



Concho Valley Archeological Society Newsletter

June 2014

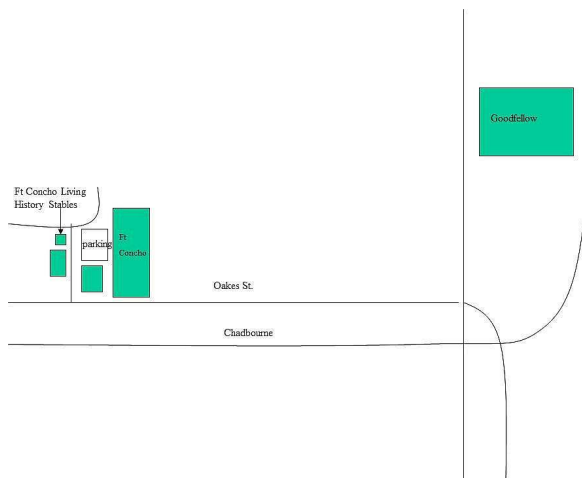
Upcoming Independence Creek Field Work

June 27th-29th (Fri—Sun):

Our next work at Independence Creek Nature Preserve will be an all-day survey on Saturday the 28th. Housing will be available if folks want to come Friday evening and stay over through Sunday. This trip will be to help survey the creek bank and find any newly exposed bones post-flood, as well as record what was torn up during the floods this past fall. This will be an "in-the-water" survey, so if you plan to attend you need to bring swim wear and shoes for in-the-water. Activities. **Tom Ashmore will be giving an overview of the preserve, location, housing, etc. at the June CVAS meeting.**

June Meeting

We will be providing **two short videos** on the Texas Gault Site at our June meeting. This is probably the most important site for understanding the ancient history of mankind's migration into North America. As usual, we will meet at the Ft Concho Living History Stable classroom at 7 p.m. on June 26th.



Other upcoming outings (Archeological field work)

Bella Oaks Ranch

Saturday, June 14th: Meet at the Allsup's on 8210 US Highway 87 N in Grape Creek 7:30 AM. Bring a lunch and plenty of water-No Pets and No smoking. Testing (1-x 1- m square units) for the site boundary and to determine if buried cultural deposits are present. No Metal Detectors. All artifacts stay with the landowners.

Contact Callan Clark for more details or questions.

Ancient Caribou Hunting Site Found Under Lake Huron

hngn.com, By Julie S, Apr 29, 2014

Researchers from the University of Michigan led by John O'Shea stated that the 9,000-year-old-hunting site may have been used by ancient people to capture migrating caribou herds passing through the Alpena-Amberley Ridge, a land corridor connecting southern Ontario and northeast Michigan. To date, the land corridor is now underneath 120 feet of water.

The lines and structure were discovered using a remotely operated vehicle (ROV) equipped with a video camera.

Underneath the water, researchers stumbled upon a 26-foot-wide and 98-foot-long lane ending in a cul-de-sac that pointed northeast. They also found V-shaped hunting structures oriented southeast, along with a rectangular enclosed space which might have been used as a holding space for the caribous. The entire hunting site measured 92 feet by 330 feet.

"The fact that all of the migrations tend to converge on these two locations ... would have provided predictability for ancient hunters, which is why we see so many structures located in these spots," O'Shea told LiveScience.

After gathering enough pictures of the site, scuba divers were sent to investigate

it further. They found around 11 stone flakes near the lanes, bolstering the hypothesis that the site used to be a hunting ground. Computer simulation was also used to predict and understand the migration patterns of caribous during the spring and autumn seasons. The simulation provided two major choke points that were likely used to drive the caribous to the hunting site. One of the found choke points is directly in line with the hunting site found by the researchers.

[Further details of the study can be read on the April 28 issue of the Proceedings of the National Academy of Sciences.]



Drones unearth more details about Chaco culture

By Susan Montoya Bryan, April 22, 2014

ALBUQUERQUE, N.M. (AP) — Recently published research describes how archaeologists outfitted a customized drone with a heat-sensing camera to unearth what they believe are ceremonial pits and other features at the site of an ancient village in New Mexico.

The discovery of the structures hidden beneath layers of sediment and sagebrush is being hailed as an important step that could help archaeologists shed light on mysteries long buried by eroding desert landscapes from the American Southwest to the Middle East. The results of the research were published earlier this month in the Journal of Archaeological Science.

Since the 1970s, archaeologists have known that aerial images of thermal infrared wavelengths of light could be a

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powerful tool for spotting cultural remains on the ground. But few have had access to million-dollar satellites, and helicopters and planes have their limits.

Now, technology is catching up with demand. Archaeologists can get quality images from very specific altitudes and angles at any time of day and in a range of weather using inexpensive drones and commercially available cameras that have as much as five times the resolution of those available just a few years ago. A basic eight-rotor drone starts at about \$3,700.

