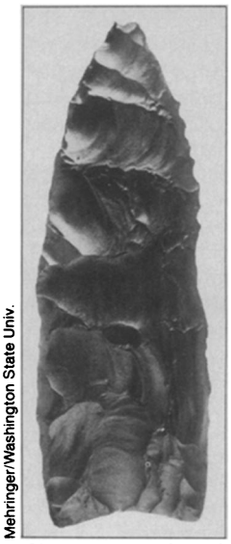
Promising new clues to early Americans



Mehringer/Washington State Univ.

Clovis point found last week at apple orchard site in Washington.

Archaeologists from across the country gathered last week in an apple orchard near Wenatchee, Wash., and, in a preliminary excavation, uncovered what appears to be the first undisturbed collection of artifacts belonging to the Clovis people, generally assumed to have been the earliest settlers of North America around 11,500 years ago.

"This is a startling discovery," says archaeologist Michael Gramley of the Buffalo (N.Y.) Museum of Science, a participant in the project. "We've finally found Clovis material in its original position. If the site is carefully excavated, it will enable us to address important questions about these people."

Among the more than 30 artifacts unearthed so far are 12 Clovis points, distinctively shaped stone spear points named for the New Mexico town where they were first discovered in the 1920s. This is the largest collection of Clovis points ever found, says anthropologist and project director Peter Mehringer of Washington State University in Pullman.

The find also includes stone scrapers, fleshers and several pieces of antler apparently sharpened for use as tools. Radiocarbon dating is underway on samples from the antler. Volcanic ash at the site provides a preliminary age of 11,200 years old.

The first six Clovis points were found in May 1987 by two men who were digging an irrigation ditch for the company that owns the orchard. Mehringer then learned of the discovery and obtained permission to explore further.

He notes that the Richey-Roberts site—named for the orchard's owners and operators — has yielded the largest known Clovis points. Several of the specimens are about 8.5 inches long; they usually range from 4 to 5 inches in length.

Clovis points are usually found among the bones of extinct mammals such as mammoths at what are thought to have been kill sites, but no animal remains turned up at the Richey-Roberts site.

"These points are larger and thinner than those found at Clovis kill sites," says Mehringer. "They're works of art produced by master flintknappers and may have had special significance beyond weaponry."

The carefully flaked points may simply have been artistic expressions, explains Mehringer, or they could have been used in initiation rites or religious ceremonies. At any rate, he says, the collection of artifacts appears to have been a "cache" that Clovis people buried and intended to reclaim.

Gramley, however, says such interpretations are speculative and need to be tested by a full-scale excavation. A Clovis site uncovered in 1968 near Anzick, Mont., is currently the best comparison to the Richey-Roberts site, he notes. Anzick yielded nearly 100 artifacts, including spear points and plate-sized pieces of stone that could be used to strike smaller flakes. The bones of several children, coated with a red pigment, were also found, indicating that the site served as a burial ground.

No human bones were found at Richey-Roberts, says Mehringer, but the dig extends only several feet into the ground.

Whatever the site represents, it is clear that the people who left behind the artifacts had traveled some distance, adds Gramley. Obsidian flakes were found among the remains; the nearest obsidian source is in Idaho, about 300 miles from the site. The stone used to fashion the Clovis points does not appear to be of local origin either, he notes.

Mehringer and his colleagues hope to continue the excavation later this year if an arrangement can be worked out with the orchard's owners.

"This site is like fine wine," says Gramley. "You have to drink it slowly, be deliberate and uncover it gradually."

— B. Bower

Anthrax outbreak: The Soviet scenario

Three high-ranking Soviet scientists visiting the United States presented their government's most detailed report on the deadly 1979 anthrax outbreak in the city of Sverdlovsk, offering new evidence that the epidemic resulted from tainted meat. The U.S. Department of Defense has long alleged that the epidemic was caused by an accident at a nearby biological warfare facility.

A number of questions about the incident remain unanswered after the Soviets' three talks last week. But many scientists say the new evidence strongly supports the Soviet claim that the epidemic was indeed due to ingestion of anthrax spores—rather than their inhalation, as might be expected in the case of a biological warfare accident. Still, the Defense Department says it remains unmoved by the new data.

"We stand by our statement in our book," a Defense Department official told SCIENCE NEWS, referring to a 1986 Defense Intelligence Agency publication, "The Soviet Biological Warfare Threat." That document states that "an accidental release of anthrax occurred within the Microbiology and Virology Institute in Sverdlovsk City," after "a pressurized system probably exploded." It cites unconfirmed reports that "there may have been 1,000 or more cases" of anthrax as a result of the accident.

However, according to Petr Burgasov, the Soviet deputy minister of health who supervised investigation of the epidemic, the outbreak caused 96 cases of anthrax, 64 of them fatal. "I would like very much that you take my word for this and exclude the fantasy that thousands of people fell ill," he said through an interpreter, speaking with great emotion to scientists and journalists at the Johns Hopkins School of Medicine in Baltimore. Later, he asked, "What else do you need for proof? I don't understand your doubts at all."

The Soviets provided, in the words of one American specialist, "the best slides we've ever seen of intestinal anthrax," a rare and not well understood form of anthrax. Anthrax is a bacterial disease that in its more common form causes black ulcers on the skin of humans who have come in close contact with infected animals or animal skins. According to the Soviet scientists, Sverdlovsk residents became infected after eating tainted meat sold illegally on the black market. The meat came from animals fed unsterilized fodder made from bone meal contaminated with anthrax spores, Burgasov said.

Western scientists were disappointed that no photographs of lung tissue were shown. However, the Soviets noted, the time course of the epidemic, which lasted more than a month, was not suggestive of a single, catastrophic release. And children who ate state-inspected meat at state-run day care centers did not fall ill.

Several scientists and a U.S. Army commander familiar with the new evidence told SCIENCE NEWS that more details, preferably a peer-reviewed scientific paper, could help eliminate lingering skepticism. In total, however, the Soviet data add up to a strong "epidemiologic inference" that the outbreak was in fact food-borne, according to Alexander Langmuir, a former chief epidemiologist for the federal Centers for Disease Control in Atlanta.

"Their epidemiology is somewhat different from ours, somewhat less rigorous and more argumentative, but they told a consistent story, they seemed to be sincere and they deserve our full attention," he said in an interview. "This is not proof, but I've lived long enough to know that proof is a very elusive thing." *— R. Weiss*