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

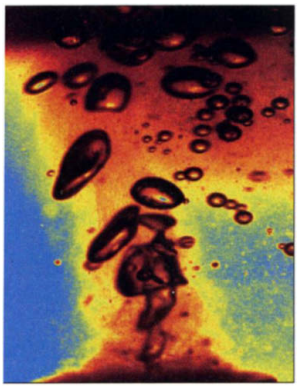
Pluto or Bust? Space scientists are rethinking one element of a new planetary research plan released last week by the National Academy of Sciences (*Science*, 19 July, p. 317). After initially expressing full support for the plan, the American Astronomical Society (AAS) now says NASA should delay a proposed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



No nukes? Sonoluminescent bubbles look bad for fusion.

initiate fusion. "They're saying, 'We understand what's going on inside the bubble,' and if this is what you believe the science is, you should be suspicious of the Taleyarkhan paper," says Crum. The authors of that paper could not be reached for comment. But for now, at least, skeptical voices rule the acoustic waves.

–CHARLES SEIFE

CLIMATE PREDICTION

Signs of Success in Forecasting El Niño

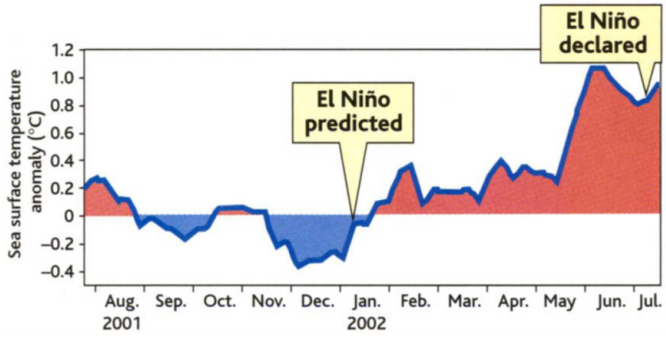
El Niño, the sleeping giant of climate, awakened earlier this month, according to government scientists. Six months ago, those same researchers went out on a limb when they recognized stirrings around the Pacific as likely signs that El Niño's warming of tropical waters would soon return after a 4-year absence. Their early-January forecast appears to be holding up; if the warming trend continues, El Niño's often disastrous weather shifts around the globe should crest around the end of the year. A full year's warning of El Niño's peak would be much better than forecasters achieved last time. But soon will come the next test: Will this El Niño develop into a weak-to-moderate warming this winter, as now predicted, or another barnburner like last time?

El Niño forecasting has a long and checkered history. In the 1960s and even early '70s, monitoring of the tropical Pacific was so spotty that full-blown El Niños could pop up around Christmastime without warning. A simple model of tropical Pacific winds and currents successfully predicted a Pacific warming for the first time in 1986, but forecasters' optimism was short-lived. It was only with the 1997 super–El Niño that human and computer forecasters had some measure of success, and even then they were criticized for a months-late alert and gross underestimation of the event's huge scale (*Science*, 13 October 2000, p. 257).

This time around, some forecasters seem to have gotten the onset of El Niño right. At the National Weather Service's Climate Prediction Center (CPC) in Camp Springs, Maryland, meteorologist Vernon Kousky and a half-dozen colleagues put out a monthly "diagnostic discussion." Their Web site report* sorts through observations from ships, islands, satellites, and buoys across the Pacific and evaluates forecasts from more than a dozen models run by CPC and others. Last fall, while most of the tropical Pacific was at near-normal temperatures, the CPC group started talking about a warming trend that would likely continue into 2002, although as a group the models dithered from month to month between calling for normal and somewhat warmer conditions.

On 9 January, while the crucial central tropical Pacific was still normal, the CPC group came out with its first solid prediction: "It seems most likely that warm-episode conditions will develop in the tropical Pacific during the next 3–6 months." That didn't contradict the majority of model forecasts, and it fit what CPC researchers had been seeing in the changing circulation of atmosphere and ocean.

Not everyone agreed, however. "A lot of us felt they were too quick" to call for an El Niño, says meteorologist Anthony Barnston of Columbia University's International Research Institute for Climate Prediction (IRI) in Palisades, New York. On its public Web site,† the IRI group started in January with a 60% probability of an El Niño developing and built more or less steadily to a June forecast with a 90% chance. At the same time, the models were developing a consensus for an El Niño peaking at weak-to-moderate warmth next winter. "Overall, the models are doing better this time around," says Barnston, who main-



Good call. Early this year, government scientists correctly predicted an El Niño warming while the tropical Pacific was still near normal.

CREDITS: (TOP TO BOTTOM) K. SULICK/UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN; CLIMATE PREDICTION CENTER/NCEP

* www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/index.html
† iri.columbia.edu/climate/ENSO/currentinfo/QuickLook.html
‡ iri.columbia.edu/climate/ENSO/currentinfo/SST_table.html

ScienceScope

Museum Stays Nanjing city officials have agreed to revise plans for boosting tourism to accommodate a science museum being built by the Nanjing Institute of Geology and Paleontology.

The institute, part of the Chinese Academy of Sciences, spent 4 years winning approval for a three-story, $3.6 million museum that would display fossils and other artifacts. But in February, city officials ordered the institute to halt work on the building, to be completed next year, because it interfered with plans to enhance a nearby 1400-year-old Buddhist nunnery (*Science*, 24 May, p. 1379). Last month the city backed off, however, saying it will develop new beautification plans that take the museum into account.

Yang Qun, deputy director of the institute, says he's "glad that the government has reiterated its support" for the museum.

NIMH Short List The search is winding down for a new director for the National Institute of Mental Health (NIMH), which has lacked a permanent leader since Steven Hyman returned to Harvard in December 2001. A search committee has forwarded four names to National Institutes of Health (NIH) director Elias Zerhouni, sources tell *Science*. They are Edward Scolnick, executive vice president for science at Merck & Co. Inc.; Thomas Insel, a former NIMH researcher who is now at the Yerkes Regional Primate Research Center at Emory University in Atlanta (see p. 506); Dennis Charney, who leads NIMH's intramural program on anxiety disorders; and David J. Kupfer of the University of Pittsburgh.

The front-runner is said to be Scolnick, a former NIH cancer researcher now on NIMH's advisory council. But rejoining the government would mean a hefty pay cut.

Forgive and Take In an unusual deal, Russia has agreed to forgive $98 million in Armenian debt in exchange for control of four state enterprises, including a pair of scientific institutes. The biggest prizes are the Hrazdan thermal power station and the Mars joint-stock company, a circuit-board manufacturer. But the inclusion of two Yerevan-based electronics research labs irks some observers. "This is a new form of neocolonialism," grouses an official of a science foundation in Yerevan. The parliaments of both countries are expected to ratify the deal this fall.

Contributors: Andrew Lawler, Jocelyn Kaiser, Ding Yimin, Richard Stone