

ing to deliver a deeper moral message, says Thomas Powers, author of *Heisenberg's War: The Secret History of the German Bomb*. "He thought that he got the word out in some form or another," Powers says. "But Bohr makes it clear he didn't hear a thing."

However, Hans Bethe, a physicist and Nobel laureate at Cornell University who worked on the Manhattan Project, says he no longer believes that Heisenberg tried to make only a nuclear reactor. "The letter changed my view," Bethe says. "It seems that in 1941 Heisenberg wanted to build a bomb." After the war, Heisenberg had more reason than Bohr to "misremember" the facts when recounting the meeting, says Gerald Holton, a physicist and historian of science at Harvard University. "Niels Bohr had no reason to say something that wasn't true," Holton says, "whereas Heisenberg had a real problem after the war, namely, explaining why the German group failed to do what they set out to do."

If Heisenberg was working in earnest on the German bomb effort, then his purpose in visiting Copenhagen was likely more personal than political, Bethe says. The Nazis threatened Bohr, whose mother was Jewish, and Heisenberg must have known that his visit would help secure Bohr's safety. "He was convinced that Germany would win the war," Bethe says, "and he wanted Bohr and his institute to survive."

—ADRIAN CHO

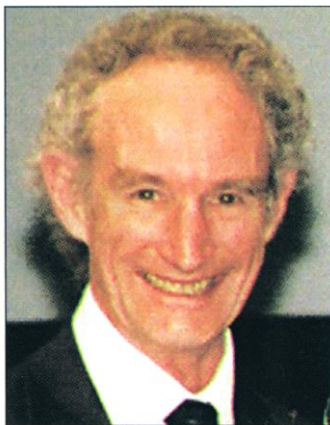
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UNITED KINGDOM

Parliament Takes Aim At Royal Society

CAMBRIDGE, U.K.—A showdown is looming between Britain's oldest and most respected scientific institution and the U.K.'s House of Commons. Responding to long-standing concerns over elitism and discrimination against women at the Royal Society, the Commons' Select Committee for Science and Technology has launched a probe of how the society and similar institutions should use public money and how they elect members.

The Royal Society, founded in 1660, received \$37 million from the government last year, most of which it spent on postdoctoral research fellowships and travel grants. It also organizes meetings, publishes journals, and acts as an independent "voice of science" for the government. Each year, the soci-



Search me. Robert May welcomes the Commons' inquiry.

ety bestows lifelong membership on 42 new "fellows." But despite a policy of equal opportunity, only 44 of its present 1216 fellows are women. Moreover, 62% of them are based in London, Oxford, or Cambridge, home to the country's top universities.

Select Committee chair Ian Gibson, former dean of biology at the University of East Anglia in Norwich, says he wants to find out why the society's fellows do not reflect the makeup of the wider scientific community. He also wants to ensure that there isn't duplication of effort among the Royal Society, the Royal Academy of Engineering, and other learned societies in areas such as the popularization of science. "That outcome includes the possibility of more money for learned societies," he says. His goal is to achieve "a complete revamp and modernization" of the Royal Society.

Robert May, president of the Royal Society and former government chief scientist, told *Science* he acknowledges that the society is "working against the pyramid" of gender inequality and is actively trying to identify women scientists who may have been overlooked. It has also recently changed its nomination rules: Starting this year, a candidate needs to be nominated by only two fellows instead of six, which may make it easier for women to be nominated. "We also try to have women on all our committees, but that turns out to be a burden for [the female fellows], because there are so few," says May. However, he says, "we will not have different standards of election [for men and women]."

Early reaction from scientists supports that view. Plant scientist Lorna Casselton, a Royal Society fellow at Oxford University, agrees that doctoring the selection process to favor women would be unacceptable: "I don't think women would like to see double standards applied." All the female fellows contacted by *Science* stressed that they had never experienced or seen any discrimination in the selection of candidates. "The problem is with society, not with the Society," says physiologist Frances Ashcroft, a fellow at Oxford University. Fewer women follow careers in science, and the proportion of women in the Royal Society is the same as the proportion holding scientific chairs in British universities, she says.

