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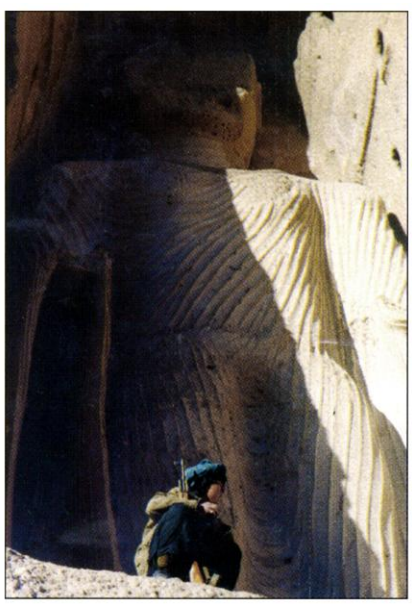
ANTIQUITIES

Global Support Grows For Afghan Restoration

As Afghanistan settles into a precarious peace after the ousting of the Taliban regime, scholars are taking stock of the most recent destruction of Afghanistan's rich cultural heritage. Initial reports are grim: Ancient murals were trucked away from the niches around the dynamited Buddhas of Bamiyan, every human statue in the national museum in Kabul was destroyed, and the museum itself may be beyond repair, say UNESCO officials. But there is growing international support for restoring and possibly even rebuilding important cultural artifacts.

The most dramatic example is a plan by a Swiss architect to rebuild the 53-meter-high standing Buddha at Bamiyan, whose 1700-year reign as the world's largest Buddha ended last March when the Taliban regime destroyed it and another similar but older sculpture (*Science*, 9 March 2001, p. 1873). Paul Bucherer-Dietschi hopes to use digital data from photographs to create a 1:10 scale model of the Buddha at a museum he founded in Bubendorf, Switzerland, as a temporary home for Afghan artifacts. The model, likely to cost about $1 million, would be the first step in recreating the original in the Afghan cliffs.

Bucherer-Dietschi, who last week returned from a 6-week tour of Afghanistan under a UNESCO contract, says that Raheen Makhdoom, Afghanistan's new minister of information and culture, told him he supports the reconstruction. A former professor of art history, Makhdoom announced recently that the government wants to sponsor an international conference in May to assess what can be done to repair the damaged site, including rebuilding the statue.



Regaining the past. Efforts have begun to recreate one of the Bamiyan Buddhas, shown being guarded by a Taliban soldier before its destruction last March.

CREDIT: ZAHEERUDDIN ABDULLAH/AP

The reconstruction would be more than a symbolic emergence from the Taliban's policies of cultural destruction. It would also be a huge boon to Afghanistan's once-thriving tourism industry. But the ambitious project poses formidable engineering as well as fund-raising challenges. "The cliffs were heavily damaged from the explosions, so stabilization is a priority," says Bucherer-Dietschi. Although some debris remained at the base of the two Buddhas when he visited the site, he says that local residents told him that much of the rubble had been hauled away in trucks to be sold. Some 150 square meters of murals in the nearby niches also vanished, he notes. The details of how to rebuild the Buddha and restore other artifacts must be left to international experts, he adds.

While Bucherer-Dietschi focuses on the destroyed Buddha, UNESCO officials are trying to assess the damage and restore order to the cultural relics that remain. Tracing the rubble and murals "is hopeless—we don't have the money or personnel," says Christian Manhart, who heads UNESCO's Asian cultural heritage division. "Our priority is to conserve what's still there." UNESCO already has distributed about $1000—"a huge sum in Kabul," Manhart says—to three Afghan archaeologists to purchase materials and put the rubble from the museum into boxes for later identification.

Sadly, little appears salvageable. Manhart says the museum's collections—undermined by 20 years of war and chaos—were "systematically destroyed" by the Taliban, whose strict reading of Islamic law made them hostile to all representational images. "It's worse than we thought," says Manhart, noting that other artifacts were likely looted. The one exception is prehistoric shards boxed in the museum basement. "They didn't touch those," adds Manhart. "There was no real market value to them." The museum itself may have to be replaced, he says.

UNESCO is assembling a team of scholars, primarily Afghan researchers in Europe and the United States, to conduct a detailed assessment of ancient sites. James Williams, a UNESCO cultural heritage officer, says that there are early reports of extensive damage to the Zoroastrian complex of Surkh Kotal near the Pakistan border, to a variety of mausoleums in Herat, and to the 9th century mosque of Haji Piyada in Balkh. The unique site of Hadda near Jalalabad, which combines Hellenistic and Buddhist styles, is rumored to have been destroyed, he adds. And thousands of excavated artifacts remain unaccounted for, including a spectacular Soviet find in the late 1970s of Hellenistic-influenced gold objects at Tilya Teppe in north-central Afghanistan.

There are no plans at present to resume archaeological digs, says Roland Besenval, an archaeologist at the Guimet Museum in Paris who learned during a visit last month to Kabul that officials first want to assess the damage and clear land mines. The Italian and German governments have pledged support for rehabilitating the museum, and France, Austria, and Japan may also chip in money for cultural heritage assistance. In addition, Italy has provided $160,000 for conservation and archaeological training of Afghan workers involved in the repairs, and Japan has set aside $76,000 to track looted Afghan objects. Unfortunately, money can't mask the fact that a good deal of Afghanistan's heritage either has been wiped out or now rests in the hands of foreign collectors. **–ANDREW LAWLER**

MATERIALS SCIENCE

Mammalian Cells Spin A Spidery New Yarn

Not even the priciest threads from New York's fashion district can match the wonders of a simple spider web. Spider dragline silk is stronger than Kevlar and stretches better than nylon, a combination of properties seen in no other fiber. That's had entrepreneurs and scientists scheming for more than 100 years to find a way either to farm spiders or, lately, to transfer their silk-making genes into organisms that can produce enough silk to be useful. None have succeeded—until now. On page 472, a team led by researchers at Nexia Biotechnologies near Montreal, Canada, reports splicing dragline silk genes into mammalian cells and showing for the first time that harvested recombinant proteins can be spun into