Going Woolly Mammoth Huntin'

Japanese explorers' houseboat and (inset) mammoth jawbone on Kolyma River beach.

An improbable race to resurrect the woolly mammoth is kicking into high gear. Earlier this week, Japanese researchers were expected to arrive at prime mammoth grounds in northeastern Siberia, hoping to find a carcass in the permafrost. Hot on their heels is a French-led team planning a return visit to two frozen hulks discovered last fall.

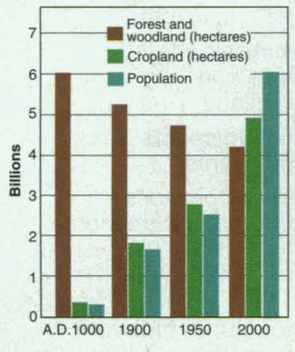
The woolly mammoth made its last stand as a species about 3700 years ago, on Wrangel Island in the East Siberian Sea. To raise it from the dead, the teams hope either to clone a living specimen from frozen, long-dead tissue or breed a hybrid by injecting dead male mammoth sperm into the egg of an Asian elephant, a close living relative. Experts admit pulling off either feat is a long shot. "It's a brave idea," says University of Hawaii, Manoa's Ryuzo Yanagimachi, whose lab was the first to clone mice. But he doubts that any mammoth tissue could have stayed chilly enough over the millennia to preserve the DNA.

The odds haven't stopped a group led by reproductive biologist Akira Iritani of Kinki University in Japan from embarking on a sperm hunt along the banks of the Kolyma River in Russia's Sakha Republic. Sponsoring the dig is a Japanese firm, Field Co. Ltd., that hopes someday to help set up a mammoth-filled nature reserve.

Two frozen mammoths were actually found last fall on remote Taimyr Peninsula, 1500 kilometers to the west, by French explorer Bernard Buigues. With a Discovery Channel film crew in tow, Buigues will return to the site with an international team that includes paleontologist Larry Agenbroad of Northern Arizona University, Flagstaff. Says Agenbroad: "I would rather have a cloned mammoth than another stupid sheep."

Forest Alarm

Half the world's original forest cover is gone. And the rest is dwindling rapidly, according to a new study, "Forest Futures," by Population Action International. PAI estimates that 1.7 billion people live in countries with "critically low" levels of forest cover and predicts that number could rise to 4.6 billion by 2025.



Wet Old Days in the Midwest

The great Midwest flood of 1993 was bad, but it's been a lot worse in the past. By analyzing flood-borne clays dumped in a stagnant hole in the Gulf of Mexico, scientists have found that megafloods larger than any in historical times have repeatedly struck the Mississippi River. The finding bolsters the notion that modest climate changes may trigger major changes in catastrophic weather.

In the August issue of *Paleoceanography*, Paul Brown of Exxon Exploration Company in Houston and colleagues report that decades-long bouts of megafloods hit the Mississippi every 5 to 12 centuries over the past 5000 years, the last one ending about 300 years ago. These episodes are recorded in the larger-than-normal sediment particles, meaning the floodwaters were powerful enough to sweep them 290 kilometers from the river's mouth into the Orca Basin, a 20-km-long pothole in the Gulf of Mexico. Thanks to its briny, oxygen-poor waters, the Orca Basin lacks the burrowing animals that would obliterate records of such distant events.

Other indicators preserved in the hole, such as fluctuations in plankton populations, suggest that the climate change responsible for these flood episodes involved the Loop Current, which swings through the gulf on its way to the Gulf Stream. When this current strengthens, the waters warm, allowing winds to pick up more moisture and dump it on the Midwest.

The observations suggest "there were some pretty remarkable changes" in flood patterns over the last 5000 years, says geographer James Knox of the University of Wisconsin, Madison. The past few centuries of relatively modest Mississippi flooding have guided insurance rates and riparian zoning, he notes, but that could all change if the Loop Current shifts again.

Putting Kids on Drugs to Fight Drugs

The stimulant Ritalin may protect children with attention deficit hyperactivity disorder (ADHD) against later problems with drug abuse, according to a study in this month's online edition of *Pediatrics*.

The study is the latest entry in a heated battle over using drugs to treat ADHD, diagnosed in about 4% of school-aged children. For years, doctors have prescribed Ritalin, which paradoxically eases symptoms. But because kids with ADHD are more prone to later drug abuse, some experts have suggested that medication may exacerbate the problem by fostering reliance on artificial stimulants. Others counter that untreated kids are likely to self-medicate with street drugs.

Psychiatrist Joseph Biederman of Massachusetts General Hospital in Boston and colleagues analyzed data on 75 white middle-class boys, aged 15 to 21, who had been diagnosed with ADHD at least 4 years earlier. Nineteen had never been treated with drugs, while the rest had received Ritalin or another stimulant. Of the untreated group, 75% reported substance abuse problems, usually with marijuana or alcohol—three times the rate in the Ritalin group.

The findings are unlikely to settle the debate. Psychologist Nadine Lambert of the University of California, Berkeley, says her own ongoing research involving more than 200 ADHD patients suggests that kids treated with stimulants are more likely to smoke and to abuse cocaine as adults.

Others contend that the latest results are on target. Ritalin may curb the impulsivity that often leads to drinking and drug-taking and also may reduce alienation by enabling kids to do better socially and academically, says Berkeley psychologist Steve Hinshaw.

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