



Concho Valley Archeological Society Newsletter

November 2015

Independence Creek Drone Survey Testing

Tom Ashmore

I took the drone out to Independence Creek on November 1st & 2nd to test some survey procedures. Lisa Wrinkle was kind enough to host my visit and run us all over the property to different sites. The testing consisted of launching off a sheer cliff at the end of one of the mesas, searching from the bottom of Dry Creek and working up the hill, and finally flying a pre-programmed survey pattern over the flat mesa top. On the cliffs I was able to look into several extensive shelter-like overhangs below the caprock, but they were determined to be uninhabited after reviewing the video. My next plan is to figure out a way to determine exactly how we can find a potential site viewed in the video immediately after landing and reviewing the video. If we can do this properly we can immediately walk to the location to determine if it is or is not a legitimate site (such as a midden). In agriculture this locational data is produced with photogrammetry (taking many photos stitched together and laying them out over GIS mapping). However, this is very time consuming and not a good field technique to find a location quickly from the immediate feedback of the survey. All in all, the testing was a gratifying success. Thanks to Lisa for her help and hospitality.



Launching the drone off the edge of the caprock cliffs

Prescribed fire exposes more rock features at archaeological site

<http://billingsgazette.com>, By Brett French, Oct 15, 2015

Photos of a 1,000-year-old buffalo jump in northeastern Montana that were shot after a controlled burn in April have revealed more than 400 new rock features, and the analysis is only one-third done.

“It’s like a super detailed, super accurate Google Earth,” said Josh Chase, a Bureau of Land Management archaeologist based in Havre. “It’s really given us a more complete picture of the site.”

The 800-acre Henry Smith site in Phillips County was first documented in the 1960s and is now protected by the agency as an area of critical environmental concern. The bluff contains stone effigies of humans and a turtle, meaning the site held religious as well as utilitarian significance to the nomadic prehistoric people who lived and worked there between A.D. 770 and 1040.

“Prehistorically speaking, we knew there were a lot of features,” Chase said. But the burn has revealed even more stone effigies, teepee rings, mysterious figures and drive lines on the bluff. It even shows how settlement patterns changed over time.

About 40,000 photos were taken by an unmanned aerial vehicle of the 300-acre burn. Geographic information specialist Jerry Rich, who works at BLM’s Malta office, helped program the computer to analyze all of the data from the shots. Rich had done similar work in the Army.

“I took that exact same method and process and helped him find some sites out there,” Rich said. “The part that was amazing was the sheer amount of them that we were able to locate in a small area.”

Once the computer software was programmed to look for rocks in the images, Rich said rings and mounds started jumping out of the pictures.

“It was one of those moments where I realized I’ve got a pretty good job,” he said. “I just hope I get to see more of the pictures, or go out and ground truth to see what I saw from the UAV picture.”

Jessica Bush, from the Montana Historical Society, had a similar feeling as she was onsite for the prescribed fire to document the results in case there are similar requests in the future.

“It was really incredible,” she said. “It was amazing how clear everything became after the fire.” She noted that a drive line — rows of rocks stacked to funnel bison to a jump site — would stand out starkly where the grass had been burned and then disappear in patches of grass that hadn’t caught fire.

“You could just see this crisscrossing of stone features everywhere,” Bush said.

She noted that there is little appreciation of the stone features and historical sites spread across northern Montana’s Hi-Line — mostly because a lot of it can’t be seen. But Chase noted that the area is rich in archaeological features. “I hope this is the start of a new way to look at archaeology in new areas,” Bush said.

Chase agreed, saying it was nice to be at the forefront of a newly emerging technological advancement for plains archaeology.

“Because it did work so well and it’s proven that our technology works, I’m thinking about using the same exact strategy to just explore the area a bit,” he said.

Another part of the study involved Missoula Fire Science Lab personnel placing artifacts without provenance at locations around the burn to document how fire affected them.

“If they don’t agree, we have different times of occupation,” Chase said.

Eventually, Chase will write up all of his findings in a scientific paper and publish it so the study and techniques can be scrutinized by his colleagues.

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Visitors to our area

Tom Ashmore

I received this email on Saturday, Oct 24th.

We are the editors/publishers of Desert Tracks, the publication of the Southern Trails Chapter (STC) of the Oregon-California Trails Association. (The publication can be found online on the archive page of the STC web page, southern-trails.org.) Because there is an effort underway to designate the Butterfield Trail as a National Historic Trail, the winter issue of Desert Tracks will be devoted to the Butterfield Trail. As background, we have been following the section of the trail from Tipton, Missouri, through Arkansas, Oklahoma, and Texas, to El Paso.

