

**Independence Creek's Alan Shelter:
An Earth Oven Cooking Shelter
(41TE703)**

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Abstract

Concho Valley and Iraan Archeological Society members worked together to identify and record rock shelters within the Independence Creek Nature Preserve in 2014 and early 2015. This report focuses on one small shelter which shows strong evidence of being used as a sheltered cooking oven rather than a habitation shelter. Although hearths and middens have been reported within larger shelters throughout the Lower Pecos region, this is the possibly one of the first to address a shelter that appears to have been used exclusively as a cooking oven. This shelter may also be one part of a larger mesa top complex of extended cooking locations serving a few large habitation shelters tucked into the canyon walls of this large mesa.

Introduction

The Independence Creek Nature Preserve is located 22 miles south of Sheffield, Texas, which is 38 miles west of Ozona, just off Interstate 10. The preserve was started in 1991 by the Chandler family and The Nature Conservancy of Texas. They permanently protected 702 acres along the free-flowing Independence Creek through a conservation easement. In 2000 and 2001, The Nature Conservancy purchased the Oasis and Canon ranches to create a 19,740-acre preserve adjacent to the Chandler family's easement. Independence Creek runs west to east as it runs through the nature preserve, emptying into the Pecos River five miles below the preserve headquarters.

Background

Lisa Wrinkle, the nature preserve caretaker, and her brother were hiking along the upper mesa above Independence Creek in 2002 when her brother noticed an extremely large talus slope on the other side of the canyon. Upon further inspection they found the shelter which the burned rock came out of was quite small. They made note of the location and thought little about it after that. In April of 2014 Lisa mentioned the small shelter to the CVAS and IAS group that had come to make recordings of shelters. The group made its first visit during our reconnaissance that month.

Archival Research

The area around Independence Creek is dotted with a great number of ancient shelters. In July of 1994 and September of 1995 the University of Texas System Lands sponsored an archeological survey of an area west of the Independence Creek preserve. The area surveyed covered 38,400 acres on Blocks 34 and 35. The work was authorized by Antiquities Permit 1414 issued to Solveig A. Turpin, principle investigator, and assisted by Larry Riemenschneider, Director, CVAS and Texas Historical Commission Steward. A total of 116 sites were recorded. Of these 53 were burned rock middens and 54 were rock shelters. Additionally, field reconnaissance surveys in 1986, 1994 and 1995 identified 109 similar sites in areas adjacent to Blocks 34 and 35. (Turpin 1995)

