

Briefings

edited by CONSTANCE HOLDEN

Fleas Turn a Deaf Ear

Ultrasonic flea collars have been touted as the safe, non-chemical answer to keeping Spot and Puff comfortably flea-free.

But it seems there's a hitch: they don't work, according to a controlled study conducted by a veterinary research team at Purdue University.

The researchers tried two brands of ultrasonic collars on five cats. Each cat was furnished with 50 fleas. After 7 days the fleas were removed and counted. An average of 98.6% of the fleas were still hanging in there.

The fleas were then put back on the animals for a week of no collars. The result was the same.

Fleas continued to feed and reproduce during the experiment. Although some insect species produce and receive acoustic signals, said the researchers, "there is no evidence that fleas can either hear or produce ultrasonic signals."

CDC Head Named

The Centers for Disease Control in Atlanta finally has a new director. He is William L. Roper, 41, a physician who apparently has the requisite scien-



William Roper

tific and ideological credentials.

Roper was the head of the Health Care Financing Admin-

White House

Moss Landing Labs Destroyed by Quake

Not all Bay Area academic centers escaped the brunt of last October's earthquake. It wiped out the entire campus of Moss Landing Marine Laboratories, disrupting the work of its 50 employees and 150 associated students. The lesson is an old one: do not build your house upon the sand.

The laboratories were on a spit of sand just a few meters from the high-tide mark of Monterey Bay. Although 50 kilometers from the epicenter, the underlying water-saturated sand and mud

liquefied and flowed from beneath the main building, stretching it more than a meter. Among other effects, the stretching and shaking opened a gaping crack right beside the desk of one startled teaching assistant.

No one was hurt and almost all the scientific materials were retrieved intact. But Moss Landing is now a shambles and the single-story main building a mass of teetering walls and shattered floors. Luckily, San Jose State University, which runs the labs, has a new building in nearby Salinas to house offices and classes. Lab space in the form of trailers will arrive later this month. Permanent rebuilding—presumably on a more stable site—will require perhaps \$8 million in federal and state funds.

History could have foretold Moss Landing's doom. The same sand spit suffered liquefaction during the great 1906 San Francisco earthquake as well as during more modest offshore quakes in 1926.

H. Gary Greene



Main Building. Total loss.

istration in the Reagan Administration and is presently a White House adviser. He replaces James O. Mason, who left CDC nearly a year ago to become assistant secretary for health and head of the Public Health Service.

Roper has a medical degree from the University of Alabama. His wife, Maryann Roper, deputy director of the National Cancer Institute, has announced she will leave that post at a date yet unspecified to join her husband in Atlanta.

Stanford News Director Resigns

A conflict over how to handle news at Stanford University has broken into the open with the resignation of Bob Beyers, who has been director of the university's News Service for 28 years.

Beyers, who has often been cited for running an outstanding operation, says he fears that Stanford's traditionally open news policy is in danger of be-

ing abandoned in favor of a safe, corporate-style PR shop. "I have been told," he wrote in a letter to Stanford president Donald Kennedy, "that the university has become a billion-dollar corporation and we at News Service should behave accordingly."

Beyers also complained that his budget had been capped and that the resources of his offices had been squandered in "administrivia" rather than "solid, trend-setting coverage."

The resignation ends several years of conflict with mid-level administrators. A report commissioned by Robert E. Freelen, vice president for public affairs, supplied the last straw. Conducted by John Burness, vice president of university relations at Cornell University, it was highly critical of Beyers' management style.

Freelen told *Science* that there were differences with Beyers relating to management and resource allocation, but that there will be "no retrenchment on policies of candor and openness that Bob established long ago."

Incredible Lightness of Gyroscopes

Have a pair of little known Japanese physicists discovered anti-gravity?

In the 18 December 1989 issue of *Physical Review Letters*, Hideo Hayasaka and Sakae Takeuchi of Tohoku University report that gyroscopes spinning clockwise seem to grow lighter in proportion to their spin rate—while the same gyroscopes spinning counterclockwise show no change whatsoever. The weight loss is roughly proportional to the mass of the gyroscope—three different rotors were used—and is independent of what the rotors are made of, the ambient magnetic field, the type of scales used, and a host of other variables.