Tomorrow we will be in the San Angelo area looking for the Butterfield sites that Kirby Sanders, A. C. Greene, and Don Matt mention in their writings. Can you suggest any Butterfield sites for us to visit that they might have overlooked? We plan to visit the sites of Grape Creek, Head of Concho, and Mustang Springs. Do you have any information on these sites that we might not know about?

We have read several of your web-based articles on Butterfield stations. We would welcome an article on any aspect of the trail for a future issue.

Best regards,

Deborah and Jon Lawrence
Co-editors, Desert Tracks

It was too short notice to get on any actual locations, but I offered to show them some of the crossing points on Arden Road the next day. I also sent them a selection of articles I had written over the years that were in our newsletters. The weather cleared and our visit was very nice. They have asked if I would write some articles for their winter and spring issues of Desert Tracks.

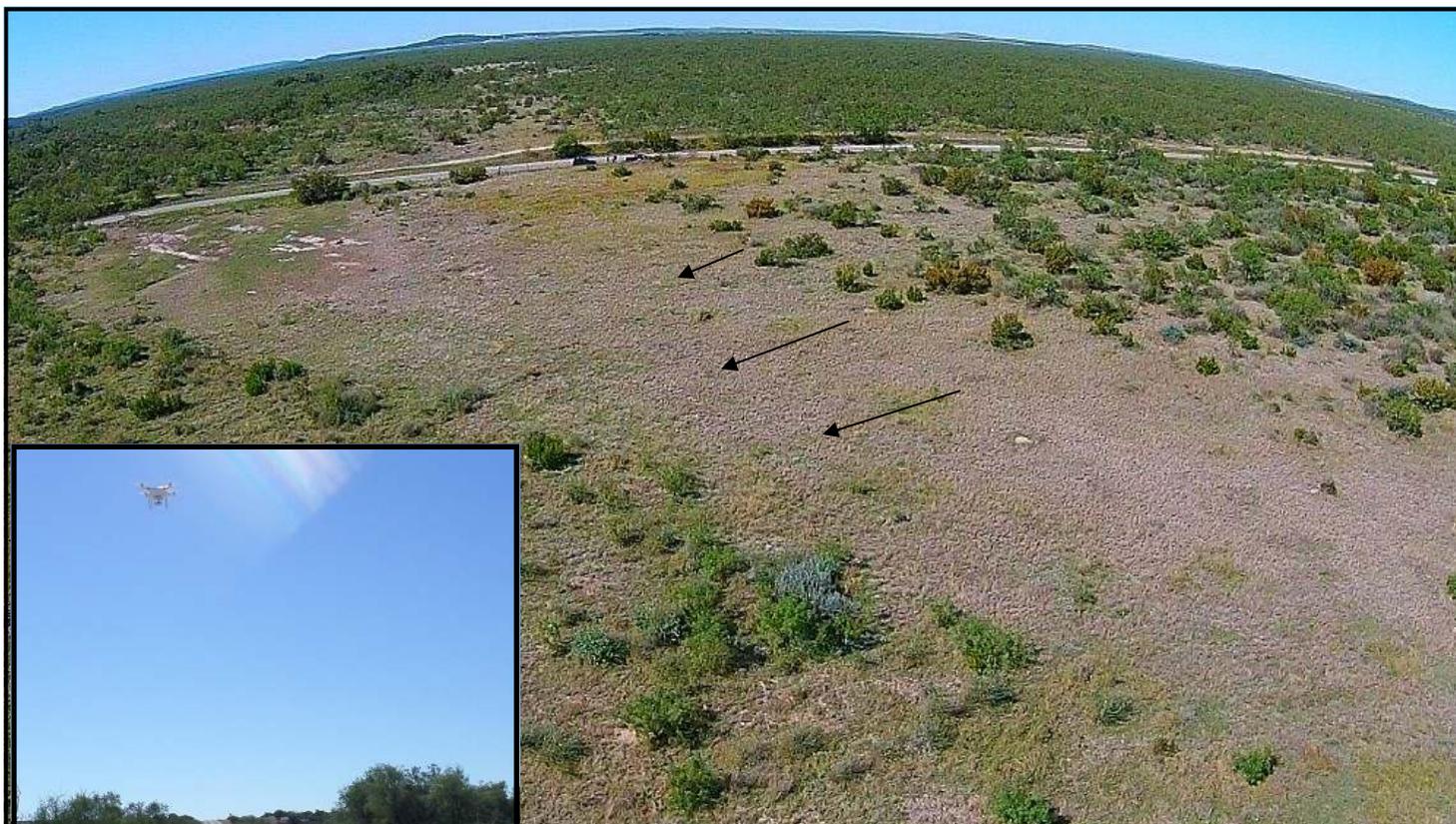


Drone view of Grierson's Shortcut crossing Arden Road. You can see it to the left of our vehicles. This is right before (1500 feet) you cross the Middle Concho. Grierson's Shortcut paralleled the Butterfield Trail (by about 1000 feet at this point) for a ways. It is so easily viewable many people thought it was the actual Butterfield Trail, but it was just what he said— a shortcut.

