

# RANDOM SAMPLES

Edited by Constance Holden

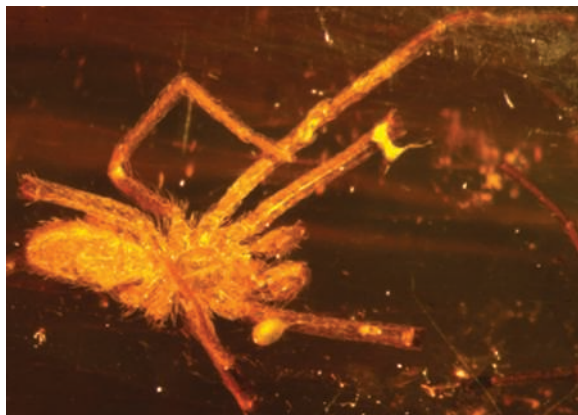
## Groovy Choppers

A Swedish anthropologist has found the first evidence of dental modification by early Europeans: Young men in Viking-age Scandinavia filed deep furrows into their upper front teeth.

Caroline Arcini of the National Heritage Board in Lund discovered the marks on the 1000-year-old skeletons of 24 young males, which were among several hundred skeletons unearthed from four different cemeteries in southern Sweden and held in storage in several museum collections.

Arcini thinks earlier researchers assumed the dental marks to be from wear or damage. But the furrows were clearly filed intentionally and with a great deal of skill, she reports in a paper in press at the *American Journal of Physical Anthropology*. She speculates that the men filled the grooves with a colored substance such as wax or fat mixed with pigment to make the marks more visible.

George Milner, an archaeologist at Pennsylvania State University, University Park, who has studied similar dental modifications in prehistoric North Americans, says such marks usually indicate a social group affiliation. These are surprising because "most instances of tooth modification have been found in Mesoamerica and South America." He says there have been occasional cases in Asia and Africa but none until now in Europe. Arcini says she hopes researchers will now be on the lookout for similar marks that might yield clues as to where the custom originated in Europe.



## Spider Essence in Amber

Even spiders have blood, although it is actually a bluish fluid called hemolymph. Now the oldest known droplets of spider blood have been discovered trapped in amber.

Paleontologist David Penney of the University of Manchester, U.K., spotted the droplets in a specimen, dated at 15 million to 20 million years old, belonging to the Museo del Ambar Dominicano in the Dominican Republic. He claims that the drops' preservation yields new information about how small organisms get trapped in amber.

It has been thought that insects become slowly engulfed after getting their feet stuck in resin. However, in the September issue of *Palaeontology*, Penney argues that because the droplets of spider blood were caught intact, the creature must have been submerged and had its legs broken very suddenly from a flow of liquid resin. Slow engulfment would allow the blood to dry out.

George Poinar of Oregon State University in Corvallis,

an expert on amber-embedded fossils, agrees that "entrapment could have occurred quite rapidly." The museum specimen, he adds, shows that the "rapid and yet relatively gentle flow of amber resin can preserve rarely fossilized structures such as blood."

Penney suggests that such droplets may hold promise as an uncontaminated source of ancient DNA. Getting genetic material from bodily tissues is usually problematic because they may be contaminated by the DNA of internal microbes.

## Italians Defend Darwin

Fearing that the teaching of evolution will disappear from Italy's elementary and middle schools, scientists last month organized a new group—the Society for Evolutionary Biology—to defend Darwin.

The new society was formed in reaction to the ministry of education's decision in 2004 to drop evolution from school curricula (*Science*, 30 April 2004, p. 677) in response to pressure from ruling conservative elements. Teachers and scientists mounted a protest, prompting the government to conduct an inquiry. The ministry withdrew its initial proposal earlier this year but has not made it clear how evolution will be reintroduced into classrooms.

The society's president, Giorgio Bertorelle of the University of Ferrara, says he aims to strengthen ties among evolutionary biologists worldwide and raise funds from Italian associations overseas. The furor in Italy could benefit science by raising public awareness about evolutionary biology, says Giorgio Bernardi, editor-in-chief of *Gene* and chair of the International Society of Molecular Evolution. Bernardi, one of hundreds of scientists who have joined the new society, predicts that in the end, "sanity will prevail."

