

## Briefings

edited by CONSTANCE HOLDEN

### Animal Rightists Win One...

Animal rights activists have reportedly won a victory against Michael Carey, a Louisiana State University neurosurgeon who was using cats to study the type of brain wounds soldiers get in combat.

Four months after the General Accounting Office (GAO) raised questions about the research (see *Science*, 18 January, p. 265), Carey has received word that his work, already temporarily halted by Congress, will no longer receive funding from the Army.

The news was made public by the Physicians Committee for Responsible Medicine, a group that wants to end all use of animals in military research. While the Pentagon has made no formal announcement of the cutoff, Stephen K. Conver, Army assistant secretary for R&D, wrote several members of the House defense appropriations subcommittee that it will ask Carey for a final report on his research—to be “completed without further experimentation

on animals.”

The prime force behind these developments is Representative Bob Livingston (R-LA), a member of the subcommittee, who in 1988 engineered a hold on Carey’s \$350,000 annual budget pending a GAO review of the research. The GAO, despite recommendations by an expert scientific panel that the research be continued, expressed strong reservations and threw the decision back to the secretary of defense.

Carey, recently returned from active duty as a neurosurgeon during the Gulf war, is still being “demilitarized,” according to his secretary, and could not be reached for comment. But the chairman of the expert panel, neurosurgeon John A. Jane of the University of Virginia, speculated to *Science* that “the Army doesn’t want to antagonize” the Louisiana congressman.

Jane says he is profoundly disturbed by the developments. Carey’s is “the only research in the world being done on missile wounds to the head. And the general principle of submitting to being shut down on inadequate grounds by an outside organization has terrible implications....For the scientific community to sit back and let it happen is outrageous.”

### Presidential Digital Commitment

George Bush has finally made a clean breast of it: “I want to be computer literate, and I’m not.” The presidential confession was made in a major speech on education delivered in Washington on 18 April. “Starting next week, I’ll begin studying...I want to know how to operate a computer,” he said.

Sure enough, an IBM PC was installed in the Oval Office on 23 April, according to press secretary Marlin Fitzwater, and the president showed up the next morning for his first lesson in WordPerfect, the White House word-processing program. There was one hitch: The teacher wasn’t there. But he did learn how to turn on the machine.

Bush, who types with two fingers (according to *The Washington Post*) and likes to use a manual typewriter for personal notes, is way behind his wife in entering the computer age; Barbara Bush has been using a laptop for 2 years.

And Fitzwater? The *Post* reports that when asked by reporters if the president’s computer used a mouse, the press secretary replied, “What’s a mouse?”

### ...and Lose Another

Two years ago, officials at the State University of New York at Stony Brook were ordered by the state supreme court to turn over reams of animal research-related documents to animal rights groups. The groups had sued on the basis of New York’s Open Meetings Law for access to the deliberations of the university’s animal care and use committee.

Now, in what Stony Brook president John H. Marburger hailed as an “important victory” for the state’s public universi-

ties, the court’s appellate division has ruled that the law does not apply to the committee. In its ruling, the court stated that it is “manifestly apparent” that the committee is not involved in “deliberations and decisions that go into the making of public policy.”

The ruling is likely to have implications for similar cases now pending in other states.

### Nouvelle Cuisine

“Waste not, want not” will hold yet more meaning for space travelers. With no room for storing extra boxes of cookies or bags of garbage, space voyagers will have to recycle and reuse whatever they can. Which is why agricultural engineer Michael R. Ladisch of Purdue University took a close look at the inedible stems and roots of the plant *Brassica*—a candidate food crop for spaceborne gardens.

He and his co-workers in the Laboratory for Renewable Resources Engineering are developing means of converting parts of *Brassica* and other plants that would normally be discarded into usable food. Ladisch’s group has shown how microorganisms cultivated on board could make enzymes capable of breaking down the tough cellulose in the plant waste into its molecular building blocks,

### New Eye on the High Seas

Oceanographers will soon get something they’ve wanted desperately for more than a decade—a new satellite. Scheduled for launch on 3 May, the European Space Agency’s European Remote Sensing Satellite (ERS-1) will be the first devoted to oceanography in 13 years.

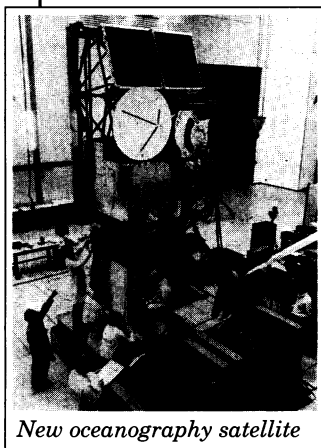
Since the U.S. Seasat satellite stopped transmitting in 1978, the Navy has scrapped plans for new oceanographic satellites and kept most of the data from its Geosat satellite classified. Civilian researchers have been left to analyze and

reanalyze the same limited data. With instruments such as synthetic aperture radar, an altimeter, and a

scatterometer, the ERS-1—which will sell data to scientists at cost—will be furnishing the most detailed and comprehensive satellite picture ever of the surface winds, temperatures, circulation, ice conditions, and ocean floor topography.

ERS-1 should help oceanographers understand better how surface winds relate to currents and waves and how coastlines change. The satellite will also monitor climatic anomalies such as El Niño and improve medium-range weather prediction. “Every oceanographer and many meteorologists in this country are vitally interested in this data,” says oceanographer Frank Eden of the Joint Oceanographic Institutions in Washington, D.C.