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Visitors to our area

Tom Ashmore



This is the actual Butterfield Trail as it crosses Arden Road, paralleling the Middle Concho. The trace line is extremely faint, but this is definitely the trail. It crosses right to the rear of our vehicles

Deborah and Jon Lawrence with me at the Middle Concho. They got a big kick out of the drone, having never seen one before

Prescribed fire exposes more rock features at archaeological site (continued)

“I think we’re really lucky,” Bush said. “This is one of those once-in-a-lifetime projects that you get to work on that can really change what we know.”

Temperatures recorded next to the artifacts hit 1,300 degrees for less than a minute, Chase said. That temperature and duration was not harmful to stone and ceramic artifacts. Bone, on the other hand, suffered some pretty pronounced damage from the fire, he added, especially when near sagebrush, which would burn longer.

The information gives Chase a scientific basis on which to rest his theory that the fast-moving grass fires were, in general, not harmful to most artifacts.

It may be springtime before Chase has had time to analyze all of the 40,000 photos in detail. By then he may have soil samples back from a Washington laboratory telling him how long ago some of the stones were moved into place.

To do that, soil samples are taken from under the rocks, but only at night or in a darkened tent to avoid the soil being exposed to the sun. The technique for analyzing the soil, called optically stimulated luminescence, or OSL for short, can determine the last time the soil was exposed to the sun.

Four dirt samples were collected from the Henry Smith site for testing. The dating from the soil samples will then be compared to dates scientists have come up with from the archaeological dig at the buffalo jump below the cliffs to see how close they compare.

Butterfield Overland Trail Special Resource Study/Environmental Assessment

National Park Service, National Trails Intermountain Region (undated website announcement)

The proposed Butterfield Overland Trail National Historic Trail commemorates the routes pioneered by John Butterfield and the Butterfield Overland Stage Company as they traveled over the "ox-box route" between the eastern termini of St. Louis, Missouri and Memphis, Tennessee and the western terminus of San Francisco, California. Stages traveled over this route between 1858 and 1861.

In recognition of the perceived national importance of these routes, and in response to public advocacy for the inclusion of these routes in the National Trails System, Congress passed legislation that was signed by President Obama on March 30, 2009 (Sec. 7209 of P.L. 111-11).

This section of the public law calls for a "special resource study along the route known as the 'Ox-Bow Route' of the Butterfield Overland Trail (referred to in this section as the 'route') in the States of Missouri, Tennessee, Arkansas, Oklahoma, Texas, New Mexico, Arizona, and California to evaluate—(1) a range of alternatives for protecting and interpreting the resources of the route, including alternatives for potential addition of the Trail to the National Trails System; and (2) the methods and means for the protection and interpretation of the route by the National Park Service, other Federal, State, or local government entities, or private or nonprofit organizations."

In compliance with P.L. 111-11, the National Trails Intermountain Region office of the National Park Service in Santa Fe, New Mexico, will complete a special resource study of the proposed Butterfield Overland Trail National Historic Trail.

The study shall be prepared as an Environmental Assessment, as authorized by recent revisions to Director's Order 12, in compliance with the National Environmental Policy Act, Council on Environmental Quality regulations, and Departmental and Service regulations. Advisory Council on Historic Preservation procedures for compliance with Section 106 of the National Historic Preservation Act shall be followed. All affected State Historic Preservation Offices and Tribal Historic Preservation Offices shall be consulted during the planning process. Section 106 consultation requirements also will be followed in partnership with interested parties and cooperators.

Public meetings for scoping purposes were completed in Spring 2012. A planning newsletter has been posted for your information and review. The draft document is currently under internal NPS review and is projected to be released to the public later in 2015.

Field Trip Doss Ranch

Saturday November 21st

Meet in parking lot west of Allsup's (right side of highway overpass) in Grape Creek at 8:30 am.

Purpose: Survey and Testing

**Noon Meal: Derrick will cook venison burgers
CVAS members are asked to provide
salads, fruits, desserts, drinks**

Some reminders:

**Wear clothing suitable for walking in pasture
Bring water and snacks
No pets
No alcoholic beverages
All artifacts are property of the landowners**

We will talk more about the outing at our November 19th meeting. If you have questions about the trip contact Larry (653-8216) or Michelle at (450-6965)

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.

2015 Membership Application

Name _____

Address _____

City _____

Zip _____ Phone _____

Cell _____

Family members _____

132 Kilt Road San Angelo, TX 76901

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 _____

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

(active military only)

Mail to: CVAS, 132 Kilt Road, San Angelo, TX 76901