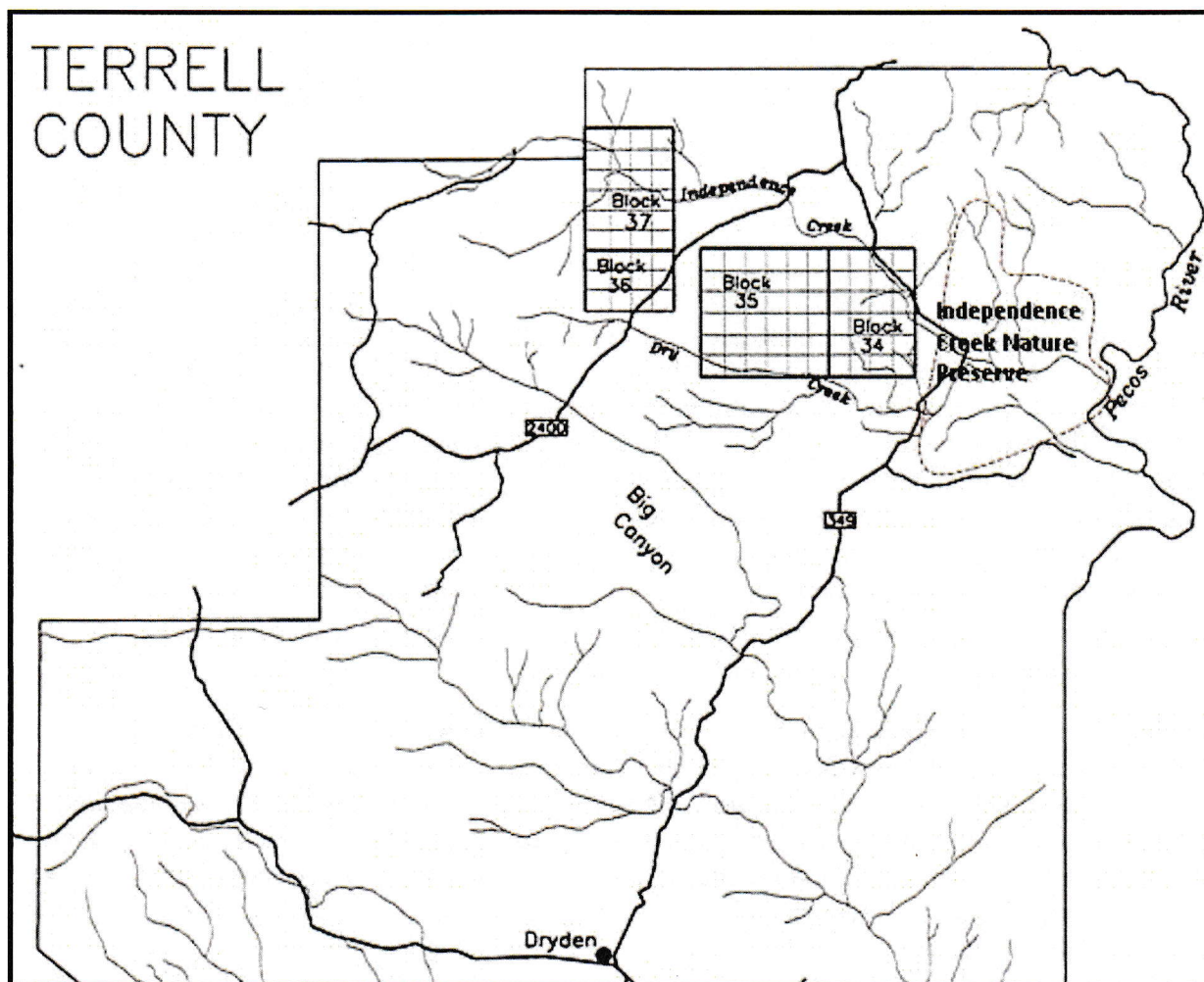


Figure 1. Blocks 34 & 35 west of Independence Creek Preserve

The nearly 20,000 acres of Independence Creek was not surveyed and recorded prior to when CVAS and IAS began to work with Lisa Wrinkle and the Texas Nature Conservancy in 2011. Thus, although it was in the middle of what appeared to be a highly utilized area, it showed only as a gap in the TARL records. In the past three years CVAS, IAS and the Texas Archeological Society's Rock Art Task Force have recorded seven shelters within the preserve. Some had earth ovens within the shelter and all but this small shelter showed obvious signs of at least seasonal habitation within the shelter in addition to the earth oven.

Discussion

Our teams visited Alan shelter on four occasions. The first was the initial assessment in April 2014, looking for pictographs and doing an initial surface search. The inspection was brief. No pictographs were found. The first sign this was a somewhat unusual shelter was the thick layer of ash throughout the entire shelter and the ceiling was completely covered with smoke residue all the way to the rear of the shelter and to both sides. The sheer size of the talus slope was also a puzzle. The question of whether this was only being used for cooking or was at any time used for habitation was an intriguing one. We decided further study and a site recording would be in order during follow-up visits.



Figure 2. Evans Turpin, CVAS/IAS team lead, searching for pictographs during initial visit.

Our second visit was to conduct measurements, further surface search and an initial minor depth test of the hearth/oven area. When our test continued to bring up solid ash and burned rock to a depth of 30 centimeters we decided an additional visit and excavation was in order.