The ERS-1 is a coup for the Europeans, who have already taken the lead in high-resolution remote-sensing satellites with the launch of the French SPOT satellite in 1986. The United States should enter the ocean satellite field next year, when NASA launches—with French collaboration—the TOPEX/POSEIDON satellite, carrying some of the same instruments as are on the ERS-1.



European Space Agency

New oceanography satellite

which include a good measure of eminently edible glucose. Pure glucose may not sound like a five-star meal, but evidently the microorganisms add some flavor compounds for seasoning.

Now the Purdue workers are exploring a way to harvest the fruits of all that microbial effort. Ladisch says space travelers may have to bring along a liquid chromatograph to sieve glucose and other edible carbohydrates from inedible ones. Preliminary tests suggest that such a system for converting waste into food could up the efficiency of space-based farming by as much as two-thirds.

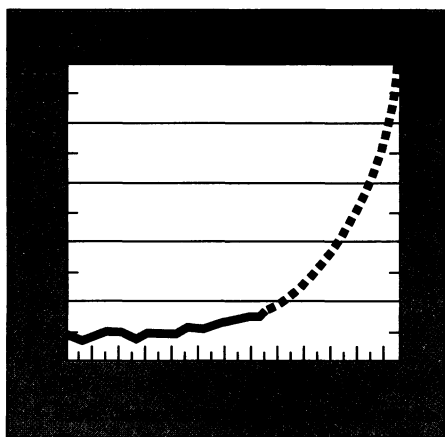
The next challenge is to adapt present liquid chromatograph designs to fit the extra requirements of space flight, Ladisch says. Since he thinks astronauts could be bound for Mars within 20 years, he's not wasting any time.

## \$11.5-Million Housecleaning

Residents of East Stratford Avenue in Philadelphia can breathe easier. The site of one of the few private houses ever to make the Environmental Protection Agency's (EPA) National Priorities List of Superfund sites is about to be certified as clean, according to the newsletter *Superfund*.

**A man's reach must exceed his grasp—or what's an "education president" for?** People often talk about "the year 2000" as though it were still several decades off. President Bush, for example, intends to haul America's schoolchildren from the bottom ranks to world leaders in science

and math within the next 8 1/2 years. And one of the millennial goals of the National Science Foundation is to increase the production of (non-Asian) minority Ph.D. scientists from 350 to 2000 a year (see chart). Currently, 22% of the population is black, Hispanic, or Native American, but in 1988 those groups accounted for only 4.4% of natural scientists and engineers.



## Hope for African Elephants

Just 2 years ago, conservationists were saying that the African elephant was doomed to disappear—that little could be done to stop poachers from wiping out the greatest living land mammal. The numbers seemed to support the sad prognosis: The continent's elephant population had dropped from 1.3 million in 1979 to 609,000 in 1989. But now there's some good news: Paleontologist Richard Leaky is claiming victory in the war against poachers.

"We've turned the tide for elephants," exulted Leaky at a luncheon last month at the National Press Club in Washington. Leaky, Kenya's director of Wildlife Services since early 1989, reported that last year only 55 elephants were slaughtered by poachers in Kenya—down from a high of 5000 elephants a year in the late '80s (including an average of three elephants killed every day in 1988 in one game park alone). Similar declines have been reported in Uganda and Tanzania.

The sharp drop in poaching came immediately after an international ban on commercial trade in ivory was implemented in 1989. Leaky said the ban, along with an intensive campaign to persuade Western consumers not to buy ivory, ap-



East African elephants

pears to have paid off: The price of ivory has dropped from \$30 a kilogram in 1989 to about \$3 today. That, said Leaky, is the chief disincentive to poachers, who had not been fazed by Kenya's official policy "to shoot to kill" them on sight.

Despite the dramatic initial success, Leaky, who was in the United States on a tour to raise money for African wildlife management, warned against complacency. He said that African nations are pressing for an end to the ban so they can regain the profits from the ivory trade. Said Leaky: "We should be focusing attention not on beating the ban, but on ways to beat the hardship the ban has caused."

For the next 20 years the Kabakjians refined the hazardous metal and fashioned it into radioactive implants for cancer treatment. The doctor's methods were crude even by the standards of the time—he tracked radium around the house, flushed it down the drain, and dumped piles of tailings on flower beds in the yard. "Very few parts of the house escaped getting contaminated," says Philadelphia EPA official Victor Janosik, who oversaw the cleanup.

When the state turned the site over to the EPA in the early 1980s, investigators found radiation up to hundreds of times natural background levels—in spite of an earlier cleanup in the 1960s, which Janosik estimates had already removed about 90% of the radium inside the house.

In 1989 the Army Corps of Engineers was brought in to do a thorough cleanup. Two elderly women (who had lived in the house for years without apparent

ill effect) were moved out, the house was demolished, and the topsoil was scraped away, in some places to a depth of 11 1/2 feet. More than 4000 tons of soil and 1000 tons of rubble were trucked to a disposal site in Utah.

Now, says Janosik, the site is "probably the cleanest spot in southeastern Pennsylvania." He expects it to be removed from the Superfund list within a few months. And just how much stray radium caused all the trouble? An Argonne National Laboratory study of the site estimated the total at about a gram.

## Correction

Contrary to what we reported, the horned dinosaur *Chasmosaurus* (*Science*, 12 April, p. 207) did not have the largest skull of any land animal. Paleontologist Paul Sereno of the University of Chicago says that honor belongs to *Triceratops*, another member of the family *Ceratopsidae*.