two as yet undiscovered Mersenne primes with exponents in the vicinity of 500,000. So, how long before the next record pops up? "Probably no one's going to find another one for a while," comments Larry Washington, a University of Maryland number theorist. "Of course," he adds, "we thought that the last time."



Missing Mersenne? The new Mersenne prime would best fit a conjecture about the prevalence of Mersenne primes if it were the 33rd, with the 32nd yet to be found. Solid dots are the base-2 logarithms of the exponents of the first 31. The open dot shows where the new prime would be if it lay exactly on a conjectured line, whose slope is about 0.56.