

and gene-reading software—is \$7000 to \$15,000 per user per year, although the term “user” is not well defined. In contrast, pharmaceutical companies pay \$5 million to \$15 million per year.

Klausner says he isn’t aware of any legal barrier that would prevent NIH scientists from becoming Celera subscribers, nor does he see a problem in spending public money to get access to data that may be freely available through GenBank. “We would [only] do this if it is cost-effective and valuable to enhance the public research,” Klausner says. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, also says his scientists should “have access to all scientific resources that the extramural people” can use. Steven Hyman, director of the National Institute of Mental Health, agrees: “If any of my scientists were to ask, I would sign up without compunction.” Like Klausner, Hyman sees no problem in paying for the data twice: “We do it all the time” with scientific journals, he argues: “We pay for the research, we pay for publication costs, and then we pay for the journal subscription for our scientists. We do it without complaining. ...”

Insiders say it’s impossible to guess how or when the negotiations will end. At present, the company is trying to answer 15 detailed questions from NCI scientists about fees and access. The company’s responses, according to one NCI scientist, could make or break the deal.

—ELIOT MARSHALL

PALEONTOLOGY

New Fossil Fills Gap In Bird Evolution

Early birds have never had it so good. Paleontologists who study bird evolution are reveling in new finds from around the world, especially China (see special Focus section beginning on p. 232), that provide ever more evidence of dinosaurian ancestry. Meanwhile, evidence bearing on an equally puzzling question—the origin of modern birds—has been frustratingly scarce. But an 80-million-year-old bird from Mongolia may be about to change all that.

Described in this week’s issue of *Nature*, the Late Cretaceous fossil is the best preserved close relative of modern birds found in more than a century. “This specimen is paramount for understanding the origin of modern birds,” says Luis Chiappe of the Nat-

ural History Museum of Los Angeles County. For starters, he notes, “it’s saying that our picture of the early evolution of birds is certainly more complicated than we thought.”

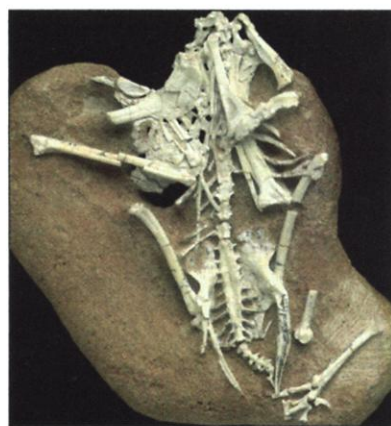
The most primitive bird known, *Archaeopteryx*, flapped over Jurassic lagoons some 150 million years ago. By the early Cretaceous a more advanced group of birds had appeared. Called the Enantiornithes, or “opposite” birds, for the way their foot bones grew, they flourished for 70 million years before going extinct. Many have been discovered in the last 2 decades. Unfortunately, the fossil record is much more limited for their successors, the Ornithurae—the group that includes living birds—which are thought to have emerged roughly 65 million years ago. Paleontologists had relatively complete skeletons for only two, *Hesperornis* and *Ichthyornis*, both discovered in the 1870s.

Now Julia Clarke of Yale University and Mark Norell of the American Museum of Natural History (AMNH) in New York City unveil *Asparavis*, a new fossil bird from the Ukhaa Tolgod region of Mongolia. Not only is the specimen a long-coveted ornithurine, but it is also breathtakingly well preserved. The skeleton is three-dimensional, rather than smashed flat—highly unusual for fragile birds—and so the anatomy stands out in sharp relief.

Asparavis is already turning up some surprises. For example, it appears to have a mosaic of primitive and advanced traits. Clarke and Norell have found 27 features that make *Asparavis* an ornithurine and link it with modern birds, such as its 10 fused sacral vertebrae. But they also found 12 traits that were thought to be unique to Enantiornithes. If those traits aren’t diagnostic of that group, the dozen or so fragmentary fossils classed as Enantiornithes by those features may not actually belong to the group—and that could upset the standard idea that Cretaceous enantiornithines were much more diverse than ornithurines. “It’s not as simple a picture as we thought,” Clarke says.

No matter how these features shake out, paleontologists are thrilled to have such a complete bird to work with. “You don’t see birds that old in that good condition,” notes Jim Kirkland of the Utah Geological Survey in Salt Lake City. “This fossil will be an incredible focal point for what we will know about bird relationships.” And that would be something to crow about.

—ERIK STOKSTAD



Relief. This three-dimensional fossil may clarify origins of modern birds.

Texan to NIH? Rumors reached a fever pitch in Washington this week that the Bush transition team had tapped a director for the National Institutes of Health, but the supposed candidate denies all. John Mendelsohn, president of the University of Texas M. D. Anderson Cancer Center in Houston, told *Science* in a statement that although “It would be an honor to be considered” for the NIH post, “no one has approached me about it” and “I love my job.”

Mendelsohn, who is said to have links to the Bush family, has worked at the University of California, San Diego, and Memorial Sloan-Kettering. But observers noted that if offered the NIH job, he would have to mull whether he is willing to give up positions on the boards of biotech ImClone Systems and Enron, the giant Houston-based energy company, and become a politico. And one biomedical research lobbyist expressed concern that a clinical oncologist might not “resonate with” NIH’s mostly basic research grantees—and might also add to NIH’s already heavy slant toward cancer research.

Prion Payoff The uproar over Germany’s first cases of mad cow disease is paying dividends for researchers on the tiny Baltic Sea island of Riems. This week, molecular biologist Thomas C. Mettenleiter, who heads Germany’s Federal Research Center for Animal Viral Diseases, said that the center will open an Institute for New and Emerging Animal Infectious Diseases on Riems and will “significantly expand its research.”

Riems has housed German animal-virus research laboratories for 90 years, and officials expect the new institute to open this spring in a refurbished lab with 17 employees, including seven scientists. In the past 2 months German officials have discovered seven cows infected with bovine spongiform encephalopathy, a prion disease that has struck more than 179,000 cows in the United Kingdom and hundreds on the continent.

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