## Blood and Steel

*Heart of Steel (Hemoglobin)*, unveiled last week in Lake Oswego, Oregon, is one of a series of "protein sculptures" created by Julian Voss-Andreae, a quantum physics-trained German who is now an Oregon artist. The sculpture is made from tightly coiled steel tubing that trembles under the touch and which surrounds a red glass sphere.



Edited by Yudhijit Bhattacharjee

**TWO CULTURES**

**Genetic action.** Few researchers get the chance to share the richness of a life in science with a general audience. For medical geneticist Michael Hayden, that opportunity comes this week at the Vancouver International Film Festival in Canada with the debut of *The Score*.

The movie portrays a geneticist racing to isolate the gene for Huntington's disease, which she herself may be carrying. The concept for the story came from Hayden (inset), who studies the same disease at the University of British Columbia in Vancouver. (The gene was actually identified in 1993 by a research consortium organized by the Hereditary Disease Foundation.) The story was first enacted as a play by the Electric Company Theater in Vancouver and later adapted for the screen with the help of a \$300,000 grant from Genome Canada. Hayden's lab worked closely with the filmmakers.

Apart from the inclusion of a risqué lab romance, Hayden is pleased with the result. The film focuses on the dilemmas of modern research, including the fierce competition between and within labs, the thorny relationship with pharmaceutical companies, and the ethical implications of integrating costly predictive genetic disease testing into the health care system. "It also portrays the vulnerability of science and the fact that it is not a cold, dry activity but rather tends to incite intense passions," says Hayden.



**AWARDS**

- A dozen scientists and engineers, and a lobsterer with a master's degree in biochemistry, are among the 25 winners of this year's MacArthur fellowships. Each awardee will receive \$500,000.
- Ernest McCulloch and James Till, who together discovered the first stem cell, are the joint winners of this year's Lasker

Award for Basic Medical Research. Edwin Southern, who developed a method for detecting specific genetic sequences among genomes, and Alec Jeffreys, who invented genetic fingerprinting, will share the Clinical Medical Research Award, and Nancy Brinker, who created the Susan G. Komen Breast Cancer Foundation, will receive the

Mary Woodard Lasker Award for Public Service.

**JOBS**

**Hanging it up.** Seven years after becoming president of the Association of American Universities (AAU) in Washington, D.C., Nils Hasselmo has decided that he's old enough to retire. On 1 February 2006, 4 months shy of his 75th birthday, he'll step down from his job leading the consortium of 62 major research institutions.



Hasselmo, who moved to the United States from his native Sweden in 1956, trained as a linguist at Harvard University and served as president of the University of Minnesota, Twin Cities, before taking charge of AAU. His leadership has strengthened AAU's role in "higher education advocacy and policy development," says AAU chair Mark Wrighton.

Hasselmo says the country's most pressing need is "a clearly

formulated national strategy to help the United States maintain its innovative capacity." And one step in that direction, he says, is for universities to find "new means of marketing their role in society."

**MISSING**

**Lost in ice.** Two members of a five-person team from the Argentine Antarctic Institute have been missing since 17 September, after falling into a deep crevasse in the Antarctic ice.

The team, including biologist Augusto Thibaud and a member of the Argentine Navy, Teófilo González, was crossing the Collins Glacier by snowmobile en route to Argentina's Jubany Base on King George Island when it ventured into a zone of cracks that had been obscured by snow. The other team members managed to avoid the crevasse and were rescued from the danger zone the following morning by a Chilean helicopter.

A rescue effort, delayed 1 day because of a storm, has found no trace of the missing men, although there was faint hope of finding the men alive.

**RISING STARS**

**An open mind.** A 37-year-old Canadian biologist has been tapped to head a new center to study the basic biology of stem cells at the University of Michigan (UM), Ann Arbor.



Sean Morrison, a native of Nova Scotia who came to Michigan in 1999, does research on the basic mechanisms that regulate stem cell biology, using blood-forming and nervous system cells as models. Harvard stem cell researcher George Daley calls Morrison, a Howard Hughes Medical Institute investigator, "a formidable force in stem cell biology."

Morrison says the \$10.5 million center, to be based at UM's Life Sciences Institute, will hire up to seven researchers.

"At this stage, many of the ideas we have about how stem cells will be used clinically will probably change rapidly over the next few years," he says. "If we focus on the basic biology and keep an open mind, we may ultimately have better results."

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