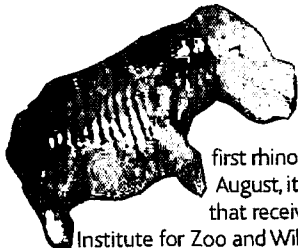


RANDOM SAMPLES

Edited by Constance Holden



A Rhino First

Stone Age art? Nope, it's a 3D ultrasound preview of the first rhinoceros to be created by artificial insemination (AI). Due next August, it's the offspring of a white rhino couple at the Budapest Zoo that received a bit of help from AI expert Thomas Hildebrandt of the Institute for Zoo and Wildlife Research in Berlin and colleagues.

Hildebrandt says attempts to breed rhinos in captivity have been largely unsuccessful: Sharing close quarters is apparently a turnoff for the beasts, whose normal mating activities involve a fair dose of aggression. An estimated 11,000 white rhinos remain in the wild. The team hopes to repeat the success with captive northern white rhinos, a handful of which still roam in the war-torn Democratic Republic of the Congo.

Men on the Move

The long history of human migrations is difficult to discern, but these movements leave traces in our genes. Now a new study shows a sex difference in mobility, with

Image not available for online use.

men having covered more ground.

Researchers had found that across the world's populations, mitochondrial DNA (mtDNA)—which is passed along by mothers—is more homogeneous than the DNA of the male-only Y chromosome. This fact suggested that women have spread their genes farther than men have, an argument supported by the fact that in many cultures, brides move to their new husband's home.

But some geneticists have argued that the sequences chosen might not be comparable. To help settle the debate, evolutionary geneticist Michael Hammer and colleagues at the University of Arizona, Tucson, analyzed regions of mtDNA and the Y chromosome thought to mutate at the same rate. Using data from 389 men around the world, they found about the same amount of variation in both types of DNA, indicating the same degree of mix-

ing for both sexes, as reported in a paper published online in *Nature Genetics* on 19 September. But Hammer argues in another recent paper that for much of our history, fewer men than women became parents. So to achieve the mixing seen in the Y chromosome, the reproducing males must have traveled farther than their female counterparts. Although that makes sense given the historic male lead in wars and exploration, "this is the first genetic evidence" for it, says Hammer.

Evolutionary geneticist Henry Harpending of the University of Utah in Salt Lake City agrees that the genetic regions Hammer analyzed are more appropriate to the question than those used in previous studies. "They did an excellent job," he says.

High-Power MRI

The largest magnet ever constructed for imaging purposes is now in operation at the University of Illinois, Chicago's Center for Magnetic Resonance Research. Researchers hope the 9.4-tesla system, three times as



an "immersion theater" to take visitors down to the briny depths. The initiative will coordinate the hall with a new Center for Ocean Science and a fancy new Ocean Web Portal (see www.mnh.si.edu/ocean).

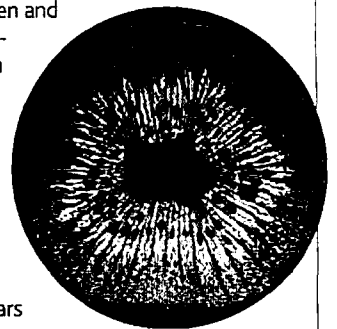
powerful as those currently in use, will probe deeper into the working human brain than ever before.

Magnetic resonance images (MRIs) are produced by powerful magnetic fields and radio waves that detect proton densities in living tissue. Brain activity can also be tracked through changes in blood oxygen levels, but these provide only a delayed and indirect measure of neural activity.

The new system can detect signals from a variety of elements including sodium, phosphorus, carbon, nitrogen, and oxygen and

will provide researchers with a direct window into cellular metabolism, says center director Keith Thulborn. He says sodium imaging appears particularly promising at separating living from dead brain tissue in patients with tumors or stroke damage. The system can also track cognitive processes by detecting metabolic changes. "We can image the actual formation of thought rather than what follows 5 seconds later," says Thulborn.

Although he calls the project "very exciting," Gary H. Glover, director of the Lucas Center for Magnetic Resonance Spectroscopy and Imaging at Stanford University, cautions that users face a host of technical challenges, including finding ways to image the whole body.



High-power image of kiwi.

