

NEWS RELEASE

Sequoia National Forest and the Giant Sequoia National Monument
Kern River Ranger District



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Keyesville School of Archaeology

Being "Privy" to the History of Mining

Lake Isabella, CA: What does manually manipulating a sampling auger to view soil stratigraphy, and digging around in an old toilet have in common? Believe it or not, they can be one in the same, intellectually stimulating, and good fun for all involved.

On May 7th, 2011, a group of 18 students, two professors, and a handful of land-management professionals gathered on Bureau of Land Management property in Keyesville Mining District (just outside of Lake Isabella, CA). The wild-west mountain terrain serves as a modern haven for OHV (off-highway vehicle) use, mountain bicycling, and recreational gold panning. That day, it also provided a time capsule to be opened and documented by aspiring archeologists of the California State University - Bakersfield (CSUB), Department of Anthropology, and Porterville College (PC) under the tutelage of professors Dr. Robert Yohe of CSUB and Prof. Richard Osborne with PC. This was part of the CSUB Archeological Field Methods Course being taught by BLM and Forest Service Archeologists, and spanned ten weekends during the spring and summer.



Professor Robert Yohe demonstrating soil sampling with the auger.

The archaeological site they uncovered layer by layer held its secrets in an unusual combination of organic materials, soil and artifacts. It was an old outhouse, also known as a privy. It was first thought to have been constructed in the mid 1800's but artifacts discovered by the team dated its use between the early 1930's to late 1950's. The outhouse structure had deteriorated over the years and had recently collapsed due to heavy rain and snowfall in December 2010. An intact, but weather-worn roof lied directly on the ground above which it once provided shade to those in need of an urgent break.

Bakersfield Field Office, BLM Archaeologist Amy Girado had hoped to find evidence for diversity among the mining town patrons as historical sources cite the presence of women and Chinese immigrants in the Keyesville area. A hotel and brothel that were established in the area during that mid-19th century were once located nearby. Artifacts discovered so far reveal it to be from a later date,

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however. Excavations ceased at the end of the field school, and the assemblage is currently being analyzed by Anthropology students at CSUB.

The collegiates and professors did not make the trek to Keyesville just to look at the old boards, they wanted to explore under the surface and give the students a chance to use what student Misty Allen called the “Ray Gun”. Forest Service Minerals Administrator and Archeologist Mark Howe provided the undergraduates with the opportunity to use a very special piece of equipment during their study—the Niton pXRF. The acronym pXRF is the shortened version of “Portable X-Ray Fluorescence.” This device is similar in appearance to a silver convenience store price checking gun with a flip up readout. It has a monster price tag of its own -around \$30,000; but it delivers every dollar worth in functionality. As the students took layers of soil out of the ground inches at a time with the sampling auger, they could use the pXRF to fully map variations in the soil’s elemental content from layer to layer (stratigraphy) with a device that offered both safety and simplicity of use. This training was conducted with the pXRF at the field school by Howe to teach the students new technology that might not be available at other archaeology field schools. The pXRF gives real time analysis to soils, rocks and other materials, allowing anthropologists to “see” into its invisible content.



Jasmine McClung of PC studies the XRF’s display

The students not only enjoyed learning how to operate this field-portable technology to evaluate and measure the soil in ways that would otherwise require sending soil samples to a laboratory; they also made some interesting discoveries. One finding from a previous trip was a layer with high barium content. The professors explained this phenomenon as possibly being a sign of “patent medicine” use by someone during that time period. These snake-oils were sold as cure-alls for everything from sore-throats, to tuberculosis. They were known to contain high levels of otherwise rare elements, even deadly ones like arsenic and mercury.

After cataloguing their findings at the privy site, the educational expedition continued up a winding trail to the old Keyesville mining facility. This relic of the fortune-finding past stands as a lean-to pile of rusty corrugated metal and splintered timber situated in a beautiful hillside nook about halfway up one of the surrounding slopes. Although some considered the walk as nearing the arduous side of the hiking scale, all that made the trek found a pleasing vista shaded by several large trees. Once there, the students reconvened their anthropological business. The pXRF was unsheathed and the students took turns evaluating the mineral content of the hillsides around the closed-up mine. These tests held the added benefit of establishing standard background granite readings in the area for comparison to the privy soil tests.

BLM archaeologist Amy Girado explained that she is actively working within her agency in hopes of restoring the dilapidated buildings around the old mine in order to preserve the encased machinery. Everyone immediately sensed their historical value as they peered through small windows between fallen lumber to view the half-buried and rusting stamp mill, and boiler that provided mechanical assistance to the old adventurers in their quest for riches. Amy explained that anyone coming upon sites like this while on federal land should “enjoy looking, but please don’t touch.” Leaving them intact and in place allows others to wonder at their untold stories, and also allows for future restoration efforts.



Students explore the Keyesville mining site

The day-long trip to Keyesville gave the students new insight—both into the history of mining in their home state and into the present technology used to unlock such history. Some of them will return to continue the work here next year. Wherever the rest go, they will carry lessons learned with them to further understanding of human anthropology and what archaeology tells us of our past.

Several students, along with Howe and Girado, will present their findings on the excavation of the artifacts, pXRF analysis and teaching methods at the Society for California Archaeology annual meeting in March 2012 in San Diego.

For further information on the history of the Kern River Valley and Keyesville, contact the Sequoia National Forest , Kern River Ranger District at 760-379-5646 or the Bakersfield BLM office at 661-391-6000 or on the web at: <http://www.fs.fed.us/r5/sequoia> , and http://www.blm.gov/ca/st/en/fo/bakersfield/Programs/Recreation_opportunities/recmining.html.

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