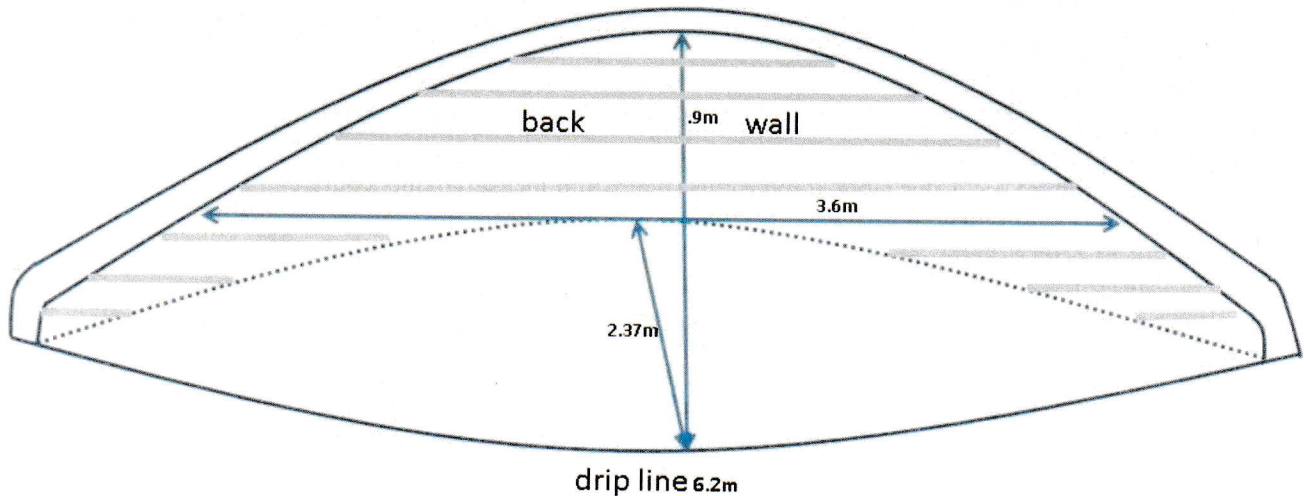


Figure 3. Alan Shelter dimensions (measured to useable area)

In addition to the tiny shelter being completely full of ash and burnt rock the most obvious and dramatic anomaly to this site is the enormous talus slope. From a 5.89 meter wide drop off in front of the shelter the talus covers an area 81.5 meters long and 22.7 meters wide on a 60 degree slope. And all this came out of a useable area only 2.37 X 3.6 meters. The shelter sits 7.6 meters below the top of the mesa and under a natural rock ledge. It faces 260 degrees west.