Jesse Casana, an archaeologist at the University of Arkansas, teamed up with University of North Florida professor John Kantner last summer to test the drones in a remote area of northwestern New Mexico, south of Chaco Canyon — once the cultural and religious center of ancient Puebloan society.

Kantner has been studying a village in the area known as Blue J. He found two households at the village's edge through test digs, but much of Blue J's secrets remain buried under eroded sandstone and wind-blown silt. Blue J was most active close to 1,000 years ago, around the same time as Chaco. So finding structures such as kivas and great houses at the site would help solidify the theory that Chaco's influence spread far and wide. Kivas are circular, subterranean meeting places associated with ceremonial activities. Great houses were massive multistory stone buildings, some of which were oriented to solar and lunar directions and offered lines of sight between buildings to allow for communication.

Aside from dozens of anthills, the drone picked up on much larger, unnatural circular shapes that are thought to be kivas. From the surface, these structures are invisible, Kantner said. He said crews can use the drone information to plan a dig at the location to search for the archaeological remnants.

"Really within a few hours we were able to survey this area that took me a long time, years of what we call ground reconnaissance and excavation to see what's below the surface," he said. "So this is great for quickly and pretty cheaply being able to find sites."

There already is talk about using the drones in other dry environments such as Saudi Arabia and Cyprus, where the difference between daytime and nighttime temperatures would be great enough to allow the heat signatures of buried stone structures or other features to pop up on the thermal images.

The drones have their limits. For example, flights usually are less than 15 minutes depending on battery power and camera weight, and the eight-rotor mini copters have been known to stop and come crashing to the ground. There also are questions about whether federal regulators will toughen rules governing drone flights.

Kantner said as drones become more reliable, their ability to survey vast areas quickly will become even more important. He pointed to potential threats of oil and gas development and coal and uranium mining throughout the Chaco region. "There are resources that we obviously need for our nation's self-sufficiency, but on the other hand, we don't want to give away our cultural patrimony by losing these archaeology sites," he said.



This June 2013 photo provided by the University of North Florida Office of Research, shows an aerial photo taken from a drone of the Blue J area in northwestern New Mexico.



Tom Ashmore represents CVAS at the Southwest Federation of Archeological Societies 50th Annual Symposium in Canyon, TX. The presentation was Independence Creek Rock Shelter Recordings (41TE687, 41TE688)

Ft Martin Scott, Fredericksburg, TX

I was invited to join a select working group of planners for the Ft Martin Scott excavations. Our first meeting will be on June 21st. As now organized, the Archeology Group consists of:

- | | |
|--------------------|-----------------------|
| 1. Joseph Luther | 5. Duke Davis |
| 2. Jim McRae | 6. Joe Labadie |
| 3. Barry Wagner | 7. Tom Ashmore |
| 4. Jimmy Alexander | 8. Walter Moldenhauer |

The first meeting will be to develop a vision statement for the archeology group and I'm sure it will morph into a discussion of the planning of the first excavation. Once we put the plan together and layout a schedule we will be looking for volunteers to help in the excavation on scheduled dates.

Tom Ashmore

Cord-Wrapped Fiber Bundle: A Most Curious Artifact Comes to Light

<http://aswtproject.wordpress.com>, by Kevin Hanselka , 6/1/2014

In early May I returned to Eagle Nest Canyon to assist in the excavation of a remarkable plant processing feature in Kelley Cave. When first encountered by Dan Rodriguez and Steve Black last summer, Feature 4 appeared to consist of a thick fiber layer capped by a uniform and seemingly purposeful layer of alluvial mud about 3-5 cm thick. They hypothesized the mud layer was a prepared surface, presumably created by dumping basket loads of fine Rio Grande alluvium like that found in a flood deposit in adjacent Skiles Shelter. However, sediment size analysis and comparison led geoarchaeologist Charles Frederick to favor an alternative idea: that the layer is a naturally deposited thin mud drape from the same impressive flood that left an alluvial layer over one meter thick in the back of Skiles Shelter. This fits with the fact that Kelley is some 5 meters higher in elevation than Skiles. A tentative assessment of new radiocarbon dates from both sites suggests this extraordinarily massive flood may have occurred around AD 1350.

My interest in Feature 4 is in its layers of plant matter and the information they may contain about the cultural use of plant resources in the shelter. In other words, as Brooke Bonorden so eloquently stated in the March 3rd blog post, I want to assess these deposits for "... well-preserved evidence of full behavioral chains from plant collecting to baking to food consumption to fiber production to weaving and plaiting to finished object to final discard." Most of the plant remains from Feature 4 probably represent the accumulation of waste products of food prepared in nearby earth ovens—mainly trimmed-off outer leaf bases from baked agave lechuguilla stems or "hearts," but also discarded agave quids (masticated inner leaf bases) and other plant remains such as wild onion skins. The food remains, however, may also be intermingled with manufacturing waste produced as leaves were stripped into fiber for weaving mats or baskets or for twisted twine.

