

SWEDISH SCIENCE

Funding Hike, With Strings Attached

STOCKHOLM—Seeking to boost basic research and improve science education, the Swedish government earlier this month announced plans to pump an additional \$100 million into academic research. But the funds come with some strings—most of the money is earmarked for political priorities—and this has prompted grumbling in the academic community.

The government this year will spend about 60% of its \$1.6 billion R&D budget on basic research, most of which is handed out as block grants directly to university faculties. The cash infusion is slated primarily for a new government agency, the Science Council, which will give grants for basic research in natural sciences, technology, medicine, social sciences, and the humanities. The move is viewed as a criticism of the Swedish university system's ability to set its own priorities. "There are signs that the state has lost faith in the universities," says Boel Flodgren, rector of Lund University. "We lose a lot of influence."

Academic research has been squeezed in recent years by rising salary and overhead costs, which, along with demands for matching funds from external financiers, consume a growing portion of the block grants. That has forced scientists to rely more heavily on outside funding sources such as the European Union, which sets its own priorities. The upshot, says Flodgren, is that "research originating in curiosity has gotten the short end."

The government shares that sentiment, and in a research policy document presented on 15 September it decided to put more money into a new Science Council, which will start its activities next year. "Our idea is to fund basic research and to protect the freedom of research. Through the Science Council, scientists themselves will decide what to prioritize," says research and education minister Thomas Östros.

However, the government has already de-

creed that much of the \$100 million should be spent on new postdoc career opportunities and research in eight areas: social sciences and humanities, biosciences and biotechnology, information technology, educational science, materials science, health care research, environment and sustainable development, and the arts. Other research fields will have to vie for funds from the rest of the budget. The university share, meanwhile, will be channeled into shoring up recently established universities and creating 16 centers for doctoral studies in subjects ranging from genomics to history. Östros describes the new centers as an effort to revitalize doctoral education by drawing together resources from several campuses. "Our goal is to bridge the gap between the universities and colleges," says Östros. "Universities can count on getting even more money for graduate studies in the coming 10 years."

University officials are giving the government plans a lukewarm reception. "They could have left more responsibility to the new Science Council," says Dan Brändström, chair of the committee responsible for organizing the council. Lars Lönnroth, a literature professor at Göteborg University, sees the proposal as overly pragmatic: "Research is viewed as a tool for solving problems in society, and thus the system favors mediocre researchers satisfied with meeting the demands of others." And although some of the priority areas have merit, adds Anders Flodström, rector of the Royal School of Technology in Stockholm, "the message of the proposal is clear—we have to look for both money and our freedom in collaborations with the private sector."

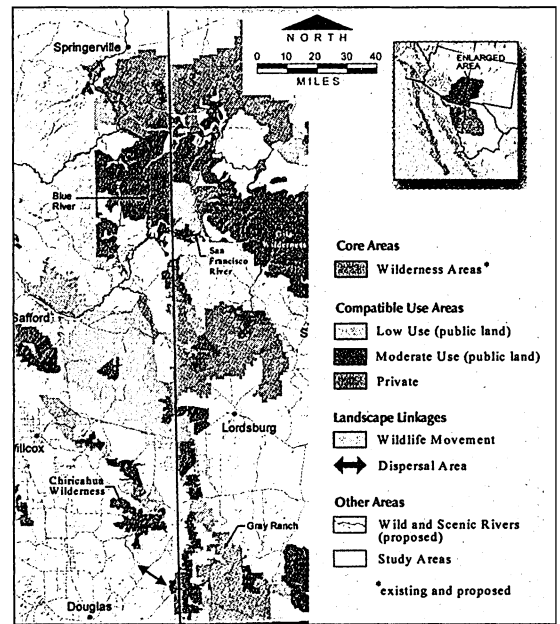
—ANNIKA NILSSON AND JOANNA ROSE
Nilsson and Rose are science writers in Stockholm.

CONSERVATION BIOLOGY

Group Urges Southwest Migration Corridors

Conservationists with an ambitious goal of "rewilding" North America have released their vision for an ecologically rich swath of the Southwest, where subtropical and temperate biomes meet. The Sky Islands Wildlands Network is a blueprint for protecting species across 4.2 million hectares of Arizona, New Mexico, and Mexico by encouraging the return of wolves, jaguars, bears, and mountain lions.

This 220-page report is the first detailed product to emerge from The Wildlands Project, an organization of scientists and activists that advocates restoring big carnivores and linking large wilderness areas across North America (*Science*, 25 June 1993, p. 1868). Sky Islands, for example, would establish



Border crossing. Conservation plan includes north-south migration linkages (orange) to connect Mexican and U.S. wilderness areas.

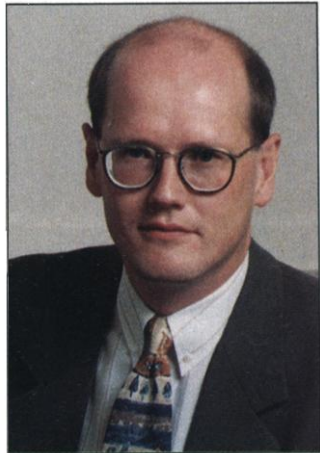
corridors along a historic wolf and jaguar migration route (see map). These connections are at the heart of the plan, a web of wilderness reserves and human "buffer zones."

The plan, which would take decades to implement and comes without a price tag, is intended to guide the actions of government agencies and conservation groups, notes Roseann Hanson of the Sky Island Alliance in Tucson, Arizona, another project sponsor. One key element is to enlarge wilderness areas. Some other steps are already under way, says Hanson. Federal biologists are reintroducing the Mexican wolf, and the Clinton Administration's policy to ban new roads in national forests is "a nice bonus."

Dozens of conservation groups and a few ranchers have endorsed the plan, which is not as radical as it may sound, asserts the network: Only 5.5% of the targeted lands are private, and 95% are already managed for wildlife. Even so, the network is bracing for resistance from ranchers and off-road vehicle enthusiasts, among others.

Some biologists have qualms as well, because Sky Islands bucks the trend of focusing on habitat types; rather it assumes that providing habitat for top predators will also protect other species. The Wildlands Project's scientific director, conservation biologist Michael Soule, responds that just because it's "based on a different set of premises" doesn't mean it's not done "according to scientific principles." The plan will now go out for review by 20 or so biologists. Next on the agenda are regional plans for Maine, the southern Rockies, and linking Yellowstone with the Yukon.

—JOCELYN KAISER



Freedom fighter? Science minister Thomas Östros says scientists will set their own research priorities.

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