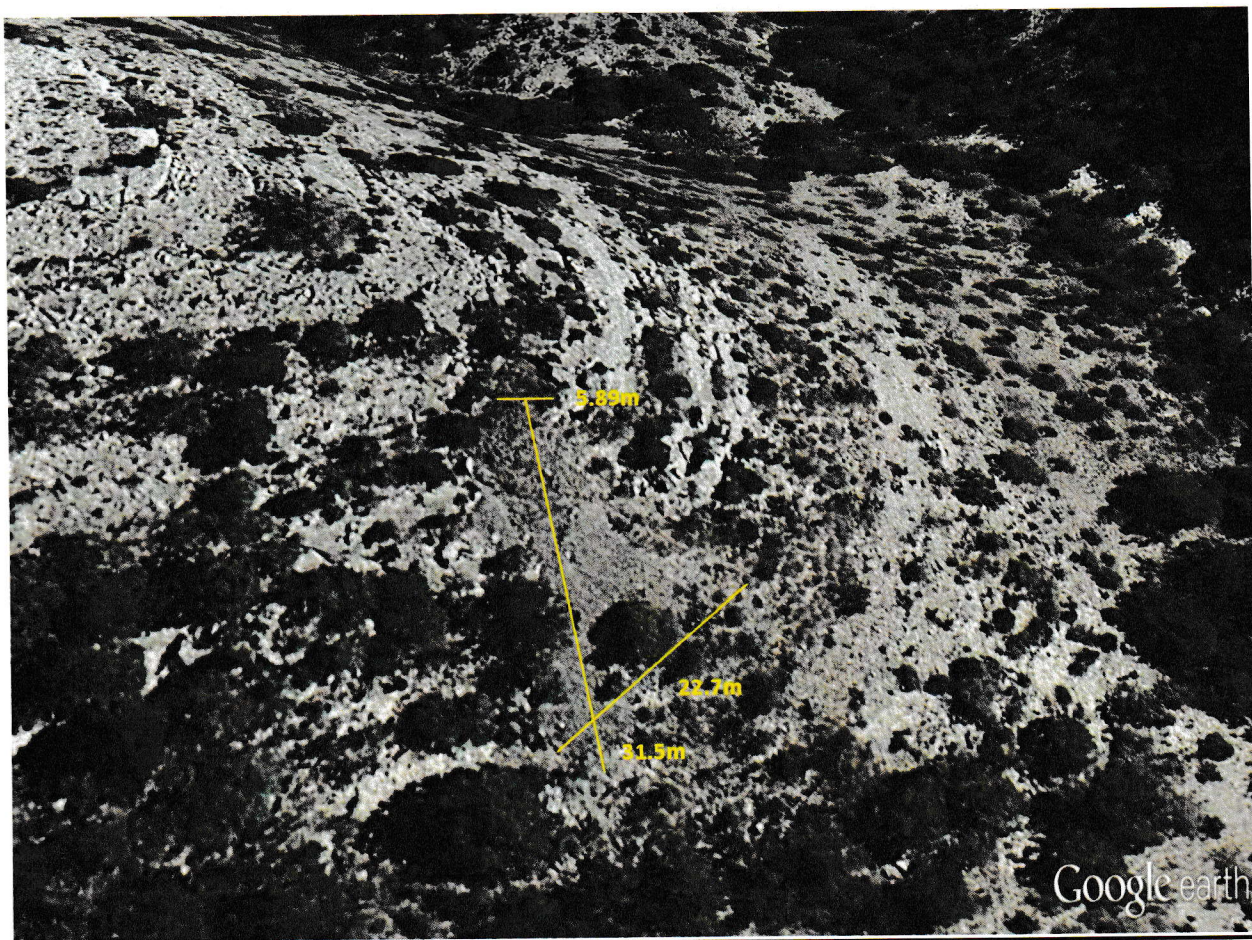


Figure 4. Talus slope dimensions (photo and measurements courtesy of Google Earth)

Archeological Investigation

The team for excavation was headed up by professional archeologist Eric Schroeder, with assistance from University of Texas archeology graduate student, Steve Evans. Also assisting were myself, Texas Historical Commission Steward, Evans Turpin and Lisa Wrinkle, Texas Nature Conservancy Lower Pecos Program Coordinator. On our last excavation we were also joined by archeologist, Ethan Moorehead.

Due to time constraints our first excavation consisted of a 2 meter by 50 centimeter trench unit. The excavation went down 10 centimeters for the first layer and 20 centimeters for the second layer. At 25 – 30 centimeters we encountered flat stones, generally three to five centimeters thick, laid out to make what appeared to be a table-like slab base. This is consistent with other burned rock middens, as reported by Black and Thoms (2014), in their report on earth ovens and is generally referred to as pit linings.



