RANDOM SAMPLES

edited by CONSTANCE HOLDEN

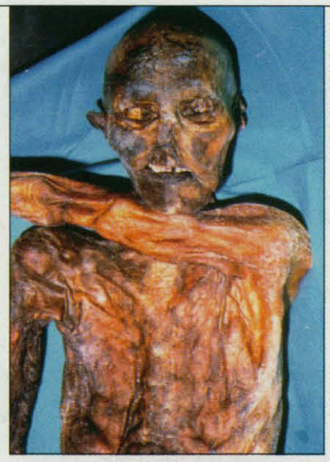
New Digs for Ice Man

After 5300 years in a Tyrolean glacier and nearly seven in an Austrian lab, the "Ice Man" has found a permanent home in Italy. With great fanfare, Italian officials on 28 March opened a $10 million Ice Man exhibit and research facility in the newly renovated South Tyrolean Museum of Archaeology in Bolzano.

Supporting Italy's claim to the mummified Copper Age man—called Ötzi, after the Ötztaler Alps—scientists determined last year that the remains, found in 1991 in what was thought to be the Austrian Alps, were actually 93 meters south of the Austrian-Italian border. Now that ownership has been established, "South Tyrol's most famous citizen," as Italians call him, can be viewed by the public for the first time, through a 40-centimeter-square window.

The Ice Man may already be the most heavily researched human body in history, but more is in store. An international committee will be mapping out new research areas at a meeting in September. One likely focus: comparative studies of Ötzi and "Juanita," a frozen Incan mummy discovered several years ago in the mountains of Peru.

While Austrian scientists were sorry to see Ötzi go, paleobotanist Klaus Oeggl of the University of Innsbruck, who studied plant remnants found in the body, says scientists still have lots of data to keep them busy. "There is no need for new sampling at the moment," he says. "There is plenty of material around."



MARCO SAMADELL

Looking good. Ice man in Bolzano to stay.

Oliver No "Humanzee"

A primate named Oliver has attracted waves of media attention over the last few decades for certain humanlike qualities, including a habit of walking upright (*Science*, 1 November 1996, p. 727). But DNA testing has finally pegged Oliver as strictly a chimp.

Since making his debut in California some 30 years ago, Oliver has intrigued onlookers for certain nonchimpish behavior, including the ability to mix drinks. The ambiguous result of a chromosome analysis fed speculation that he might be a mutant or even a human-chimp hybrid.

But now geneticists John Ely of Trinity University and Charlene Moore of The University of Texas Health Sciences Center, both in San Antonio, report in the March issue of the *American Journal of Physical Anthropology* that they have scrutinized a blood sample for genetic markers specific for humans, chimps, and other primates. The upshot? Oliver's all chimpanzee.

Bringing High-Tech to Horse Breeding

Breeders of cows and sheep have long used in vitro fertilization (IVF) to improve their stock. But ordinary IVF doesn't work for horses—for some unknown reason, sperm won't penetrate eggs in a dish. Scientists now say they've found a way around the problem with a technique they helped develop 6 years ago for people: injecting sperm directly into cultured eggs.

Veterinarian Angus McKinnon of Goulburn Valley Equine Hospital in Australia says his team removed four eggs from a mare and shipped them 200 kilometers to Monash University. There, embryologists Orly Lacham-Kaplan and Alan Trounson used a technique called intracytoplasmic sperm injection (ICSI) to insert sperm inside the outer coating of each egg. Some 36 hours later, the embryos were placed into four mares whose wombs were ripe for implantation.

Two embryos aborted. But last month a colt named ART (for assisted reproductive technique) was born, and a second foal is due this month. This success means breeders have a new tool against infertility in both mares and stallions, as well as a chance "to get the top genetics from the breed," says Edward Squires, a reproductive physiologist at Colorado State University in Fort Collins. In 1996, Squires's team produced the first ICSI foal, using eggs taken from a dead mare. But that success has been difficult to reproduce. The Monash effort showed that ICSI works even with frozen sperm and that multiple offspring can be generated from live mares that are infertile or too old to sustain pregnancies.

But one area is off-limits: thoroughbreds. John Digby, who manages the Sydney organization that tracks Australian racehorse pedigrees, says such practices are banned because breeders fear shrinking of the gene pool caused by reliance on a few top studs.

MONASH UNIVERSITY

Test-tube colt. ART.

Thunderstorms Ripple Upper Atmosphere

A satellite has spotted high-altitude circular waves spreading outward from tall thunderstorms, like ripples in a pond. The images, reported in the 1 April *Geophysical Research Letters*, mark the first time a satellite has seen storm-generated gravity waves far above Earth's surface.

Gravity waves—not to be confused with "gravitational waves" from cosmic events—are spurred by a local disturbance in a fluid or a gas, such as a pebble splashing in a pond, that moves under the influence of gravity. They can be spawned by everything from wind blowing over mountaintops to rapidly shifting wind currents in the jet stream.

A decade ago, infrared cameras spotted concentric ripples expanding high into the stratosphere from thunderstorms. But it was not until late 1996 that the phenomenon was observed from space, when a military satellite—the Midcourse Space Experiment—spotted gravity waves in a 40-kilometer-high air layer above India and Indonesia. Based on snapshots from the satellite, a team led by atmospheric scientist Edmond Dewan of the Air Force Research Laboratory in Bedford, Massachusetts, calculated that the disturbances were concentric ripples. Images from a second satellite showed that isolated thunderstorms roared at the centers of the ripples. "The tops of these [intensely churning] storms punch up into the stratosphere," launching sets of gravity waves, says Dewan.

This work is a "helpful step forward" in finding out how gravity waves originate, says retired atmospheric scientist Colin Hines of Toronto, who founded much of the science of gravity waves. He says that the ability to view them easily from space will help scientists see how storm-driven gravity waves deposit energy into the upper atmosphere and drive circulation patterns there, thus aiding understanding of long-term climate patterns.