donor agencies to withhold millions of dollars in grants. At the time, some of Western's supporters charged that Leakey was behind the ouster, but Western himself said that mining interests hoping to gain access to park lands were responsible.

This time, however, Western says he is "very puzzled" about why Moi prevented him from serving until his contract was to expire in February 1999, adding that the decision appeared almost "whimsical." Editors at *The Nation*, Kenya's leading newspaper, appear equally confused. In a 20 September editorial, they demanded that government officials explain "in fuller detail why Dr. Western was fired." Whatever the explanation, Western says he will continue to "do everything possible to support the KWS." One lesson his own tenure teaches, he says, is that the agency's governing board—rather than Kenya's president—should be given the power to hire and fire directors. "The crucial point is to keep politics out of the KWS," he says. He adds that he is "unaware of anyone waiting in the wings" to take his old job, which is being filled on an acting basis by KWS Deputy Director David Kioko.

Western plans to spend the next few years writing about his conservation experiences. He is disappointed that he won't be able to finish several tasks he started at the KWS, such as developing a long-term funding strategy and a process for identifying key areas in need of conservation. Western is proud, however, of gains he made in involving Kenyans in conservation efforts. "Conservation has filtered right down to the grassroots," he claims. "We began a process of engaging people in conservation and the role it plays in their lives." **–DAVID MALAKOFF**

INFRASTRUCTURE GRANTS

Canada to Draw Up Strategic Plans

OTTAWA—With $520 million to spend on refitting the nation's academic laboratories, the Canada Foundation for Innovation (CFI) has generated a lot of interest from university researchers. Too much, as it turns out.

This month, after sifting through more than 300 proposals for its first round of grants, CFI officials decided that they couldn't choose among virtually identical projects without first seeking a community consensus on priorities in a dozen or so fields for which applicants were seeking funding. That exercise will force a delay in the bulk of awards and could lead to collaborations and significant revisions among what are now competing projects. University administrators warn that it also could pose quite a challenge for a community accustomed to going its own way.

Money talks. CFI's Strangeway asks for road map before making awards.

CFI was created last year with government funds, and it instantly became the country's largest foundation. The upcoming awards are seen as a badly needed shot in the arm to the nation's sagging academic research infrastructure, and university officials had no problem generating $785 million worth of requests for an initial pot of $260 million, despite a requirement for matching funds. An initial review earlier this month eliminated about one-third of the applications, but the original goal of issuing all awards by the end of the year has been pushed back indefinitely.

The new approach involves drawing up what David Strangeway, president of CFI, calls "a coherent regional or national strategy" for several fields. Without such a strategy, he says, CFI can't be sure that its money is being put to the best use. In the area of genomics, for example, CFI received 18 applications for genetics centers, all dealing with human genomics. Strangeway says the national interest might be better served if some of these proposed centers focused on animal or plant genomics.

Strangeway says CFI's governing board will select the specific fields to be examined at a meeting on 13 October. He estimates the formation of 10 to 12 task forces, composed of experts drawn from around the country and the world, that would cover such areas as genomics, high-performance computing, and digital libraries. The panels would make their recommendations regarding national scientific priorities and needs. The universities, meanwhile, will be encouraged to work together to revise their proposals to address those national strategies. Both the recommendations and the revised proposals will then be fed back to CFI peer-review committees, whose advice will be incorporated into the board's funding decisions.

Such directives may encounter some resistance, however, say university administrators. "Universities spend a lot of time developing their expertise in certain areas," notes Sally Brown, executive vice president of the Association of Universities & Colleges of Canada. "If somebody puts in a human genome project as opposed to a plant one and is then told that we've got enough of those, there will be some sensitivities." Others are skeptical about Canada's capacity to develop discipline-specific strategies. "We don't even have a

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MAKING HAY WITH PLANT GENOME AWARDS

The University of Missouri, Columbia, learned it had snagged its largest grant ever last week—but not through the usual channels. Senator Kit Bond (R–MO) announced the $11 million National Science Foundation (NSF) award to start mapping the corn genome even before university officials in his home state were officially notified of their windfall.

The grant is just the first from a $40 million plant genome initiative added—with Bond's help—to NSF's budget. Three-quarters of the extra funds are supposed to help meet the growing demand for genomic studies of food crops and other economically important plants (*Science*, 27 June 1997, p. 1960), rather than expand studies on a laboratory workhorse, the mustard *Arabidopsis*.

In Missouri, plant geneticist Edward Coe's team will use its funds to take the initial steps needed to determine the order of some of the 2.5 billion bases that make up corn's genetic code. The 5-year project will soon be joined by other studies: NSF plans to announce about two dozen more plant genome projects by 1 October. Just who gets to break the good news to winning researchers remains to be seen.

RUSSIAN INITIATIVE WINS MAJOR SPONSOR

Despite Russia's economic turmoil, an ambitious plan to reform the nation's research and higher education establishments is moving forward. *Science* has learned that the John D. and Catherine T. MacArthur Foundation will spend $6 million over 4 years to help create elite research centers at top universities.

Run by the Russian Education Ministry and the U.S.–based Civilian Research and Development Foundation, the initiative will establish centers that can help train the next generation of scientists (*Science*, 29 May, p. 1336). The MacArthur money—and potential matching funds from other foundations and Russia—will allow the program to expand beyond a pilot project under way at the University of Nizhny Novgorod. In January 1999, organizers expect to invite proposals for a competition to award two to three new centers.

tronomy information service will also be moved to Greenwich.

