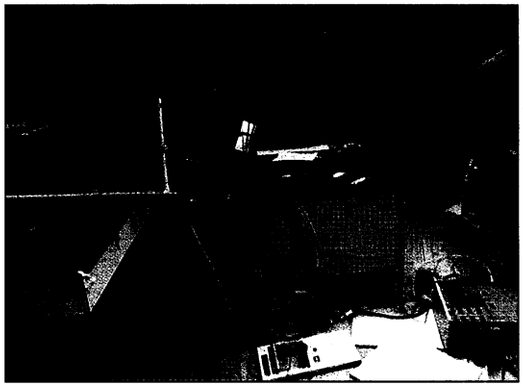
neurosciences programs, where they ransacked 12 labs, destroying microscopes, computers, and other equipment. In neuroscientist Walter Low's lab, for example, they damaged incubators, resulting in the loss of several cell lines used to test compounds that might block neuron death in diseases such as Alzheimer's and Parkinson's. Low's group also may have lost a hard drive full of preclinical data on a vaccine therapy for brain cancer being tested on human tumor cells. "We were just completely devastated," says Low, whose grad student discovered the damage around 6 a.m.



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Aftermath. Computer equipment was among the items vandalized in neuroscience labs.

Although some of the animals, such as Hsiao's Alzheimer's mice, are irreplaceable, insurance will cover much of the damage. In addition, the Minnesota Medical Foundation has set up a $25,000 fund to help researchers rebuild their labs. And a local cancer survivor has offered a $10,000 reward for tips on the perpetrators. **–JOCELYN KAISER**

GRADUATE FELLOWSHIPS

Fewer Minorities Under New NSF Rules

Last month the National Science Foundation (NSF) selected 900 aspiring young scientists to receive its prestigious graduate research fellowships. But the news was tempered by the fact that the number of minorities chosen had dropped by more than half from last year's total, from 175 to 76. The decline, following the cancellation of a separate competition for underrepresented minorities begun 20 years ago, is the latest fallout from legislative and judicial rulings prohibiting the use of race as a selection criterion in education.

"I'm not surprised," says biologist Joel Oppenheim, head of the Sackler Institute of Graduate Biomedical Sciences at New York University, which aggressively recruits minority students. He notes that the elimination of affirmative action programs has also had a chilling impact on minority enrollment in college and graduate schools.

The drop comes in the midst of declining interest in the fellowship program, which received 13% fewer applications this year (from 5548 to 4796). For minorities, however, the decline was an even steeper 20%—from 697 to 559—despite an increase in NSF's outreach efforts to schools with sizable minority populations. "There is a feeling among minorities that they didn't stand as good a chance once NSF dropped its sheltered fellowship program," says Rice University mathematician Richard Tapia, a member of NSF's oversight National Science Board.

NSF has traditionally used targeted programs to accomplish its congressional mandate to increase participation in science by members of all segments of society. But officials are reviewing some two dozen programs to see if they still satisfy both the law and the current political climate. They revamped the 47-year-old graduate fellowship program last year after being sued for discrimination by a white student who was denied the chance to apply to the minority component of the program (*Science*, 2 January 1998, p. 22). The agency paid $95,400 in a pretrial settlement and soon after announced that it would no longer set aside 15% of the total number of slots for a competition reserved for African-American, Hispanic, and native American students. Under the new rules, all applicants for the 3-year, $15,000 a year awards were funneled into one competition.

Hoping to minimize any negative impact of the new rules, NSF officials dispensed with an initial numerical rating of each applicant—based on such quantitative factors as Graduate Record Exam scores, undergraduate grade point average, and a ranking of the baccalaureate institution—that was thought to put some minority candidates at a disadvantage. The change was designed to give more weight to less tangible factors such as persistence and commitment. Officials also ended the practice of assigning only one reviewer to applications that had received a low rating. "This year we heavily emphasized that reviewers needed to look at all the material in the application," says Susan Duby, head of NSF's division of graduate education. Every application was read by at least two reviewers, she says. But these measures apparently weren't enough to avert the sharp drop in awards to minority students.

