FEDERAL LOBBYING

Societies Drop Opposition to Station

Scientific societies have long been among the most vocal opponents of the space station. Fourteen societies signed a statement opposing the station in 1991; another 10 signed on in 1992. But last month, when members of Congress geared up for another assault on the international space laboratory, their scientist allies deserted them. Most scientific groups were silent, and two—the American Astronomical Society and the Planetary Society—had even changed their position and supported the station.

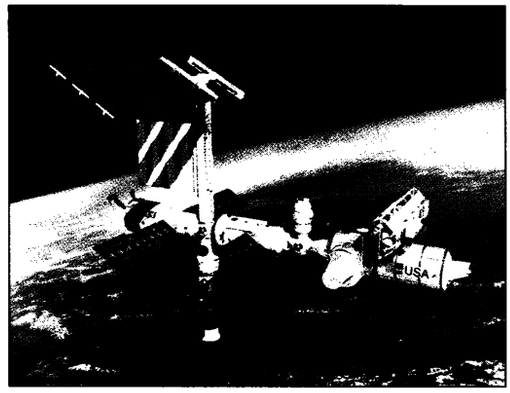
The station survived: A vote in the House of Representatives to eliminate $2.1 billion for the station in the upcoming fiscal year was defeated by the surprisingly comfortable margin of 278 to 155 (*Science*, 8 July, p. 180). The lead-up to the vote represents a case study of how the politics of science are played in Washington.

Why did the societies change their tune? For one thing, few groups have felt entirely comfortable weighing in against the station. A few years ago, when National Aeronautics and Space Administration (NASA) officials cited the opportunity to do science in a low-gravity environment as a major reason to build the station, many societies felt compelled to point out that as a scientific project, the station was a poor value for the money. But this year, NASA didn't package the station as a scientific venture, emphasizing instead jobs, the chance to tap into Russian technology, and the potential to inspire young people.

Another reason many societies sat out the debate this year is that opposing the space station has always been fraught with risk. For one thing, some societies in past years have been criticized by members who support the station or who felt the issue was tangential to their professional concerns. After the American Society for Cell Biology came out against the project in 1992, for example, some life scientists complained because they believed the station would be valuable for biological research, and others questioned why the society should be commenting at all about a project on which its members had little knowledge. "It has really been a contentious issue," says one official.

Opposing the station also put the societies at odds with powerful political forces, including the President, key congressional leaders, and the aerospace industry. Several society heads report veiled threats from Congress that opposing the station could hurt the chances of other space-science missions. And NASA administrator Daniel Goldin's "reputation for vindictiveness is well established," says one.

Robert Park, head of the Washington office of the American Physical Society (APS), has traditionally been the driving force behind the scientific opposition to the station. But the station's political durability finally did him in. "It's hard to mobilize people year after year," he says. "You can get them to sign up one year, but then they hear the complaints. They take a little heat, and then they don't want to take it any more." This year, APS and a few of its sister societies within the American Institute of Physics were the only scientific groups to publicly oppose the station.



NASA

Free sailing. The space station is no longer a target for most U.S. scientific societies.

They were not the only societies to take a stance, however. Space-science groups also spoke up—but in favor of the project. The Planetary Society, whose membership includes non-scientists, had opposed the station in congressional testimony prior to last autumn. But in June it wrote a letter to a leading congressional opponent saying that "the space station is not only vital to the continued development of the American space industry, but it has also become a crucial part of our foreign policy." The society also reasoned that the demise of the station could undermine NASA's other activities, turning it into "a huge agency without much of a mission."

For the American Astronomical Society, the shift has been more gradual. In 1991, the society organized a letter-writing campaign against the station, but this year it wrote a letter to Vice President Al Gore describing the station as one of several "noble and worthy investments for the future." Executive director Peter Boyce explains that the society simply decided it was no longer politic to oppose the station. "When [NASA] stopped pitching it as a science project, it kind of cut the ground out from under us," he says. At that point, he adds, scientific opposition "wasn't politically realistic. I think [the opposition of other societies] really hurt the scientific community."

