NIH BUDGET

Senate Panel Adds 16% To Complete Doubling

The last leg of the biomedical community's campaign to double the budget of the National Institutes of Health (NIH) over 5 years got a boost last week from a key Senate spending panel. The Senate Appropriations Committee approved $27.2 billion for NIH for the year beginning 1 October, a 16% increase over 2002 and twice the agency's 1998 level.

Senators Tom Harkin (D–IA) and Arlen Specter (R–PA), leaders of the subcommittee that oversees NIH's budget, celebrated the doubling victory a day earlier at a jubilant press conference. Joining them were new NIH chief Elias Zerhouni, his deputy Ruth Kirschstein, and six directors of the larger NIH institutes, who donned spanking new white lab coats with their names sewn on them for the occasion. "This is a red-letter day. It's a milestone," said Harkin.

The amount approved by the Senate panel is consistent with what President George W. Bush had proposed, but the panel didn't follow the Bush plan to the letter. Instead, it trimmed $263 million from the National Institute of Allergy and Infectious Diseases (NIAID)—which had been slated for a 57% boost, mainly thanks to $1.5 billion for antibioterrorism research—and spread it around. That put many institutes that had been slated for 8.4% increases in the president's budget closer to 9%, a committee staffer says. "All these other problems—cancer, Alzheimer's, Parkinson's—did not stop being problems on September 11," explained the aide. The bill gives NIAID a free hand in applying the cuts.

The lawmakers also ignored the president's request to designate a total of $5.1 billion for cancer-related research because "we would have considered that to be earmarking for a disease," the staffer says. Even so, they matched his proposed 12% boost for the National Cancer Institute, to $4.6 billion.

Although elated by the Senate mark, biomedical lobbyists note that the figure might be lower in the House, where the corresponding spending panel has a smaller overall total to work with. The House is expected to take up the spending bill in September after a monthlong recess; the two versions must then be reconciled.

–JOCELYN KAISER

Well covered. Senators Tom Harkin, at podium, and Arlen Specter celebrate with NIH top brass their proposed boost in the NIH budget.

GLOBAL CHANGE RESEARCH

Senate Puts the Heat On Science Nominees

A Senate panel turned a routine confirmation hearing last week into a withering, bipartisan assault on the Bush Administration's climate change policy. The targets—nominees for two senior White House science posts, one of whom would coordinate the Administration's research agenda on climate change —were left speechless and politically wounded by the criticism.

The unsuspecting victims were Kathie Olsen and Richard Russell, in line to be the principal deputies under John Marburger, the president's science adviser and head of the Office of Science and Technology Policy (OSTP). Olsen would handle science policy, including the Administration's $1.7 billion global change research program, and Russell would coordinate technology policy. Russell holds a bachelor's degree in biology and spent 10 years as a House staffer before joining OSTP last year as chief of staff; Olsen, a Ph.D. neuroscientist, worked at the National Science Foundation for 15 years before becoming NASA's chief scientist in 1999.

Normally such hearings are innocuous affairs that showcase a nominee's expertise. But Senator John McCain (R–AZ), a ranking member, was already steamed about comments from Marburger to the same panel a week earlier in response to questions about the Administration's climate change policy. Stressing the uncertainties, Marburger had described how projections about global warming are based on assumptions of possible future levels of greenhouse gases; that should not be confused with predictions, he said, derived from known facts about current emissions. McCain, claiming that Marburger's testimony had "no credibility," offered Olsen and Russell a litmus test.

McCain first read a description of how "warming in the 21st century will be significantly larger than in the 20th century … and temperatures in the U.S. will rise by about 5°–9°F (3°–5°C) on average in the next 100 years." Without identifying the source—a recent White House report* that President George W. Bush has dismissed as mere speculation—McCain then asked each nominee whether he or she agreed with the statement.

Olsen and Russell initially refused to answer the question. Olsen, despite NASA's dominant role in the global change initiative, later said that she "was nervous … [and] didn't understand the paragraph," adding that "I don't know if we have enough

* www.epa.gov/globalwarming/publications/car/index.html

Heated words. White House nominees Richard Russell (left) and Kathie Olsen field sharp questions about climate change at Senate hearing.

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data to make that statement." Foiled in his attempt to solicit the nominees' views on climate change, McCain declared that "I will oppose your nominations until I get an answer" and stalked out of the hearing.

Senator Ron Wyden (D–OR), who chaired the hearing of the Senate Commerce, Science, and Transportation Committee, tried to mollify the stunned witnesses by assuring them that he supported their nominations. Indeed, this week the panel approved both nominees, with McCain the sole dissenter. Still, Wyden echoed McCain in expressing his "disappointment" with their grasp of the issue. "The science behind climate change is no longer in question," he said pointedly. Olsen, noting that her background is in neuroendocrinology, promised to "become more knowledgeable" on the subject in the coming months.