Duby says NSF plans to be even more aggressive next year in spreading the word about the fellowship program and counseling potential applicants on how to improve their odds. But Tapia, who has successfully boosted minority participation in graduate programs at Rice, cautions that NSF should not expect to see the number of minority

ScienceScope

Skating to Extinction Marine researchers want international action to save the barndoor skate, which they fear could become the first saltwater vertebrate to be fished to extinction. Last year, Canadian biologists Jill Casey and Ransom Myers concluded that trawlers targeting other seafood had unintentionally wiped out most of the North Atlantic's barndoors (*Science*, 31 July 1998, p. 690).

Now, after reaffirming the fish's plight at a 19 March technical workshop at the New England Aquarium in Boston, 10 scientists are calling on U.S. and Canadian authorities to restrict bottom fishing in the skate's few known strongholds. They also tacitly endorsed a bid by two environmental groups to get the U.S. National Marine Fisheries Service (NMFS) to list the skate as endangered. "Without strong measures," says Myers, "I doubt the species will survive."

Commercial fishing interests are promising to fight any proposed listing. NMFS officials, meanwhile, have a year to ponder the issue.

Mob Rule In an 11th-hour campaign to tip the scales in their favor, supporters of a controversial new data-access law flooded the White House Office of Management and Budget (OMB) in early April with letters supporting its implementation. Many scientists oppose the provision, pushed by Senator Richard Shelby (R–AL), which would force taxpayer-funded researchers to hand over raw data to the public on request (*Science*, 2 April, p. 23). But when a public comment period closed on 5 April, supporters appeared to have cranked out the majority of more than 10,000 comments sent to OMB, although no exact count was available.

Stacks of pro-rule comments were identical letters from members of Gun Owners of America, which says the rule will help it "expose all the phony science used to justify many restrictions on firearms." Members of English First also backed the plan en masse, saying it will open to scrutiny studies supporting bilingual education.

Whether OMB will give greater weight to the mass-produced missives or to the fewer personal appeals from researchers detailing how the law could disrupt their work was unclear. A spokesperson said that both the "amount of interest" and "substantive arguments" will influence a revised proposal due later this year.

Contributors: Helen Gavaghan, James Glanz, Jeffrey Mervis, David Malakoff, Jocelyn Kaiser

awardees return to previous levels anytime soon. "It's a very complicated problem, and it takes time to learn how to do it right," he says. "I don't do anything right the first time, but I keep learning." –JEFFREY MERVIS

PALEONTOLOGY

Earliest Animals Growing Younger?

For paleontologists, finding the most ancient example of an animal in the fossil record is usually a triumph. But sorting out a recent claim about the earliest traces of multicellular animals is turning out to be an ordeal instead. Citing ancient fossil worm tracks from central India, researchers last fall pushed the age of the first animals back from 600 million years old to a startling 1.1 billion years. But claims and counterclaims later tugged the apparent age of animals back and forth between truly ancient and more conventionally old. In the latest set of twists, reported last month at a workshop in Lucknow, India, new radiometric dates nudged the pendulum back toward a relatively young age—about 620 million years—for the fossil tracks. At the same time, workshop participants firmly rejected the fossil evidence originally used to suggest a younger age.

Stones of contention. Small structures in these rocks may be mere artifacts, or small fossils that disprove a claim of very ancient animals.

The traces in question are squiggly furrows from the Vindhyan basin, which paleontologist Adolph Seilacher of Yale University and his colleagues attributed to half-centimeter-thick worms (*Science*, 2 October 1998, p. 19). Seilacher's group came up with the stunning 1.1 billion year age from published radiometric dates on mineral grains from sedimentary rocks containing the burrows. But geochronologists quickly pointed out that the mineral grains could have been eroded from much older rock before being deposited as sediment.

