RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Ice Man Didn't Die Young

Scientists analyzing the bones of the famous Ice Man, who froze in the Tyrolean Alps 5000 years ago (*Science*, 17 June 1994, p. 1775), have confirmed that the man, who was discovered in 1991, was older than originally surmised—and that he may have been close to 50 when he died.

Historical osteologist Torstein Sjøvold of the University of Stockholm and his colleague, anatomist Othmar Gaber of the University of Innsbruck, announced at a press conference in Innsbruck on 26 June that they now believe the Ice Man, or Ötzi as he is called, was well into his 40s when he was apparently overcome by a blizzard and froze to death.

Preliminary x-rays had already revealed that Ötzi had some sclerosis in his neck arteries at the time of death. But the good general condition of the skeleton, despite some signs of arthritis, says Sjøvold, originally led scientists to peg his age at between 25 and 40.

Further tests reveal, though, that the Ice Man was a mature fellow who had probably already outlived most of his peers. Sjøvold explains that CT studies showed that fusion of the skull sutures was far enough advanced to suggest someone in his mid- to late 40s. The internal structure of the bones of the upper arms and legs, made of a spongy-looking system of tiny rods that thin and dissolve with age, also supported that estimate. So did microscopic analyses of two small samples taken from the man's thighbone. The outer, or compact bone layer, is made up of units called osteons. Primary osteons, laid down when the bone was first formed, decrease with age, while secondary ones increase. And Ötzi had a lot of secondary osteons. Finally, the Ice Man's teeth were extremely worn. That could have been caused by grit from hand-milled flour, but it's also in line with the refined age estimate.

T. SJØVOLD

Bones tell. Photograph, 1.62 mm in diameter, shows a transverse section from the Ice Man's left thighbone. Orange and blue mark secondary osteons. The pink gaps are holes for blood vessels.

Anthropologist Dave Hunt of the Smithsonian Institution's Museum of Natural History notes that each marker of aging can be variable, but taken together, Sjøvold and Gaber have made "a good case" that Ötzi was no spring chicken.

Ex-Mobil Scientist Vindicated

Former Mobil Oil Corp. toxicologist Myron Mehlman has done even better on the appeal of his whistleblowing case than he did on the original favorable verdict.

Mehlman, who was Mobil's chief toxicologist, was fired 6 years ago after he told Mobil Oil officials in Japan that the benzene levels at Mobil's Japanese refinery were dangerously high. On his return to the United States, Mehlman was fired. Mobil officials claimed it was because he was misusing company resources for his private publishing concern. Mehlman sued the company for wrongful dismissal.

Two years ago, a New Jersey jury ruled in his favor, awarding him $7 million in lost salary and damages (*Science*, 29 April 1994, p. 656). Even though the judge cut the damages in half, Mobil appealed the decision.

That may have been a tactical error. A three-judge state appeals court on 13 June not only upheld the verdict, but directed that Mehlman be awarded the original $7 million—plus interest and $1 million in attorneys' fees. The court also told the scientist—contrary to what the lower court ruled—that he is free to sue Mobil for defamation of character.

Mobil has been consistently tight-lipped about the case. A spokesperson will say only "we do not agree with the court's decision [and] are considering the next step, including an appeal." Mehlman, now a consultant and adjunct professor at Robert Wood Johnson Medical School in Piscataway, NJ, says if he doesn't have his money "by the end of the summer" he'll be back in court.

1995 Ph.D.S WITH DEFINITE PLANS POST-GRADUATION

Field (number of Ph.D.s)	Postdoc study %	Employment %
Physical sciences (6806)	30.1	28.4
Engineering (6007)	12.6	38.3
Life sciences (7913)	41.5	22.6
Social and behav. sci. (6623)	12.6	46.0

Into the real world? New Ph.D.s are finding work, according to the National Research Council's annual Survey of Earned Doctorates, although it's not necessarily permanent. Just 7.5% of new biochemists reported finding permanent jobs, while 62.2% took postdoctoral posts. Economists are a high-demand commodity: 59.5% had definite job plans; they're followed by political scientists and computer scientists at a little over 50% each. *Summary Report 1995* will be available in the fall. For information, e-mail phdsurvy@nas.edu.

Berkeley Gets Chief For Gene Mappers

The days of a revolving directorship at the Lawrence Berkeley National Laboratory's human genome center appear to be over. Virtuoso gene sequencer Michael Palazzolo, credited with powering the lab's successful move into big-time sequencing, has been named permanent director.

The Berkeley center used to have a reputation as a group that couldn't get its act together: First there were 2 years of the absentee leadership of Charles Cantor, then a year of governance by committee because a director couldn't be found, then 3 years under Jasper Rine, whose push for individual autonomous projects clashed with lab leaders' visions (*Science*, 28 January 1994, p. 464).

By January 1994, when cell biologist Mohandras Narla took over as acting director of the genome center, people were "very demoralized" and the gene sequencing effort was dragging, says life sciences director Mina Bissell. But Narla, aided by Palazzolo, has spent the past 2 years fostering teamwork and carving out a vision for the foundering center, and now "people are working well together [and] the morale is high," says Bissell. The center has woven together two projects—human and fruit fly genome sequencing. It's cranking out finished sequence at a red-hot rate of 500 kilobases a month and is a leader in developing automated DNA sequencing equipment.

Palazzolo says that as the center passes the milestone of 5 million bases of completed DNA sequence, the next challenges are to link together automated processes and to address "postsequencing" issues of how best to extract information from large volumes of DNA sequence.

"I was there a few months ago, and it was very impressive," says University of Utah genome researcher Ray White. "Palazzolo is a guy who has the skills to make it all work."