The Select Committee intends to call the Royal Society and other societies to give evidence after March. It will be an "interesting battle," says Gibson. But he may have little power to influence the inner workings

of the Royal Society. "Once the committee has discovered how we elect fellows, we will welcome its ideas," counters May.

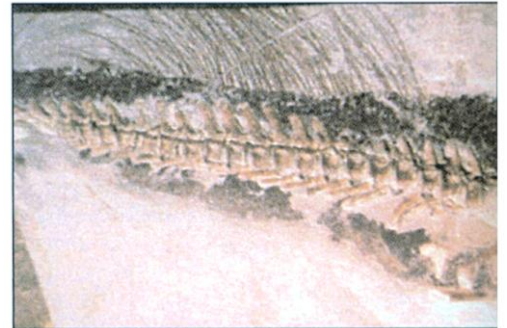
—ADAM BOSTANCI

With additional reporting by Anna Baynham.

PALEONTOLOGY

Tug-of-War Over Mystery Fossil

FRANKFURT, GERMANY—Another blockbuster dinosaur find from China has sparked a disagreement between leading paleontologists in Germany and China. Last



A tall tale. The disputed psittacosaur and its tail filaments.

week, Friedrich Steininger, director of Frankfurt's Senckenberg Natural History Museum, tried to clear the air over his museum's purchase of a mysterious fossil amid claims that it was smuggled out of China illegally. But Chinese paleontologists insist that the specimen must be handed back. "It is more than clear that Chinese law forbids such exports of important vertebrate fossils," says paleontologist Zhou Zhonghe of the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP) in Beijing.

One thing not in dispute is that many scientists are clamoring to see the find. The almost complete psittacosaur—a bipedal plant eater that's the size of a large dog and has a parrotlike beak—has a tuft of filaments on its tail that resemble a porcupine's quills. This is the first time such adornments have been found outside the theropods, the group that includes large bipedal carnivores such as *Tyrannosaurus rex*. "The discovery of these structures will certainly change the way we look upon the [skin] of dinosaurs," says Gerald Mayr, a paleornithologist at the Senckenberg.

The fossil took a circuitous route to the Senckenberg. It first surfaced in 1997 at the Tucson rock show, a major marketplace for fossils and minerals. The following year the fossil was sold by a U.S.-based fossil dealer to a pair of European dealers, who arranged to have it exported legally under U.S. law. At the time, the psittacosaur bones were

CREDIT: (BOTTOM) AP PHOTO/THE ASAHI GLASS FOUNDATION

still mostly embedded in the limestone characteristic of China's 120-million-year-old Yixian formation.

The fossil's European owners took it to the Natural History Museum in Milan, Italy, where researchers, while partially preparing the fossil, discovered parts of the skin and the quill-like filaments. Realizing that the specimen was an important find, one of the dealers, geologist Flavio Bacchia, invited an international group of experts, including IVPP's Dong Zhiming, to examine the specimen in 2000. Zhiming and others urged that the specimen be returned to China. That summer, a representative of the dealers went to Beijing to negotiate the psittacosaur's return in exchange for casts of feathered dinosaurs, but the deal foundered. "Bacchia was sincere in his desire to return the fossil to China, but he and his German partner had invested a lot in the specimen," says Eric Buffetaut of France's CNRS research agency in Paris, a member of the expert group.

After this setback, the dealers sold the fossil to the Senckenberg for about \$70,000 in June 2001. Steining says that the museum bought the fossil to save it for research: "We realized the scientific value of the specimen and decided that it must not disappear into a private collection."

Last month, German newspapers reported that the Chinese Society of Vertebrate Paleontology had gone on record as favoring repatriation of the fossil. But last week Steining said that he has not responded to a letter from the society because it was not printed on letterhead and lacked a signature. "To date we have received no official inquiry from the IVPP to return the fossil to China," he says. Steining says he wants to work out a deal with Chinese officials whereby the specimen would be the property of China but would be exhibited at the Senckenberg. But IVPP director Zhu Min apparently has no interest in such a deal: "The prerequisite is that the fossil must return to China." Once that happens, he says, "we can negotiate on whatever they want to discuss."