PPARC has been trying hard to minimize the number of job losses among RGO's staff of 110 and says that all senior researchers have been found alternative university positions. "We expect very few to be unemployed by the end of the year," says PPARC administrator Jim Sadlier. A few staff members will move to a telescope construction company set up by researchers from John Moores University in Liverpool, called Telescope Technologies Limited; five are expected to transfer to the new ATC; and another six will set up temporary home at Cambridge University's Cavendish Laboratory to complete ongoing projects.

RGO

Coming home. The RGO name will return to the original Greenwich observatory.

Despite PPARC's efforts, staff at the RGO are still bitter about the closure. "A close-knit, high-tech family has been blown apart, and we feel it very personally," says RGO director Jasper Wall. And many astronomers are still concerned about the effects of dispersing the RGO team. "Crucial technical expertise for future projects is being lost," says astronomer Phil Charles at the University of Oxford. "In the coming years, there are going to be many occasions when we realize we just don't have the support we need." –NIGEL WILLIAMS

ECOLOGY

NSF Eyes Biodiversity Monitoring Network

To most people, an observatory is a place for astronomers to probe the far reaches of the universe. But some life scientists think the concept might also help unlock secrets in their own backyards. In what could turn into the most ambitious effort yet to systematically study Earth's ecosystems, the National Science Foundation (NSF) has begun planning what may become a global system of biodiversity observatories. The idea appears to be on a fast track at NSF as one of several environmental initiatives promoted by new director Rita Colwell (see p. 1944).

The observatories program would build on a spate of NSF-funded activity in recent years to study biodiversity and ecological processes. NSF already funds 21 Long-Term Ecological Research (LTER) sites that monitor ecosystems ranging from Antarctic dry valleys to New England forests (*Science*, 15 October 1993, p. 334). Three years ago it created a National Center for Ecological Analysis and Synthesis in Santa Barbara, California, to support projects that attempt to glean insights from existing data collected across LTER sites and any number of field and marine research stations (*Science*, 17 January 1997, p. 310). More recently, Arctic researchers funded by NSF proposed pooling data from a network of circumpolar studies. And this fall the agency is preparing a competition to support microbial research at a half-dozen or so existing outposts.

The observatories idea is likely to incorporate elements of all those programs—although planners have not yet hammered out any details, including the definition, number, and locations of the observatories. The program's budget is also unknown, although researchers and NSF officials hope that some work can begin within 2 years. Despite such gaps, organizers have at least outlined the project's philosophical underpinnings: to take the broadest possible look at how organisms interact and evolve in a range of ecosystems. "We're trying to get away from the stamp-album approach, in which scientists go to one site and take a snapshot of conditions at that time for a particular organism," explains Doug Siegel-Causey, NSF's program manager for biotic surveys and inventories, who will manage the initiative. "But it's hard to take a picture of a dynamic process."

NSF took the first step in that direction earlier this month when it convened 15 experts. The group endorsed the idea of such observatories, agreeing that it is long overdue, says meeting chair Leonard Kristtalka, director of the University of Kansas Biodiversity Research Center. "Historically, the systematists and the ecologists have gone their separate ways, and biology has been the worse for it," he says. "These two approaches need to be brought together if we hope to understand biodiversity over time."

One idea likely to receive scrutiny is for a center to support any number of sites in what NSF officials describe as a hub-and-spokes arrangement. Whether it's a physical entity or a virtual presence, the center could serve as both online database and administrative support for field researchers. Participants also envision establishing the observatories at some combination of existing

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GORE GETS POLITICAL MILEAGE FROM NSF INTERNET GRANTS

The pivotal New Hampshire presidential primary election may be more than a year away, but Oval Office wanna-be Vice President Al Gore is already grabbing his chances to impress the state's voters. Last week's opportunity came in the form of a National Science Foundation (NSF) announcement that 36 universities had won grants of up to $350,000 each to hook up to the NSF's speedy Internet backbone. The headline on NSF's press release: "Vice President Gore Announces High Performance Award to University of New Hampshire." The names of the other worthy winners are relegated to a list at the end of the release.

Gore

An NSF official claims there is a nonpartisan explanation for the headline: Gore announced the awards during a visit to New Hampshire, after shelving a plan to announce them in California. More politically savvy headlines could be on the way: NSF plans to award at least a dozen more Internet grants before the 2000 elections.

HUGHES HEAD TO STEP DOWN

The largest U.S. private nonprofit biomedical research funder is looking for a new leader. On 22 September, Purnell Choppin, 69, president of the Howard Hughes Medical Institute (HHMI), announced that he will retire at the end of next year. In 2000, "it will be time for someone else to take up the reins," Choppin wrote in a memo that surprised staffers at the institute.

Choppin, a virologist, was recruited from The Rockefeller University to serve as HHMI's science chief in 1985. After becoming president in 1987, he oversaw construction of a new headquarters in Chevy Chase, Maryland, and guided the organization through a decade of extraordinary growth, focused on molecular biology. During his tenure, the number of HHMI scientists has grown from 96 to 330 and the annual budget from $77 million to $556 million. HHMI's endowment is roughly $11 billion.

A conservative manager, Choppin carefully planned his own departure, noting his 15-month advance warning "will allow ample time for the trustees to select a new president." The institute has not yet named a search committee.

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