Scientists Boycott Kansas Antievolution Hearings

While the US science community has been concerned about antievolution pressure on some science museums around the country, there was even greater concern recently about a potential reprise in Kansas of the Scopes "monkey trial" of 80 years ago (see PHYSICS TODAY, April 2001, page 32). In January religious conservatives took control of the Kansas State Board of Education and organized several days of hearings intended to pit the theory of evolution against intelligent design. The science community, led by Kansas Citizens for Science and the American Association for the Advancement of Science, organized a boycott of the hearings on the grounds that evolution isn't debatable. In a letter to George Griffith, the board of education's scientific consultant, AAAS CEO Alan Leshner wrote, "The fundamental structure of the hearing suggests that the theory of evolution may be debated. It implies that scientific conclusions are based on expert opinion rather than on data. The concept of evolution is well-supported by extensive evidence and accepted by virtually every scientist." As PHYSICS TODAY went to press, the hearings, described as "political theater" by Leshner, were under way with more than a score of antievolution experts expressing their views. Connie Morris, one of the education board members who organized the hearings, said she was "profoundly disappointed" that the scientists declined to participate. **Jim Dawson**

teapot." Day, who is a friend of Low's, hasn't purchased *Volcanoes* for his theater because he said it is a film of limited appeal and difficult to market.

Both Day and Low note that the marketing potential of IMAX films is increasingly important for science museums struggling with budget constraints. Low worries about what he calls the "beach-boy science" aspect of new IMAX films. Marketers want appealing young people in the films, not the "couple of old guy scientists" that star in his *Volcanoes* film, he said. "The box office for IMAX has become so important. Science museums clean their toilets and floors and run their institutions with this money."

Lawrence Krauss, chair of the physics department at Case Western Reserve University in Cleveland, Ohio, doesn't object to the entertainment and marketing aspect of science but is concerned that some museum officials let it undermine their educational mission. Krauss, who has served on the boards of two science museums and written the mass-market book *The Physics of Star Trek* (HarperCollins, 1995), said that the people who object to films such as *Volcanoes* "are really fighting against science. It's not just evolution. Evolution is there, but the Big Bang and age of the Earth is right behind it. They don't want to have people informed in any way that can challenge their belief systems."

"Showing [*Volcanoes*] isn't going to change anybody's mind," Krauss said. "But not showing it is bad. It is censorship." **Jim Dawson**

Infrared Illuminates Ancient Scrolls

And the helmets are shaking their purple-dyed crests, and for the wearers of breast-plates the weavers are striking up the wise shuttle's songs, that wakes up those who are asleep.

—Oxford University's translation of part of *Epigonoi* by Sophocles.

Despite the thriving trade in manuscripts that occurred throughout the Greek and Roman empires, many plays, poems, and philosophical musings by writers such as Aeschylus, Euripides, Aristophanes, and Sophocles have been lost. Now, a collaboration between Oxford University and Brigham Young University (BYU) in Provo, Utah, is revolutionizing paleography by rescuing words and images from charred and battered fragments of ancient scrolls.

Paleologists have been experimenting since the 1930s with IR photographs to decipher old paintings and texts. But success with manuscripts was elusive until 1994, when Greg Bearman, a physicist at NASA's Jet Propulsion Laboratory and an amateur history buff, hit upon the idea of using a space satellite technique called multispectral imaging. Bearman used MSI, in which photographs are taken at different wavelengths, on a badly degraded fragment of the Dead Sea Scrolls. The nearly invisible text showed up clearly at a wavelength of 900 nm. "We were surprised at how easy it was when we got the results," says Bearman.

After hearing of Bearman's research, BYU's Institute for the Study and Preservation of Ancient Religious Texts commissioned Gene Ware, a professor of engineering who was already building a multispectral imager to study ancient murals, to try MSI on