

"It was total serendipity," he says. Smith snapped some photographs, noted the location, and kept searching.

The next year, Smith and his fellow grad student Matt Lamanna assembled a crew to excavate the sauropod remains. They pulled out 6.5 tons in 3 weeks. Based largely on features of the vertebrae, they identified the incomplete skeleton as that of a titanosaurid, the dominant group of sauropods during the Cretaceous. They also came across a dig site about 10 kilometers away that may have been worked by Stromer. In a spoils pile they uncovered old boots, pieces of tin cans, and a piece of German newspaper printed in what looked like a pre-World War II typeface.

Stromer himself had discovered a titanosaurid in the area, which he named *Aegyptosaurus*. But the pronounced ridges on the freshly excavated 180-kilogram humerus, as well as a bony projection on the shoulder blades, suggested that the specimen belonged to a new genus. Smith's team named it *Paralititan*, after the term "paralic," which describes tidal environments like mangrove swamps.

To figure out how large *Paralititan* was in life, the researchers stacked its 1.7-meter-long humerus against that of *Argentinosaurus*, a South American titanosaurid that's the largest on record. Because the humerus isn't preserved in *Argentinosaurus*, the team first had to estimate its length from comparisons with other titanosaurids. *Argentinosaurus*'s humerus, estimated at 1.81 meters, makes *Paralititan* the next heaviest known titanosaurid, perhaps twice the size of Stromer's adult *Aegyptosaurus*.

The thought of *Paralititan* weighing as much as 100 tons raised a concern: Would it have sunk into the mangrove swamp? Team member Kenneth Lacovara, a coastal geologist at Drexel University in Philadelphia, crunched some numbers. Given feet 1 meter in diameter, there was no problem—a relief for the paleontologists, who didn't think the massive carcass could have floated in or been dragged there by predators. "I'm confident that this sauropod may have spent a fair amount of time in the mangrove," Lamanna says.

The researchers have also found new specimens and taxa of fish, sharks, turtles, marine reptiles, lizards, and other dinosaurs. They plan to go back next year to look for even more. Ultimately, a diverse array of Upper Cretaceous fossils from North Africa could help determine the relative positions of Africa, South America, and Europe.

Decades ago, Stromer first discovered that diversity, only to see his collection blown to pieces. "It's a great shame it was lost," says Paul Upchurch, a sauropod ex-

pert and biogeographer at Cambridge University, United Kingdom. "But now that Josh Smith and colleagues have shown that there still is material to be found there, at least we have a second bite at the cherry."

—ERIK STOKSTAD

## AUSTRIAN UNIVERSITIES

### Scientists Spar Over Reform Plan

**VIENNA**—The Austrian government earlier this week approved plans for a major shake-up of the country's university system. Proponents say the proposal, if approved by Parliament, would infuse fresh blood into a system that has become sclerotic. Some critics, however, are angry over a loss of permanent jobs, while others charge that the reforms will be half-hearted and underfunded.

Most Austrian researchers agree that the university system is ailing. Over the past few decades, it's been "too easy to get permanent positions without a real assessment of the achievements of the candidates," says University of Vienna quantum physicist Anton Zeilinger. Adds University of Innsbruck physicist Peter Zoller, "there are essentially no positions left for young people." Compounding the problem, most professors and assistants are civil servants, or *Beamte*, a status that confers lifetime employment and regular raises not tied to job performance.



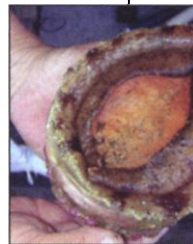
**Reform-minded.** Minister Elisabeth Gehrer wants to overhaul university hiring practices to bring in fresh blood.

president of the Austrian Science Fund, the country's main granting agency, points out that many researchers are "too old" by the time they are permitted to do independent research. Such disheartening conditions, if allowed to fester, will cause Austria "to lose a whole generation of scientists," warns University of Graz neuropharmacologist Peter Holzer.

In response to these widespread complaints, education and science minister Elisabeth Gehrer last December proposed legislation that would abolish civil servant status for

## ScienceScope

**Endangered Abalone** U.S. officials this week added the white abalone, a California mollusk prized for its taste, to the government's endangered species list. Four years ago, biologists warned that the abalone was on the verge of becoming the first totally marine organism known to have been driven to extinction by overfishing (*Science*, 25 July 1997, p. 486). In an unusual move, the National Marine Fisheries Service declined to identify the mollusk's "critical habitat," fearing that poachers might use the information to clean out the estimated 3000 abalone that remain on deep-water reefs off California.



Meanwhile, biologists are trying to raise the creatures in captivity. The Abalone Restoration Consortium last month reported that it had coaxed three captive abalones into producing 6 million fertilized eggs. Eventually, the group hopes to release 10,000 young abalones a year into the wild.

**Whose Genome Next?** These days, genomics—study of an organism or biological system by looking at many genes at a time—is considered cool by hip biologists. But with researchers jostling to get their favorite organism decoded next, the National Human Genome Research Institute (NHGRI) has decided it's time for a sequencing summit. NHGRI director Francis Collins says he has invited an array of experts to the National Institutes of Health campus near Washington, D.C., on 9 to 10 July "to develop rational guidelines [for sequencing priorities], instead of responding to the group yelling the loudest."

Large-scale international sequencing centers are currently busy polishing the human genome sequence and completing work on biomedically important species such as the mouse, rat, and zebrafish. But once those chores are done, says H. Robert Horvitz of the Massachusetts Institute of Technology in Cambridge, the sequencers should take on species that have clear relevance to evolutionary biology, biomedicine, and comparative genomics. That might put some obscure animals at the head of the line.

But don't forget an organism's PR appeal, says NHGRI adviser Maynard Olson of the University of Washington, Seattle. He would sequence primates next, even if they are not the scientific community's first choice, because the animals capture the public's imagination.

**Contributors:** David Malakoff, Elizabeth Pennisi