Figure 5. Partial section of pit lining stones



Figure 6. Pit lining stone after removal

For the final excavation we expanded the trench unit to make a 2 X 1 meter unit and continued deeper. Under the pit lining stones we found another layer of stones laid out in a way to probably level out the inherent variations in elevation in the bedrock and make a foundation for the pit lining stones. This leveling foundation stones became very apparent when we removed one particularly large one toward the back of the trench. It fit perfectly in a depression formed by the bedrock, leveling out the base foundation. Under these rocks at an approximate depth of 40 centimeters and rising as it continued toward the back wall we found bedrock.



Figure 7. Probable foundation leveling stones placed underneath pit lining stones



Figure 8. Removing particularly large leveling stone

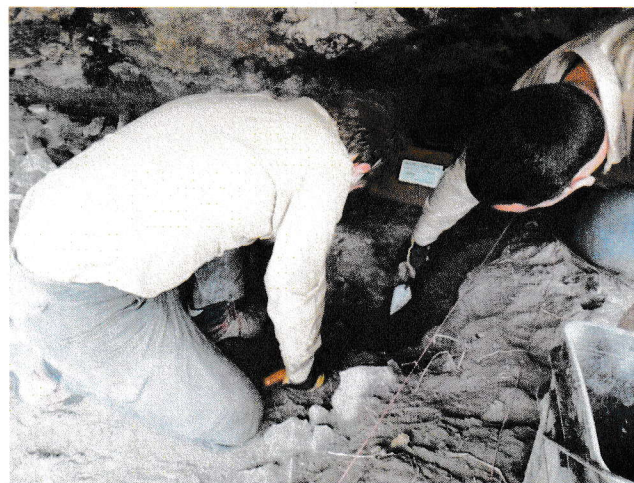


Figure 9. Checking bedrock depression after stone removal

This is earth oven technology that was used in above ground earth ovens - or middens - found throughout the Lower Pecos region. A good explanation of the cooking technique comes from an online blog by Texas State University students conducting experimental archeology in February, 2014.

“To create an earth oven, a pit is dug into the ground and a fire is built. Large stones are placed amongst the flames; these stones retain the fire’s heat and become the oven’s heating element long after the fire has died out. Next, a layer of packing material is laid across the hot stones in order to insulate the food from direct heat and provide moisture. Prickly pear pads work great for this and can be found in abundance in the Lower Pecos. The food load, the trimmed hearts of the desert succulents sotol and lechuguilla, is placed on top of the packing material followed by another layer of packing material. The oven is then capped by a thick layer of earth to prevent precious steam heat from escaping. After cooking for at least 36 hours the food is ready to be unearthed and consumed.” (Sullivan, Bonorden)

Artifacts

Prior to the excavation we found scattered on the surface eight small scrapers, one core blade fragment, two biface fragments, one chert drill and a broken projectile point with no base. Next to the trench on the surface we also discovered a Bandy point (early Archaic 6000 – 4000 B.C.E.) in very good condition, but with one small piece of a barb broken off.

In the excavation of the first 10 centimeters of the 2m X 50 cm trench we found 156 flakes of various types of chert, one small chert drill, two long bones of a Turkey Vulture, 12 unidentified small mammal bones, two deer molars and a small mollusk fragment. In the level two we went down 20 more centimeters. In that level we found 38 chert flakes, one uniface tool, two small scrapers, and one chert core blade.



Figure 10. Bandy point

Our second excavation again was also constrained by time. Thus, we only expanded the original trench unit from 50 centimeters wide to a full meter, making the final trench 2 X 1 meter.

In the unit expansion excavation the first 10 centimeters we uncovered 61 chert flakes (various types chert), 5 unidentified small mammal bones, 9 small flake tools, 2 deer molars, 1 mollusk fragment and 1 small scraper. In the level two we went down 10 more centimeters. In that level were 16 chert flakes and one small mammal bone. The third 10 centimeter level consisted of 34 chert flakes, 6 unidentified small mammal bones, 15 small flake tools, 2 small avian longbones, 2 small scrapers and 1 bone awl. The fourth and final 10 centimeter level we uncovered 7 chert flakes (various chert), 1 small flake tool, 1 longbone – avian, 1 knife fragment, 1 wood charcoal piece, 1 small fragment wood and a partial Paisano point (Transitional Archaic 200 BC.E. – 600 C.E.). At the 40 centimeter level we also encountered the shelter bedrock, rising in elevation to the back of the shelter wall.