—SABINE STEGHAUS-KOVAC

Sabine Steghaus-Kovac is a writer in Frankfurt. With reporting by Erik Stokstad.

HOMESTAKE MINE

Neutrino Lab Detects Heavy Political Fallout

The National Science Foundation (NSF) is still mulling over the merits of a \$281 million proposal to convert a South Dakota gold mine into the world's deepest underground laboratory. But the politics are very much on the surface, with implications for NSF, other major research facilities, and, probably, control of the U.S. Senate.

The scientific plan before NSF officials

would transform part of the 125-year-old Homestake Gold Mine into a 2300-meter-deep facility for studying elementary particles called neutrinos, as well as experiments in the geological and life sciences (*Science*, 15 June 2001, p. 1979). Pressed by a company-imposed deadline to close and flood the mine, backers last year decided not to wait for NSF's approval and took their case to Congress. Legislators obliged by appropriating \$10 million to keep water out of the mine. Last December, lawmakers also wrote language to protect the mine's owner, Barrick Gold Corp. of Toronto, Canada, from future environmental lawsuits.

But the deal, crafted by Senate Majority Leader Tom Daschle and Democratic colleague Tim Johnson, both of South Dakota, and the state's Republican governor, Bill Janklow, was modified at the last minute to satisfy House Republican leaders. Conservative talk radio host Rush Limbaugh and others



SEN. JOHNSON

Lead ★

SOUTH DAKOTA

SEN. DASCHLE



REP. THUNE



Follow my lead. A proposed underground lab in Lead, South Dakota, has become a hot political issue.

had complained that the Senate language would have saddled U.S. taxpayers with millions of dollars in cleanup costs. But Barrick officials have threatened to pull out of the deal due to the House revisions that were adopted.

The mine has also become an issue in the race between Johnson and Representative John Thune (R-SD), a contest that could decide which party controls the Senate. Johnson has said that House Republicans "dropped the ball" on the laboratory, implying that Thune would be responsible for losing the economically important project if the company pulls out. But in recent television advertisements, Thune says he worked hard to close the deal. Last week Thune claimed credit for convincing President George W. Bush to put nearly \$10 million in his 2003 budget request to keep the project moving while NSF ponders the laboratory's scientific merit.

In addition to being the cause of this polit-

ical sparring, Homestake has made itself an uninvited presence in NSF's 2003 budget request. In a section on "early-stage planning for potential large facilities," the White House instructs the agency to help the National Academy of Sciences design a study reviewing a planned \$240 million neutrino detector at the South Pole, called IceCube, in light of "other proposed U.S. neutrino collectors ... and planned neutrino research throughout the world." IceCube is an expansion of an existing neutrino observatory called AMANDA.

NSF has also been told to convene a workshop "on all aspects of underground and/or neutrino research." That language, explains Joe Dehmer, head of NSF's physics division, "ties together existing work on IceCube and underground labs, even though they do two quite different types of science."

IceCube will search for very high energy particles that originate beyond the solar system, whereas the Homestake lab is expected to probe lower energy neutrinos that will shed light on the sun and neutrinos themselves. The Bush Administration also has requested \$2 million in NSF's physics program next year to support research on neutrino detectors. Although Dehmer says that new findings have made the field "a hot topic" for scientists, the top-down allocation troubles physicist John Bahcall of Princeton University in New Jersey. A major backer of both Homestake and IceCube, Bahcall says such priorities shouldn't be dictated by the White House.

Homestake backers see the study as an endorsement of their claim that the underground lab is a cutting-edge research facility on a par with other projects, such as IceCube, that have already won NSF's backing. But IceCube's chief scientist, Francis Halzen of the University of Wisconsin, Madison, says he "welcomes the review, [because] we don't have anything to fear."

For Homestake, however, any studies would be moot if Barrick officials pull the plug—a decision that could come within a month. And even if the company agrees to transfer the land, the project needs the approval of NSF's 24-member governing board. That approval, if granted, would trigger another race, this time pitting the Homestake lab against NSF's growing, and increasingly expensive, list of facilities that it wants to build.

—DAVID MALAKOFF

With reporting by Jeffrey Mervis.