Briefings

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Prospectors Cash In on Geologist's Find

When Samuel Bowring, a geologist from Washington University in St. Louis, Missouri, announced last fall that he had discovered the world's oldest rocks—chunks of granite dated at 3.962 billion years—he got plenty of recognition from his colleagues and the media.

But the real payoff for this work has gone not to Bowring, but to two enterprising Canadian prospectors who staked claim to the site where the rocks were found just 2 weeks after the geologist made his disclosure. The prospectors, Walt Humphries and Brian Weir, are selling pieces of the ancient rock weighing 100 grams for $5 and larger chunks glued to a wooden base for $50. So far they have sold more than a ton of the black and white banded granite as novelties.

Although Bowring never disclosed the site of this mother lode of ancient rock, the two prospectors were able to figure out its location on the Acasta River in the Northwest Territories from the scanty information in Bowring's press release. "It's an unnamed island about 170 miles north of Yellowknife, so we chartered a plane, flew up there, and claimed the mineral rights," explains Humphries.

The turn of events is slightly baffling to Bowring, but he has no plans to jump the claim. For their part, the prospectors have made it clear that Bowring and other scientists are welcome to work on site; it's just that scientists won't get rich doing it. But what's new?

Meanwhile, geologist Bowring does have one bone to pick with the prospectors. Their next venture—to bring Japanese tourists to the island—worries him. Says Bowring, "It's a lovely little island. I'd hate to see it spoiled by litter."

Technology Unlocks "Lost" Writings

Medievalists are going high-tech. Researchers have long struggled to decipher faded writings found scattered across Europe. There's history hidden in the much eroded messages once cleanly chiseled on ancient stone tablets. And our medieval forebearers often recycled parchment manuscripts, burying yet more history beneath the printed texts of the most recent versions. Now ancient messages are being exumed by modern means.

Wiegand/University of Illinois

James Marchand

At the University of Illinois' Center for Advanced Study, for example, James Marchand, a professor of German, linguistics, and comparative literature, is combining 80-year-old ultraviolet photography techniques with digital cameras and computers to read Gothic and Old High German religious manuscripts that have become illegible over time. Marchand is able to recover lost literature by applying an image enhancement technique that he calls "contrast stretching" to iron-based inks that have nearly faded away and to parchments that were scraped clean and recycled because paper was in scarce supply. The key is software he developed himself that can distinguish between 250 shades of gray. It permits Marchand to differentiate between areas of the parchment that have been touched by ink and those that have not. He then can assign new colors to image pixels overlaying lettering and reproduce the original document electronically.

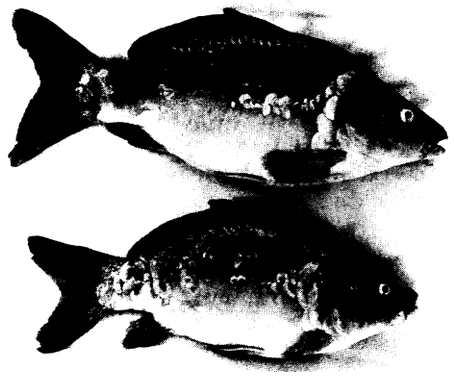
Marchand's next project will be to use his university's Cray supercomputer to decipher messages etched by Germanic tribes between 200 and 1200 A.D. on to Rune stones—stones on which the earliest German writing system, Rune, is recorded.

Stanford Patents Pay

Licensing genetic engineering technology is becoming more lucrative by the day for Stanford University. The institution estimates that since 1981 it has earned $17 million alone on a single three-part patent covering gene cloning techniques.

Developed back in 1973 by Stanford geneticist Stanley N. Cohen and Herbert W. Boyer, a chemist at the University of California at San Francisco, their patented discoveries accounted for 42% of Stanford's technology licensing income in 1989. The institution has just issued its 100th license covering the rights to the gene cloning methods to Henkel Research Corporation.

Stanford currently is charging companies with 75 or more employees a $50,000 sign-up fee, requires a $50,000 annual payment, and imposes a 2% royalty on end products that rely on patents held by the institution.



Auburn University

Enhanced fish. *Carp carrying a trout growth hormone gene (top) grow larger than normal carp.*

Transgenic Carp: Pond-Ready?

The first outdoor experiment with a genetically engineered, transgenic fish has received tentative approval from the U.S. Department of Agriculture (USDA). Pending final public comments, the action clears the way for Auburn University researcher Rex Dunham to see whether carp containing a trout growth hormone gene can transfer the genetic trait from generation to generation and to monitor how the gene affects fish development.

At issue is whether the experiment would pose any environmental threat to Alabama streams. Dunham plans to stock ten ponds with the fry from nine transgenic carp that will be spawned in a laboratory. The fish will be grown and studied for 1 year and then destroyed before they reach sexual maturity.

USDA's Office of Agricultural Biotechnology says the safety measures that Auburn has taken to make sure the fry do not escape into nearby streams are adequate. But this finding is being challenged by the National Wildlife Federation (NWF). NWF biologist Margaret Mellon, citing the presence of carp and other exotic fish in nearby waterways, questions Auburn's containment mechanisms.

Moreover, she says the department's environmental assessment should be augmented with a more detailed environmental impact study (EIS) that includes the participation of other federal agencies such as the Department of Interior's fish and wildlife division. The organization may seek a court injunction to stop the experiment pending the outcome of an EIS.