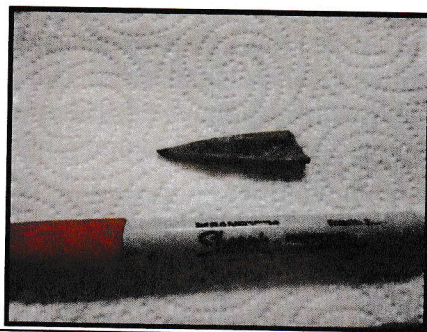


Figure 11. Paisano point Figure 12. Bone awl

Conclusion

Finding an earth oven inside a shelter is not unusual in itself. They have been reported in most shelters throughout the Pecos region. In fact, the talus slope outside shelters throughout the region is our most identifiable feature in finding unrecorded shelters. In addition to Turpin's report, an extensive reconnaissance of 4,500 acres of Rylander Ranch, 60 miles southeast of Independence Creek, by Charles Koenig in 2011 and 2012 also reported 70 percent of 527 shelters contained earth ovens within the shelter. (Koenig)

What is unusual is a tiny shelter being used exclusively for cooking, possibly to enhance the cooking effect and give good protection from the elements. Although habitation cannot be completely ruled out, it is highly unlikely this tiny shelter was ever used for that purpose. The amount of ash and lack of

open air circulation would be extremely unhealthy for anyone, even for a few nights, in such a shelter. Additionally, the smoke blackening on the ceiling indicates heating was distributed evenly throughout the entire shelter. And finally, none of the artifacts found gave any indication of daily habitation.



Figure 13. Smoke blackening throughout the shelter

In regards to daily habitation, the question arises of why so many flakes and broken tools were found within the ash layers. This is common to many other excavations of middens. Again, in their report on earth ovens, Black and Thoms (2014) discussed this phenomenon, referring to the sediment as coming from “borrow zones.” Leach and Bousman (2001) also discussed how the “borrowed sediment around a burned rock midden, which was reused for the capping of the cooking oven, often contained preexisting occupational deposits. The borrowing of sediment would inadvertently introduce artifacts and ecofacts of varying ages into earth oven facilities. “

I believe a logical hypothesis is that the middens and this oven were convenient locations for the men to work on their tools in the winter while staying warm. Working outside this shelter would have given cover from the biting north winds and the heat emanating from the oven effect would have been even greater than a surface midden. Although it faces westerly, this shelter still has quite a bit of protection from the winter winds by the surrounding ledges above and to the side facing north. While working, flakes and broken tools would be discarded in the dirt around the working area. Later, after covering the food stuffs with vegetation on a new cooking oven the entire cooking area needed to be sealed. The most convenient sealant was the soil outside the shelter. And the primary source of loose soil was the area where the men were tooling. Thus the flakes and broken tools would be recycled into the cooking oven along with the soil.

Finding extremely old artifact on the surface and a much younger artifact on the lowest level is also not unusual for middens. The talus is proof enough that this structure was constantly being cleaned out and dirt and ash recycled as a sealant on top of the new cooking oven. Additionally, this site may have been compromised prior to our initial reconnaissance. We found remnants of a screen on the surface and inside the shelter when we first explored the inside of the shelter. Finally, bioturbation by

burrowing animals may well have played a part in some of the mixing of ash layers. However, these two artifacts, along with the enormous talus slope, give a good indication that this shelter was used and reused, probably seasonally for thousands of years. It obviously played a very important role for the local inhabitants, most likely during the winter seasons.

