

Raiders of the 'Lost City'

Inspired by legend and sketchy reports, four Coloradoans — an archaeologist, two surgeons and a businessman — have worked their way through the dense rain forest of Peru's Andes Mountains and uncovered what they say is a "lost city" that dates back to before the Incas, around A.D. 500.

"We've found an unstudied civilization and an unnamed people," says archaeologist Thomas J. Lennon of the University of Colorado at Boulder, one of the explorers. "The site has been the subject of rumors and unsuccessful expeditions since the beginning of this century, but this is the first scientific study of the area." The find, he adds, may rival the Inca ruins at Machu Picchu.

The array of buildings, burial towers, tombs, terraced fields and assorted artifacts is perched on a steep, eastern slope of the Andes, 8,600 feet above sea level. The site, known as Gran Pajaten, contains the remnants of a culture that probably existed for about 1,000 years, until the demise of the Inca empire around A.D. 1500, says Lennon. The five-day trip from the nearest village to Gran Pajaten is possible only from June to August, when the rainfall, which can reach 230 inches annually, diminishes. Gran Pajaten is located in the tropical jungles of the Rio Abiseo National Park.

In an agreement with the Peruvian government, American and Peruvian scientists will begin a five-year study at the remote site this summer. Investigations at other ancient ruins throughout the park may continue over the next 15 years, adds Lennon.

During last summer's initial expedition, Gran Pajaten was partially reclaimed from a thick coat of vines and trees. The explorers found 16 round, two-story buildings and two rectangular structures. The outside walls of many houses contain carved stone heads topped by stones resembling feather headdresses. Several houses are decorated with pre-Incan mosaics. Some pottery at the site displays Incan influences, while other pottery styles were previously unknown.

Terraced fields cut into the mountainside suggest that the inhabitants used sophisticated agricultural methods, says Lennon. The valley below Gran Pajaten is dotted with about 25 ancient houses. This indicates that the area was once "intensely populated," he notes.

Not far from Gran Pajaten is a series of round burial towers built into the mountainside. The towers are connected by a narrow pathway running along the edge of a 1,000-foot cliff. Sealed stone structures at the top of the mountain and built into the face of the cliff also appear to be tombs,



Burial towers are decorated with carved wooden figures under the eaves, as well as geometric designs (left). A carved stone head fringed with stones resembling a feather headdress stares from the wall of a building (right).

explains Lennon.

"I saw dozens of well-preserved human remains at the burial sites," he says. "We hope to study the bones and see what diseases affected these people."

Lennon and University of Colorado anthropologist Jane C. Wheeler hope to enlist the aid of the National Aeronautics and Space Administration in conducting a satellite survey of the 1,000-square-mile park to locate other archaeological sites. "We're intrigued by the evidence of dense human habitation, because such jungle areas are apparently unoccupied in other parts of the world," says Wheeler.

Rumors of an advanced city at Gran Pajaten probably stretch back to around the time the Spanish arrived in the area in the 16th century, says Lennon. In 1963, Peruvian archaeologists were able to photograph and map some of the ruins, but they did not get any indication of the site's scope and richness, and Gran Pajaten receded once again into obscurity. In 1983, Boulder plastic surgeon Alan Stormo learned of the site while touring the area. Stormo then obtained cooperation from the University of Colorado in organizing the two-week excursion last summer.

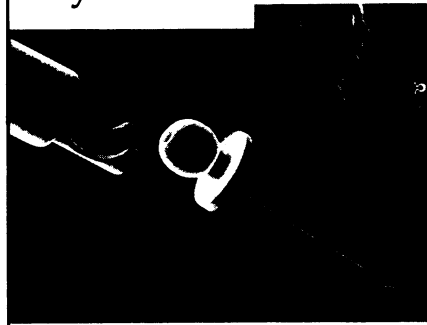
—B. Bower

Chemical warfare review

President Reagan last week signed an executive order setting up a nine-member bipartisan commission to review the United States' chemical warfare policy. Though it is official U.S. policy to advocate a complete and verifiable ban on chemical weapons, until such a ban is achieved, "it is also U.S. policy to deter chemical attack against the United States and its allies," explains Maj. Richard Ziegler, a spokesman for the Department of Defense (DOD). And having "a credible chemical warfare retaliatory capability" is deemed essential to that deterrence, he says. That's why, in recent years, the administration has tried to convince Congress to resume chemical weapons production. The fiscal year 1986 budget requests roughly \$168 million for that purpose.

The new panel — members of which have not yet been named — will be asked to report to the President by Feb. 15 on whether the nation needs a retaliatory stockpile; by March 1 on the existing stockpile's adequacy; and by March 15 on whether DOD should begin developing "binary" weapons — chemicals that become toxic only after being mixed on the battlefield, shortly before use. □

Tiny tacks



The dagger headed toward Lincoln's throat on this penny (inset) is actually a surgical tack used to pin recalcitrant detached retinas to the back of the eye where they belong. In cases where conventional surgical procedures can't get a diseased or torn retina to lie flat, one to five tacks are inserted through a cut in the white of the eye and removed months later after the retina has reattached itself. Refined from a Japanese procedure by Duke University researchers in Durham, N.C., the stainless steel tacks were first used eight months ago; so far four of the eight recipients have achieved a significant improvement in vision. A report on the process will appear in the March AMERICAN JOURNAL OF OPHTHALMOLOGY.