

# RANDOM SAMPLES

edited by CONSTANCE HOLDEN

## Big Bird Laid "Dino" Eggs?

A new fossil find in southern France suggests that many of the "dinosaur" eggs found in the region may actually have been laid by giant ostrichlike birds.

The Upper Cretaceous rock outcropping through the vineyards of the Languedoc region have been a rich source of fossilized eggs up to 20 centimeters in diameter. Scientists have attributed the eggs to dinosaurs because they believed there was no other creature around during that period, between 99 million and 65 million years ago, big enough to lay them. Huge flightless birds are not thought to have evolved until the extinction of dinosaurs 65 million years ago opened up a terrestrial niche.

But two French paleontolo-

gists, Eric Buffetaut of the University of Bourgogne and Jean Le Loeuff of the Musée de Dinosaures at Espéraza, say their discovery in 1997 of a couple of 72-million-year-old bones suggests that a big flightless bird did in fact coexist with dinosaurs. The large bones, found at two sites in the Languedoc, belong to a new species of ostrichlike bird, the duo claims in the January issue of the *Journal of the Geological Society*. The broad and heavy pelvis, some 20 by 18 centimeters, is attached to 10 fused lower spinal cord vertebrae. That's more vertebrae than have been found in any known birdlike dinosaurs, but similar in number to those of some Cretaceous birds—and similar in



**Cretaceous ostrich?** Pelvis bone with attached sacral vertebrae.

size to those of today's ostrich. The short, stout leg bone is also ostrichlike, with a shaft 15 centimeters around. The scientists estimate that the creature,

which they've christened *Gargantuavis philoinos*, weighed in at an ostrichlike 141 kg. It is the oldest flightless bird of this size yet discovered, the authors assert.

Other experts say the scientists' claims are plausible. Mike Benton, a paleontologist at the University of Bristol in England, points out that there wasn't much dino diversity in the area and "there are more egg types known from the region than kinds of dinosaurs."

Moreover, he adds, "molecular biologists have recently been telling us that many bird groups evolved much earlier than suggested by the fossil record."

## Attacking Elitism

Chang-Lin Tien, the former chancellor of the University of California, Berkeley, thinks the distribution of talent in academia is getting more lopsided, and last month he warned the National Science Foundation (NSF) that one of its most venerable programs may be making things worse.

"We're becoming a bifurcated society, and that trend is reflected

in higher education," Tien, a mechanical engineer and former NSF grantee, said in a lecture sponsored by NSF's engineering directorate in Washington, D.C. "The rich [institutions] are getting richer, and the rest are struggling." That, in Tien's opinion, is "not good for a democracy. You need regional excellence as well as national excellence."

Proof of the growing divide,

Tien said, can be found in NSF's prestigious graduate research fellowships, which each year support more than 2500 of the country's "best and brightest" graduating seniors. About one-third of them are drawn to Stanford, the Massachusetts Institute of Technology, and Berkeley. And fully half are spread over the top three and five others—Harvard, Princeton, Cornell, and the universities of Michigan and Washington.

But NSF says it doesn't have a problem with such an unequal distribution of talent. "We apply a true market philosophy," says Susan Duby, who oversees the fellowships program, "by allowing the students to choose the best place to do their research."

## Three Win Japan Prize

A Japanese physicist and two Belgian plant geneticists have won the 1998 Japan Prize, one of the world's richest science awards, this year worth close to \$800,000.

Physicist Leo Esaki, 72, president of the University of Tsukuba in Japan and winner of the 1973 Nobel Prize in physics, will receive 50 million yen, about \$391,000, in the category of "Generation and Design of New Mate-

rials Creating Novel Functions." Esaki developed the concept of superlattice crystals, which are composed of layered thin films and which have special properties, such as the ability to carry current at discrete voltages. The technology is at the heart of semiconductor lasers used in optical telecommunications, sensors in wireless communications devices, and in devices that read data in the next generation of computer hard disks.

Jozef Schell, 62, of the Max Planck Institute in Cologne, Germany, and Marc Van Montagu, 64, of the Flanders Interuniversity Institute for Biotechnology in Ghent, Belgium, will share another 50 million yen prize in the category of agricultural biotechnology. They developed a method for inserting foreign genes into plants that confer resistance to insects or diseases. "This is the basic research underpinning subsequent work on transgenic plants," says selection committee member Tadashi Asahi, a biotech professor at Fukui Prefectural University in Japan.

The winners will receive their prizes, administered by the Science and Technology Foundation of Japan, in Tokyo in April.

**Mooncrawler.** Slimey the worm, the best friend of Oscar the Grouch on the TV show *Sesame Street*, is going to the moon in the popular show's first venture outside its core mission of basic literacy and numeracy. This month's launch begins a 19-week series that will serve as the centerpiece of this year's theme, "The Science of Discovery."

Slimey's journey is sponsored by the Worm's Air and Space Agency (WASA), and he'll be accompanied by a theme song from Tony Bennett—*Slimey to the Moon*. Slimey and his wormmates will perform experiments, cope with technical difficulties, land on the moon, and collect samples. The show will be the first to explore basic science concepts at a preschool level, says Children's Television Workshop spokesperson Allyson Felix. These concepts include the difference between heavy and light, weightlessness, the distance to the moon, and how long it takes to get there.



CHILDREN'S TV WORKSHOP