Another question that arises is that if this is not a habitation shelter, where did the people live? Two other large habitation shelters recorded by our group in this area are well within proximity for travel to and from this cooking site. One shelter (Kurts Cave 41TE689) (Evans 2014) is four kilometers and the other (Tunnel Shelter – no trinomial yet) is two kilometers walking distance from this site. The two habitations shelters are one kilometer from each other. Each of those sites are large enough for multiple family units. Both had earth ovens within their shelters, but their talus slopes were not nearly as substantial as this one site. It may be that this was a convenient additional cooking site for one or both of these other habitation sites. Hunting and gathering range could be expanded if the groups could process and cook their food at an additional extended site rather than carrying all the raw material back to be processed back at their shelters. Under this concept the only thing to be carried back would be the final processed food rather than the bulk of the pre-processed food, whether it be sotol, lechuguilla, prickly pear, mammals or birds. The amount of foodstuff for the entire group could be doubled or tripled and the hunting/gathering range on top of the mesa could be quadrupled under this concept.

In Charles Koenig's paper he encapsulates multiple models presented over the years of hunter/gatherer patterns for the Lower Pecos region. One such model is the "semi-sedentary canyon collector."

Within the "canyon collector" model it is hypothesized that the major river canyons were home bases from where foraging (and hunting) expeditions would set forth and return with the gathered food resources. Home bases were located along the major river canyons in order to insure access to water and riverine resources (Shafer 1976, 1981, 1986; Taylor 1964; Turpin 1990, 1994, 2004). In this model, open-air and "small" rock shelter sites located away from the major river canyons were used as temporary processing stations for desert succulents. Once the food was processed, logistical foraging groups would return to the home base within a rock shelter or stream terrace along the major canyons. (Koenig, 2012)

The model also showed that the pattern of burned rock midden sites indicated the logistical foraging/processing radius from the home base shelters was approximately 3 to 6 kilometers. This model fits well within the pattern on this particular mesa that encompasses these two habitation shelters, this extended cooking shelter and two other large middens, one 5 kilometers and one 1 kilometer from the habitation shelters. Additionally it appears each cooking site may have been a designated site for a separate arm of the mesa. We are attempting to work through this hypothesis by conducting additional reconnaissance of the arms of the mesa that we have not yet found large middens or similar type cooking shelters.

This particular mesa is separated by other on all four sides by three major creeks and the Pecos River, making it an excellent study area. If this hypothesis is correct, each of the large mesas above canyon shelters surrounding Independence Creek could each be considered a foraging/hunting complex tied to those shelters, along with extended area cooking features. The model of the semi-sedentary canyon collector should be considered in the future for shelters contained within the canyons that surround a large mesa above them. It could be that other groups within a single mesa table may have also have worked together in order to expand their area coverage, building large burned rock middens or cooking shelters at extended distances, 3 – 6 kilometers from the home base shelters.

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About the Author

Tom Ashmore spent 21 years in the Air Force as a special intelligence analyst. Since retiring he has worked in computer modeling and simulation for the Air Force Intelligence School at Goodfellow AFB, Texas. After moving to San Angelo in 2005 he joined the Concho Valley Archeological Society. He headed up CVAS investigations of Butterfield's Overland Mail Johnson's Station (411R123) in Irion County, Paint Rock 1800s Historic Camp Sites (41CC290) in Concho County, and Tower Hill Military Lookout (41ST91) in Sterling County, Texas. Previous SWFAS papers presenting his work include "Butterfield's Overland Mail Station, Following the Butterfield Trail", "Through Satellite Imagery Interpretation" and "Independence Creek Rock Shelter Recordings (41TE687, 41TE688)".
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**Note: Independence Creek Preserve visitation is limited to volunteer workdays and various special events throughout the calendar year. An appointment is needed for visits outside of these organized events. For more information, contact West Texas Preserves Manager Ryan Thornton ryan.thornton@TNC.ORG
<https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/independence-creek-preserve/>**