So sedimentologist Dhiraj Mohan Banerjee of the University of Delhi and geochronologist Wolfgang Frank of the University of Vienna have used a different dating technique, based on the decay of potassium to argon, on volcanic ash that fell from the sky shortly before the putative worm-track sediments formed. "All these samples gave consistent ages close to 620 million years," says Frank. Although there are complications in dating these rocks, "I am absolutely confident we can reject the very old age of 1.1 billion years."

Even so, the new dates are not the final word. Frank and Banerjee analyzed chunks of rock rather than single mineral grains, a procedure that geochronologist Paul Renne of the Berkeley Geochronology Center in California calls "a little bit scary." Renne explains that whole rock may contain older or younger mineral grains, which could skew the result, and weathering may have allowed some of the rock's argon to escape, making it seem younger than it is. Seilacher also sounds a note of caution. "All of us have to think about the validity of our data," he says, "whether they be radiometric dates or fossils."

Although geochronologists may be moving toward a younger age, paleontologists at the workshop rejected the original challenge to the tracks' antiquity, published last fall by paleontologist Rafat Jamal Azmi of the Wadia Institute of Himalayan Geology in Dehra Dun, India. Azmi claimed to have used weak acid to extract "small shelly fossils" characteristic of the early Cambrian period—about 545 million years ago—from limestone laid down after the worm burrows. However, after firsthand inspection, three British paleontologists rejected the fossils as artifacts created by chemical alteration of the rock (*Science*, 6 November 1998, p. 1020).

At the workshop, none of the specialists on hand could be convinced that Azmi's fossils were actually formed by living creatures. "Azmi has lost the battle," says paleobiologist Vibhuti Rai of the University of Lucknow, one of the organizers of the workshop. What's more, says Banerjee, 15 workshop participants who subsequently accompanied Azmi to his collection sites were shocked to find that the "limestone" that was the purported source of his fossils is actually a porcellanite, a siliceous volcanic rock that would not dissolve in even strong acid. That raised the question of where the "fossils" came from.

Azmi concedes he erred in identifying the rock, but says he now thinks that his maceration and acid extraction methods somehow extracted fossils from small layers of shale within the porcellanite. Indeed, one paleontologist, Rai, says that this week he was able to extract some fossil-like structures from the rock, although he says they are artifacts, not true fossils.

Such news has made some Indian paleontologists uneasy, as they remember the professional embarrassment suffered in the late 1980s when Vishwa Jit Gupta, then at the Panjab University in India, was accused of passing off fossils from around the world as being from the Himalayas (*Science*, 21 April 1989, p. 277). Rai and other Indian paleontologists are standing by Azmi, saying that the problem may be only contamination of samples or a misinterpretation of data on Azmi's part. –RICHARD A. KERR

With reporting from Pallava Bagla in India.

U.S. WEAPONS LABS

Security Fears Prompt Computer Shutdown

Thousands of researchers at three Department of Energy (DOE) laboratories got an unexpected break from their computers last week thanks to the continuing controversy over the alleged Chinese theft of U.S. nuclear secrets. DOE officials abruptly suspended classified computing operations at the Los Alamos, Sandia, and Livermore national laboratories in New Mexico and California on 2 April and herded more than 20,000 employees—including many not involved in secret projects—to briefings on improving safeguards. Although some researchers say the time out was a necessary distraction, others worry that it could lead to new rules that will make the labs' computers harder to use but not necessarily more secure.

The unprecedented "stand-down" cut off access to all computers containing classified information and idled two of the world's fastest supercomputers while lab officials prepared new security plans. The action marked DOE's most dramatic response so far to critics in Congress, who say that lax practices have led to the theft of classified information (*Science*, 26 March, p. 1986).

The surprise training came a few days after DOE delivered a report to Congress outlining cybersecurity lapses at several labs, including the transmission of classified files over unsecured e-mail networks. In releasing that report, done annually, Energy Secretary Bill Richardson said DOE would be working to close gaps in its com-

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