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Steve and Dan's working hypothesis is that the Kelley Shelter occupants cooked plant foods such as lechuguilla, sotol, prickly pear, and wild onion in earth ovens near the mouth of the shelter, and then discarded the waste vegetal debris in dense layers, like that in the upper Feature 4. A desirable side effect of this patterned behavior would be that plant layers would help suppress dust, making the shelter a more comfortable place to live and work. We have been kicking around these ideas for several months and Steve had promised he would wait until I came back in early May to further explore Feature 4.

After removing the disturbed surface layer and remnants of the mud drape/surface and exposing the underlying fiber layer (along with some scattered small burned rocks), we paused to thoroughly document the exposed layer using Structure from Motion (SfM) photogrammetry, as described by Charles Koenig in the January 23rd blog entry. While Steve and Drew took the photos, I busied myself with closely examining the floor of the shelter for interesting perishable artifacts. From my previous experiences in similar sites in Mexico and New Mexico, I know that tiny textile fragments, cordage, and unusual plant parts are often found just lying about the surface in dry rockshelters.

Again, I was not disappointed. In the middle of the previously exposed area of Feature 4 I noticed a small loop of tightly-wound fiber cordage protruding from the dust. Based on the coarseness of the strands, I tentatively interpreted it to be made from twisted lechuguilla leaf fibers. Carefully blowing and brushing away the surrounding dust revealed that the cord was exposed in a drying crack of the mud surface and that it seemed to be encircling a fibrous mass of what appeared to be lechuguilla leaves, and was tied in a simple knot on top. However, the exact nature of the artifact was unclear because it was embedded in the hardened mud drape atop the thick upper fiber layer of Feature 4.

As I later learned, Dan had spotted the same embedded cord last summer when the mud surface was first exposed. He had left in place to be looked at more closely as the feature was more thoroughly documented. In the intervening months the mud cracks had widened such that I could see the cord was wrapping something. Given that Dan and Steve had thoroughly documented the upper part of the feature exposure using SfM, Steve authorized me to expose the object in order to thoroughly document it before removal. Although most of Feature 4 will be left unexcavated and carefully protected for the future, Steve decided the collection of the specimen was justified. Such perishable artifacts are extremely rare in the archaeological record except under the best preservation conditions, and because it will be vulnerable to future destruction by foot traffic in the shelter. While human visitors can be encouraged to avoid sensitive areas of the site, feral hogs are known to frequent the shelter and wallow out sizable depressions where they sleep.

Exposing and removing the artifact was a delicate and tedious process, and ultimately took several hours. Although it is well-preserved, the fibrous mass and cordage are very fragile, and they were firmly embedded in the mud drape. In fact, the cord-wrapped bundle's mud encasement is probably what protected and preserved it so well in the first place. I worked to remove it hunched close to the ground, using a dental pick and tweezers (and occasionally the pliers on my multi-tool!) to carefully break up the hardened mud and separate it from the cordage, fibers, and thin fragments of prickly pear leaf epidermis (the "skin") encircling the bundle. I constantly alternated between picking and tweezing and carefully brushing/blowing away the resulting debris. Meanwhile Steve photographed the action, took notes, and lined a plastic container with paper towels in which we would cradle the artifact once it was freed.

The revealed artifact proved to be a short "bundle" of fibrous leaf material and a desiccated prickly pear pad bound with a short length of fiber cordage that had been tied into a simple knot on one side. Overall, it was less than 20 cm long and was found to be on top of two additional fragmentary prickly pear pads within the dense vegetal layer in Feature 4. The item must have been sitting on top of the fiber layer when the massive flood event deposited the sheet of mud that then hardened around it, encasing it and preserving it for us to find centuries later (although this is only our preliminary interpretation).



WE'RE ON THE WEB AT
CVASSANANGELO.ORG

Meeting Location

Please remember that our meetings are now in the classroom at the Fort Concho Living History Stables, **236 Henry O. Flipper St.** We enter **through the side door.**

2014 Membership Application

Name _____

Address _____

City _____

Zip _____ Phone _____

Cell _____

Family members _____

Email _____

I pledge I will not intentionally violate the terms or conditions of any current or future state or local statute concerning cultural resources or engage in the practice of buying or selling artifacts for commercial purposes, or engage in the willful destruction of archeological data, or disregard proper archeological field techniques

Signature _____ Date _____

Mail to: CVAS, 4063 Green Meadow Dr., San Angelo, TX 76904

Individual	\$15	<input type="checkbox"/>
Family	\$20	<input type="checkbox"/>
Student or military N/C		<input type="checkbox"/>

(active military only)