–JEFFREY MERVIS

PALEONTOLOGY

Fossil Bird From China Turns Tail, Spills Guts

If paleontologists could take a field trip back in time, many would head straight for the ancient lakebeds of what is now northeastern China. Back in the early Cretaceous, some 120 million to 125 million years ago, these shores buzzed with strange life that has come to light only in the past few years: feathered dinosaurs, odd mammals with hindlimbs like those of reptiles, and primitive flowering plants (*Science*, 12 January 2001, p. 232). Birds teemed too, as more than a dozen unearthed species and hundreds of specimens attest.

Now the record of early avian life has gotten even richer. In the 25 July issue of *Nature*, two Chinese paleontologists describe one of the most primitive birds ever discovered, *Jeholornis*. The bird's peculiar tail underscores the now-common theme of kinship with dinosaurs. "This is a critical specimen that combines features that are typical of dromeosaurs with things that are typical of more advanced birds," says Luis Chiappe of the Natural History Museum of Los Angeles County. So well-preserved is the turkey-sized specimen that even its last meal is plain to be seen.

Prodded by memories of *Archaeoraptor*, a birdlike dinosaur from the same region that was shown to be a fake assembled from two creatures (*Science*, 14 April 2000, p. 238), paleontologists Zhonghe Zhou and Fucheng Zhang of the Institute of Vertebrate Paleontology and Paleoanthropology in Beijing took care to make sure that the new specimen was genuine. After examining how bones matched up between the several slabs, they concluded that "the possibility of a composite specimen … can be ruled out." Zhou and Zhang note that, unlike *Archaeoraptor*, the new specimen was completely prepared in the lab.

What makes *Jeholornis* unique among birds from the early Cretaceous is its tail. Birds usually have short tails tipped by a few vertebrae fused into a rodlike pygostyle. In contrast, the 42-centimeter tail of *Jeholornis* consists of at least 22 individual bones, just like a dinosaur's tail. This kind of tail also adorns the end of the most famous fossil bird, the 145-million-year-old *Archaeopteryx* from Germany, as well as that of *Rahonavis* from the late Cretaceous in Madagascar. Finding a third example in China shows how far-flung such long-tailed early birds were, says Cathy Forster of the State University of New York, Stony Brook.

Despite its antiquated tail, *Jeholornis* sported an advanced shoulder girdle capable of powering flight. That fits with the notion that early birds evolved their front limbs first, Chiappe says, and only later modernized their tails into part of the flight gear. A computer analysis of 201 anatomical features placed *Jeholornis* with *Rahonavis* as the closest relatives of *Archaeopteryx* in the bird family.

Jeholornis also has something to say about what fueled its airtime. Inside its chest cavity lie the fossils of more than 50 undi-

Stuffed. Remains of *Jeholornis* include fossilized seeds (*right*) from the bird's last meal.

CREDITS: (LEFT TO RIGHT) IVPP; NASA

ScienceScope

Pluto or Bust? Space scientists are rethinking one element of a new planetary research plan released last week by the National Academy of Sciences (*Science*, 19 July, p. 317). After initially expressing full support for the plan, the American Astronomical Society (AAS) now says NASA should delay a proposed 2006 launch for a Pluto mission if it would hurt other science projects.

Pluto advocates say a delay would cause the spacecraft to miss a Jupiter gravity assist and arrive after the planet's atmosphere has frozen. But AAS officials say recent studies suggest that the freeze might never occur and that better propulsion systems could make up for a delay.

Space scientists hope to win Senate support this week for an early Pluto voyage. But the project's fate won't be set until after Congress finishes its spending bills this fall.

Hanging On Argentinian scientists, whose research budgets dried up after the country's economy tanked in December (*Science*, 29 March, p. 2356), have gotten some good news. The secretary of science, Julio Luna, has won Treasury approval to use up to $14 million designated for research loans as direct grants. The money—from an international loan—will allow the cash-strapped Agencia Nacional de Promoción Científica y Tecnologíca, or "the Agency," to catch up on delayed grant payments and even start a new competition, says an Agency official. To the relief of many, Luna has also killed a plan to merge the Agency with CONICET, a larger science body whose review system has been criticized by scientists. The government also recently gave researchers permission to buy imported supplies and equipment.

The downside: Agency grants—once worth up to $50,000 annually—have lost 70% of their value due to the peso's slide. Still, University of Buenos Aires ecologist Osvaldo Sala says that the funds will be particularly helpful to scientists whose labs "have run out of money."