Smithsonian Takes to the Water

A splashy Ocean Hall (artist's rendering, left) will be part of the Smithsonian Institution's new \$60 million Ocean Science Initiative. Construction is to begin at the National Museum of Natural History this fall, with a grand opening scheduled for 2008. The National Oceanic and Atmospheric Administration is contributing \$16 million to the project, which will feature a living coral reef and

CREDITS (TOP TO BOTTOM): T. HILDEBRANDT; K. THULBORN; PETER JOHN; MICHAEL NIMPH

Edited by Yudhijit Bhattacharjee

POLITICS

Failed initiative. A tangle with evolutionary theory has cost Serbia's education minister her job. Ljiljana Colic resigned on 16 September, a week and a half after announcing that Serbian eighth graders would no longer learn about Darwin's theories of evolution and natural selection. Calling Darwin's ideas "dogmatic," she told a newspaper that they would not be taught until lessons on biblical creationism were added. After an outcry from Serbia's scientific community, Colic's deputy, Milan Brdar, announced the decision's reversal on 9 September.

Public protest of Colic's move was encouraging, says evolutionary biologist Aleksej Tarasjev of the Institute for Biological Research at the University of Belgrade. "It was a very mature reac-

THEY SAID IT

"I would relish the chance ... to paint on every corner and junction of every town and city, in whopping words, the line "Chemistry Vital OK!?"

—David Giachardi, chief executive of the U.K.'s Royal Society of Chemistry, in a letter in the *Financial Times* of 21 September. He was commenting on the mystery artist who spray-painted the molecular structure of guanine on a road near Cambridge University's Cavendish Lab. Police are still investigating the amino-graffiti, which showed up on 15 September.

CHEMISTS (BOTTOM) JANE SCHIERR



Image not available for online use.

tion," he says, noting that several prominent Orthodox Church theologians had joined in, saying that there was no inherent conflict between evolutionary theory and the Church. The government has yet to appoint Colic's replacement.

AWARDS

Medical prizes. A Frenchman and four Americans have won this year's Lasker Awards, often considered a precursor to the Nobel Prize in physiology or medicine.

Pierre Chambon of the Institute of Genetics and Molecular and Cellular Biology in Strasbourg, France; Ronald Evans of the Salk Institute for Biological Studies in La Jolla, California; and Elwood V. Jensen of the University of Chicago in Illinois will share the \$50,000 basic research award for their work on nuclear hormone receptors. The \$50,000 prize for clinical research goes posthumously to New York ophthalmologist Charles Kelman for his role in making cataract surgery speedier and safer. And

SNAFUS

A prickly probe. Russian Nobel physicist Zhores Alferov has spent a lifetime answering scientific questions in laser physics and microelectronics. But he wasn't quite prepared for the questioning he faced at the U.S. consulate in St. Petersburg last month after applying for a visa to travel to the University of California, Berkeley, for a series of lectures starting 22 September.

A consular official asked Alferov to describe his work and followed up with detailed questions such as what "heterostructures" were. After a few attempts at explaining his research, the 74-year-old physicist and deputy of the state Duma lost his patience, picked up his passport, and walked out of the consulate, says Vladimir Babkin, an aide to Alferov.

The U.S. consulate has since sent Alferov a letter of apology, and his secretary says there are no more hard feelings. UC Berkeley has postponed the lecture series to the spring of 2005 and is hoping that Alferov will make it this time.

Harvard biochemist Matthew Meselson wins the \$25,000 special achievement prize for his research on DNA and his efforts toward persuading the international community to abolish biological and chemical weapons programs.

Compassionate science. Most scientific prizes are awarded for accomplishments at the bench, but ge-

Besides her research on *BRCA1*, King used mitochondrial DNA to identify children of parents who were killed during Argentina's Dirty War of the 1970s and early 1980s. The work helped unite the orphaned children with their grandparents. The Gruber Foundation lauds her use of genetics "to benefit humanity." King plans to have her two

geneticist Mary-Claire King is bringing home a hefty one for her human rights work as well. King, a professor at the University of Washington School of Medicine in Seattle, best known for discovering the *BRCA1* breast cancer gene, will receive the \$200,000 Genetics Prize from the Peter Gruber Foundation on 27 October at the annual meeting of the American Society of Human Genetics.

dozen lab members donate \$100,000 of the prize to their favorite charities.

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