Boyce denies a rumor that the society had traded its support for the station in 1992 for a promise of $10 million in construction funds for the Keck II telescope. But he acknowledges that it is susceptible to political arm-twisting. "The Administration really wants to do the space station, and over the years they did get to us," Boyce says. "I learned that you just don't get anywhere by trying to cut somebody else's program to help your own." He says he learned one other lesson: "It just didn't make sense to wage a battle that didn't look winnable."

–Christopher Anderson

INTERNATIONAL FUSION PROJECT

Departing ITER Head Predicts Trouble

When they launched a joint effort 4 years ago to build an experimental fusion reactor, the world's leading industrial powers were well aware that they faced an immense challenge: It was the most technologically ambitious fusion project ever attempted, and it demanded an unprecedented degree of international cooperation and coordination. Last week, the outgoing director of the International Thermonuclear Experimental Reactor (ITER) warned, however, that the project's four participants—the United States, Russia, Japan, and the European Union—haven't yet faced up to the magnitude of the task. The project, he warned, will be delayed "indefinitely" unless it is restructured and given nearly double its current staff.

On 30 June, Paul-Henri Rebut said he would step down as director of the $10-billion project after mounting criticism by the ITER Council of his management practices (*Science*, 17 June, p. 1655). But last week, in an interview with *Science*, Rebut made it clear that he has no intention of going quietly. He said the project's organizational structure has created "endless difficulties."

ITER is a creature of its four partners, operating through a joint council. Its lack of independence—ITER does not legally exist on its own and has no control over its finances—undermines the authority of the director, he says, and leads to an inefficient "design by committee. To get things done is always a fight. It's impossible to work under these conditions."

Staffing has been a major bone of contention between Rebut and the ITER council. Rebut believes the project will need three or four times its current level of 50 computer-aided design (CAD) workstation operators.

He notes that ITER is at least as complex a design as a new passenger jet aircraft, for which Boeing, for example, typically employs more than 3000 CAD-station operators. Without more operators, Rebut says, construction of ITER will be delayed well beyond its scheduled 1998 start.

ITER Council members say Rebut's comments reflect a disagreement over what should be accomplished by the end of the current engineering design phase of the project. Although Rebut believes the project should be ready to start building components by the end of this phase, the ITER Council is considering settling for less than a construction-ready design, says Anne Davies, head of the U.S. Department of Energy fusion program and a Council member. "We've had some really strong advice from U.S. industry that we should not be doing 'build-to-print' design work," but rather letting the industrial contractors do the final design themselves, says Davies.

Rebut also says the ITER project is being undermined by the conflicting loyalties of its research staff. ITER researchers and designers are employees of one of the partner nations temporarily assigned either to one of the three ITER work sites or to the four "home teams" spread among national fusion laboratories. Torn between the interests of ITER and those of their own national fusion program, the designers "don't know who they're working for," he says. In particular, says Rebut, technical decisions and research priorities for ITER are sometimes influenced and compromised by the interests of the national fusion programs.

Charles Maisonnier, head of the fusion program for the European Union and a Council member, says that such conflicts are not surprising. "In any lab you have groups that want to continue what they are doing, putting an ITER label on their own work." But overall, he says, "I think that the four parties have realized that the progress of ITER is best for their own national programs." Davies agrees. "We all consider the success of ITER to be absolutely essential to our collective fusion programs. It's very difficult to change the director and management, but we want to make sure this thing succeeds." The Council is expected to discuss Rebut's criticisms at its meeting later this month, when it will select a new director and administrative officer.

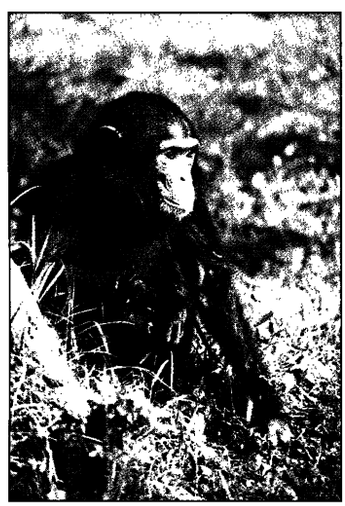
–Christopher Anderson

WILDLIFE CONSERVATION

Orphan Chimps Won't Go Back to Nature

Like Thomas Wolfe, chimpanzees apparently can't go home again, and that spells trouble for Africa's growing population of orphaned wild chimps. In late May, primatologists tried for the first time to reintroduce a captured chimp to a wild troop. But 2 weeks ago, the animal, a 4-year old female named Bahati ("Lucky" in Kiswahili), turned up alone at a park warden's hut in Uganda's Kibale National Park.

