

\$2.43 billion research account, which would grow by \$117 million in 1997 under the spending bill. Walker's move is aimed at pressuring NSF to streamline its operations by eliminating one of seven research directorates, preferably social, behavioral, and economic sciences (*Science*, 6 October 1995, p. 19).

NSF officials have argued that their administrative costs, less than 5% of the foundation's \$3.3 billion budget, include no "fat" and are already lower than at most agencies. And they cite an existing streamlining plan submitted as part of a governmentwide belt-tightening that would eliminate 50 to 75 positions by 2000. "This is a dramatic cut that would seriously disrupt our ability to do business," says one NSF official.

Opponents of congressional "earmarks" also won a victory last week, as the House

rejected a proposal by House Speaker Newt Gingrich (R-GA) to shift \$13 million from NASA to an Earth observation program to help the American Museum of Natural History in New York City (*Science*, 21 June, p. 1729). Representative George Brown (D-CA), ranking minority member of the House Science Committee, won a rare floor victory in eliminating the committee earmark, which was strongly supported by New York lawmakers.

Next week the House is expected to take up a bill that provides the National Institutes of Health with an increase of 6.9%. While the appropriations committee cleared the spending proposal without objection, members reimposed an across-the-board ban on human embryo research. That vote overturns a subcommittee decision that would have prohibited only the fertilization of human ova for the pur-

pose of research. Meanwhile, the Clinton Administration has threatened to veto both civilian science bills because of inadequate funding for national service and education programs at other agencies.

While members of Congress skirmish over specific programs, 60 Nobelists have urged Clinton to take up a broader cause: protecting university-based research. Mentioning no specific programs, their 19 June letter calls on the president to "reaffirm the fundamental role of the federal government in supporting basic scientific research." It's not clear whether their broad plea will have any impact on the 1997 budget process. But it may warm the hearts of those who believe in the unity of funding for science.

—Andrew Lawler

With reporting by Eliot Marshall and Jeffrey Mervis.

ARCHAEOLOGY

Chauvet Study Gets the Go-Ahead

PARIS—Earlier this month, France's Ministry of Culture awarded archaeologist Jean Clottes a once-in-a-lifetime opportunity: He was chosen to direct research at the Grotte Chauvet in southern France, recently discovered site of the world's oldest known cave paintings (*Science*, 3 February 1995, p. 614). This should not be surprising, as Clottes is the ministry's own scientific adviser on prehistoric art and one of the world's leading authorities in the field. "If someone had come to me independently and asked who should do it, I would have said Jean Clottes without hesitation," says Mark Patton, an archaeologist at Trinity College in Carmarthen, United Kingdom.

But little to do with the Grotte Chauvet in the 18 months since its discovery has been straightforward. There have been legal wrangles over rights to photographs taken of the cave paintings and also over compensation for the owners of the land where the cave was found. And Clottes, his high qualifications notwithstanding, had to compete for the right to study the cave.

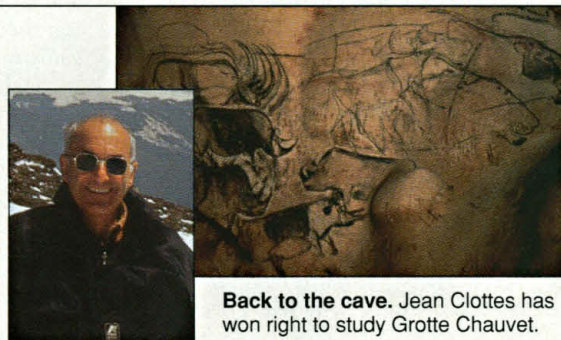
This muddle over the Grotte Chauvet makes a marked contrast to its auspicious discovery in December 1994. The cave's four galleries, which revealed nearly 300 magnificent drawings and engravings of rhinos, lions, bears, and other predators rarely before seen represented by prehistoric artists, promised new insights into the artistic endeavors of early humans and their symbolic significance. "The discovery of Chauvet changed our theories concerning the evolution of art," says prehistorian Gerhard Bosinski of the University of Cologne in Germany.

When preliminary carbon dating of pigments from some of the paintings showed them to be up to 32,000 years old—at least

4000 years older than any other rock paintings yet discovered—Clottes set about making plans for a detailed study. Yet within months, the plans had to be put on hold. First, the cave's discoverer, caver-archaeologist Jean-Marie Chauvet, the French Ministry of Culture, the Sygma photo agency, and the owners of the land under which the cave was found got into a four-way battle over the photographic rights. Then the landowners sued the French government, arguing that the compensation offered for expropriation of their land was too meager.

Finally, last December, the worst blow came for Clottes: The culture ministry decided to launch an international competition to choose who would direct the research at the cave, and appointed a jury of nine experts in prehistory—seven French scientists and one each from Spain and Germany—to make the final judgment. But only one rival stepped forward to challenge Clottes for this scientific prize, prehistorian Denis Vialou at the Institute of Human Paleontology in Paris. Because Clottes, the ministry's own leading expert, had already authenticated the cave and prepared a research program to study it further, some French archaeologists speculate that the ministry's decision to launch a competition reflected personal and political rivalries as much as scientific concerns. "The fact that there were only two candidates says a lot," remarks one French prehistorian, who asked not to be identified.

Nevertheless, on 31 May, the jury, voting by secret ballot, ruled unanimously in favor of Clottes, and the culture ministry adopted its judgment shortly afterward. Members of the panel who spoke privately to *Science* say



Back to the cave. Jean Clottes has won right to study Grotte Chauvet.

that the unanimous verdict indicates the decision was made strictly on scientific criteria, because the jury included friends and associates of both men. "Clottes was clearly more qualified and experienced than Vialou," says one French jury member.

Both Clottes and Vialou now decline to discuss the competition between them. But with this episode behind him, Clottes says that in several months his team of up to 50 experts will begin a three-pronged research program: a detailed examination of the paintings themselves; a study of the bones, artifacts, and footprints found on the cave floor; and an analysis of the cave's "environment," including pollen samples and other organic material.

In addition to determining the dates of the paintings more precisely, the team plans to make detailed life-size tracings of the rock art, an established technique for assessing how cave paintings were made. "When you trace a bison ... your hand must do what the hand of the prehistoric artist did," says Clottes. They will work from photographs, however, to preserve the fragile originals.

After being denied his prize for so long, Clottes seems determined to make a good job of it. "I want the Grotte Chauvet to be the best studied cave in the world," he says.

—Michael Balter