"It's a neat experiment," says Purdue University physicist Ephraim Fischbach, who has theorized about a possible "fifth" force in nature similar to gravity. No reputable physicist wants to believe the Japanese results, he says. "There are no

theories for this thing." But no one can find anything obviously wrong with the experiment.

It is easy to replicate, so independent data should be in hand soon. But a priority fight is already shaping up. "I've gotten about 20 phone calls from non-scientists who claim they thought of it first," says University of Maryland physicist Robert Park, head of the American Physical Society's public affairs office. "They even had patents. One said he did his research with a frisbee."

Bridging the Student-Work Gap

College-bound high school students are showered with tests and guidance to help them plan their futures. But those headed for the world of work are often left to fend for themselves.

To remedy the information gap between employers and future workers, business groups are working on a scheme whose centerpiece will be a comprehensive new information and assessment system now under development at the Educational Testing Service (ETS).

The system, called "Worklink," would contain all manner of information on a job applicant's school record, interests, activities, special abilities, and work experience. Participation would be voluntary and individuals would have control over their own files. According to George Elford of ETS, "nobody looks behind the diploma," so employers rarely get much objective information on job applicants. Worklink would provide a broad, verifiable, and continuously updatable source of information to businesses that subscribe.

The National Alliance of Business and the American Business Conference (ABC) are currently mustering support for the idea among business and education groups. They are also discussing some pilot projects in California with the state's education superintendent Wil-

Brain Decade. *If you don't recognize that structure inside the head pictured here, you should by the end of the century, because Congress has designated the 1990s as the Decade of the Brain. The White House Office of Science and Technology Policy will coordinate federal activities during the decade, which was proposed by Representative Silvio O. Conte (D-MA) to capitalize on the explosive growth of knowledge in the brain sciences. A new budget for expanded brain activities is yet to appear, however. The advisory council of the National Institute of Neurological Disorders and Stroke thinks that NINDS, which figures prominently in the plans along with the National Institute of Mental Health, needs \$703 million for the first year of the decade. But it actually got only a small increase, to \$472 million.*



NIMH

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ABC president Barry Rogstad emphasizes that the businessmen's initiative also envisages more direct contact between students and potential employers, that it will help students and businesses better understand each others' needs, and will motivate kids to work harder in school.

That could be the most im-

portant part. An ABC survey of its 100 members reported that more than 50% labeled their concerns about education as "very serious."

Asians Up, Africans Down

Asians continue to dominate the foreign student population

in the United States, according to a report from the Institute of International Education (IIE). Asians made up 52% of last year's total of 366,354, with the largest number—29,000—from the People's Republic. "The effects of recent political upheaval in China on student flows are not yet perceptible," says the IIE. It adds that the continued surge in Asian students "is especially remarkable as Australia and Japan emerge as alternative destinations."

The bad news is that Africa accounted for only 7% of foreign students in the United States—even fewer than the previous year. Said IIE president Richard Krasno, "given the magnitude of the problems facing sub-Saharan Africa . . . the continuing decline in access of Africans to overseas education and training is alarming."

While there has been a decline in foreigners seeking undergraduate degrees, climbing enrollments in graduate schools boosted the total foreign student population by 3% last year. Engineering continues to be the dominant field, but it is fast being overtaken by business.

Russian Moon Non-Landing

The Soviets have casually disclosed a long-held secret to five visiting professors from Massachusetts Institute of Technology: yes, they were racing the United States to the moon in the late 1960s. But bad luck with a rocket booster forced them to abandon plans for a manned landing.

Professors from the MIT department of aeronautics and astronautics were at the Moscow Aviation Institute on 27 November when their host, Oleg Alifanov, told the group they were viewing the lunar landing equipment. "It was one of the most dramatic moments that I can ever remember," is how Laurence R. Young, one of the group, reacted. Edward F. Crawley called it "perhaps the most conclusive evidence to date that there was, in fact, a race to the moon." The mission was put on hold in 1972 and scrubbed in 1974 because of repeated booster problems.

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Lunar lander. Professors Crawley (left) and Young (right) in front of the lower portion of the lunar landing craft.

The professors reported that the main difference from the U.S. approach was that Russians had planned to launch the landing craft and spacecraft separately and have them rendezvous in orbit. Also, there were to be only two cosmonauts, with the lunar lander carrying one.

The hardware is now on display for teaching purposes.