There are now over 200 orphaned chimps in sanctuaries throughout Africa, and "it is a desperate situation," says Harvard primatologist Richard Wrangham, who has directed the Kibale Chimpanzee Project for 7 years and was involved in Bahati's release. And, says noted primatologist Jane Goodall, "the irony is that this has all come about because the game officials are now enforcing the laws, as we've asked them to do."



RICHARD WRANGHAM

Stranded. A failed attempt to return Bahati, this 4-year-old female chimp, to a wild troop has dimmed hopes for a solution to Africa's orphan chimp problem.

Since 1989, the United Nations and several African nations have signed treaties and enacted laws to stop the international trade in chimps, which were being sold to zoos, circuses, and laboratories for medical research. But those laws haven't stopped the hunting of adult chimps for food—or the selling of their orphaned offspring to locals as pets. When game wardens hear of such illegal transactions they confiscate the young chimps and pass them along to primatologists. "Most of the [confiscated] baby chimps are byproducts of the bush meat trade," says Karl Ammann, a conservationist who operates a small refuge for such chimps in Kenya. Orphans are also found in villages where farmers have killed adult chimps raiding their crops—apparently the fate of Bahati's mother—and in the possession of poachers hoping to sell the young chimps to smugglers.

Primatologists originally started chimp reserves in the 1960s and 1970s after several attempts to reintroduce captive chimps into chimp-inhabited forests (though not to wild chimps themselves) ended in failure. Today there are five sanctuaries, and conservationists estimate that another 200 young chimps are being looked after by private individuals or kept in halfway houses at places like the Entebbe Zoo until room in a sanctuary can be found for them.

Sanctuaries, however, are small, and their cost is high. The Jane Goodall Institute, a nonprofit organization dedicated to the study and conservation of chimpanzees and headed by the primatologist, spends about $40,000 a year maintaining reserves in the Congo Republique and Kenya; it has a third under development in Burundi. With an estimated 50 additional orphaned chimps turning up annually in the Congo Republique alone, sanctuary keepers are desperate for a better solution.

Bahati, Wrangham thought, stood a chance of being accepted back into the wild. "She was a young female, and I was told that she was about 7 or 8, the age that many females move into new groups," he explains. He hoped the resident chimps would regard her as a natural new arrival. Another factor in Bahati's favor was that she had only been in captivity for about 5 months, so she was not too accustomed to humans.

Initially, the experiment looked like a success. Bahati, Wrangham says, "was welcomed with uniform kindness and care" by the Kibale chimps. Although she went into a village just 2 days after being released, Bahati later appeared content to stay with the troop when she was returned to them. "Not one of the other chimps tried to be aggressive toward her, which is something none of us expected. So that is a kind of breakthrough," Wrangham says.

For a few weeks, Bahati stayed with the wild apes, but when an easily available food source gave out and the chimps began to disperse, Bahati did not join them. Instead, she turned up at the park warden's office. "She knew right where to find us," says Wrangham. She now resides at the Entebbe Zoo.

The research team now speculates that Bahati was too young (only after seeing her himself last month did Wrangham realize she was 4) and too weak to remain with the troop. "She lacked the self-confidence and physical strength to keep up with the other chimps," Wrangham says. "I think she came back to us because it was safe."

Still, the test gives the researchers hope that a somewhat older and more fit chimp might make the transition—although Wrangham admits the number of orphaned chimps that fit the bill (female, 7 years old, in top physical condition) is small. For the vast majority of Africa's orphaned chimps, there's apparently no going back.

–Virginia Morell