



# *Concho Valley Archeological Society Newsletter*

*April 2010*

## **Texas A&M Brings Seismography to Paint Rock**

by Callan Clark

On Saturday, March 27<sup>th</sup>, a group of students from the Texas A&M University Geophysics and Anthropology departments conducted two geophysical surveys at Paint Rock - magnetometer and seismic reading (seismic refraction). The group was led by Dr. Bruce Dickson, Texas A&M professor of anthropology and archeology. Seismic refraction is a geophysical principle using seismograph(s) and geophone(s), utilizing the refraction of seismic waves in order to characterize the subsurface geologic structure. Seismograph(s), or seismometers measure motions of the ground allowing to map the interior of the Earth. At Paint Rock they are mapping the depth of the sediment and bedrock. Geophone(s) records the energy waves reflected by the subsurface geology. Magnetometer is used in ground-based geophysical surveys to assist with detecting ferrous artifacts and archaeological sites.

Based on the CVAS report of 1800s camping sites at Paint Rock - previewed by Dr. Dickson - a proposal is being developed to return in August to conduct a thorough study of the area close to the military road crossing in front of the painted rocks. Dr. Dickson has invited CVAS to participate in that project and will be contacting C.A. Maedgen to keep him up-to-date on the proposal's progress.



Henry Dusek watches as Texas A&M students conduct magnetometer readings



C.A. watches on as Texas A&M student work seismography data collection

## **April Meeting Presentation—Searching for old Knickerbocker**

**22 Apr, 7 p.m.**

Tom Ashmore will give a presentation of his work with Judy Gill, CVAS member and Knickerbocker area land-owner, on identifying some of the structures of old Knickerbocker. Knickerbocker moved from its old location to the current location in 1893 due to lack of water. Since then the original town and building locations have been lost and the last of the old-timers have gone. Judy Gill believed her land contained some of the old buildings and during their research they found much more. Judy will attend and be displaying some of her artifacts.

# Romance of the Tin Can

Our recent CVAS outings have been dealing more with the 1800s period lately. Many of the artifacts we find are trash left behind and much of that turns out to be old, rusty tin cans. At first glance they seem to be of no archeological value. However, tin cans have a history, just like anything else, and can help guide you to timelines of the site and sometimes give further insights into activities.

With this in mind, I thought it might be interesting to give a little history of the tin can. The following article comes from the 1937 issue of *Modern Mechanix*.

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Back in the early eighteenth hundreds metal food containers were being developed—the ancestors of today's tin can. They were known as tin canisters. Copies of the yellowed order books of the salesmen show that they almost always abbreviated their notes, as "tin cans." or "cans." And thus the word got into the vernacular to stay.

An Englishman named Peter Durand obtained a patent in 1810 for a tin plate canister. It was cylindrical, like the one we see coloring our grocery and pantry shelves today, but was made entirely by hand. The raw material was lavishly tinned iron sheet. Using shears and a soldering iron, a tinsmith cut an oblong piece of tin, curved it and soldered its ends together to form the body. Then he cut a round piece for the bottom of the can, bending its edges over a circular mandrel, and soldered this on one end. After this was filled with fruit, fish, vegetable or meat, a similar round piece was soldered on the top. A small hole was left in the top so that air could escape as the food in the can expanded while the can boiled. With the can still hot, a drop of solder closed the hole. Sometimes a little globule of this solder dropped down inside the food, but in those days people didn't mind so much.

With Appert's method meat was successfully put up for sea voyages. The canning industry had been launched and the can making industry was on its way. The scene now changes to America. William Underwood built a flourishing canning business in New England, after landing at New Orleans and walking all the way to Boston. Thomas Kensett, another immigrant from England, applied for the first American patent on the tin can. Patent officials considered it a hoax and the application gathered dust in a pigeonhole for 10 years. When finally granted the patent was signed by President James Monroe.

Underwood started using tin instead of glass in 1839 but it was still some time before the tin can surpassed the glass container. During this period of development construction was crude and by hand. An expert tinker could make perhaps 60 cans a day. Jump across the years to the present. In the

time taken by that early tinker, whose speed was the wonder and envy of his fellows, to make his 60 cans, today's automatic machine produces 180,000.

The Civil War furnished the first boom for canned foods, and increased their production so much as to inevitably shoot can manufacture up into volume. About 5,000,000 cans were made at the beginning of the war. By 1870, the output had increased six fold.

And it was at this stage that several inventions of importance in canned foods processing acted to increase the volume of tin cans, even to a greater degree than did refinements in the art of can making itself, which were indeed negligible. Cannerymen were still processing (cooking) by boiling the cans for long periods. A Baltimore canner named Isaac Solomon applied an English discovery to the process. He added calcium chloride to the boiling water. Its temperature was increased to 240 degrees plus. Overnight, the time necessary for sterilization was reduced from five or six hours down to half an hour. The canner whose kettle capacity would produce 1,000 cans was able to turn out 10,000. This occurred on the threshold of the Civil War, in 1861.

That great disturbance gave many people their first taste of canned foods. Soldiers ate them in their bivouacs; sailors on their gunboats; the wounded in hospitals. Canning was no longer confined to the seaboard, to centers around Baltimore and in New England.

Improvements and inventions in the field of canning machinery also played their part in this expansion. It wasn't due alone to processing refinements and the sole outstanding can-making improvement of the time, namely, the invention of capping seals and a furnace with which a young boy could seal twice as many cans as could the master tinsmith with the old style of soldering iron. This inventor was another Maryland canner, Louis McMurray. He also was the first big corn canner, and a new product leaped into the market, one that was destined to become one of the "big three" packs of canning.

Better cans now were being made. Dies worked by foot power were introduced. A hole was cut in the top large enough to insert food into the can after the top had been soldered on, with a round disc to be soldered over the aperture, following processing. This was known as the "hole-in-top" can.

The next style was the "open-top." Tops and bottoms were crimped on without using solder.

**(continued on next page)**

## Palo Alto Battlefield National Historical Park in Texas Slowly Yielding its Secrets to NPS Archeologists, Volunteers

### OldWestNewWest.com

When U.S. and Mexican soldiers fought May 8, 1846, on the prairie land of Palo Alto at the southern tip of Texas, it was the match that ignited a two-year war between the two countries.

The battlefield itself faded into American history, but not the legends. In June 1992, a law was passed creating Palo Alto Battlefield National Historical Park, preserving the 3,400-acre scene of the fighting, ten miles north of the Rio Grande River in what is now Cameron County.

"The battlefield itself is relatively intact, but the site has been gone over ever since the battle," Rolando Garza, archeologist and chief of resource management at Palo Alto Battlefield National Historical Park, told OldWestNewWest.com Travel & History Magazine. "People would go out there and look for relics. We had one farmer tell us that he used to toss cannonballs into the (ravine) because he would hit them and they would damage his plow blade."

Palo Alto Battlefield National Historical Park has the unique distinction of being the only unit of the National Park Service with a primary focus on the U.S.-Mexican War. With the creation of the park, all the relic hunting stopped, and in its place the park service has started an archeological survey of portions of the core battlefield area.

Garza and his team developed a plan to create a grid of the battlefield, and between Feb. 20 and March 3, 2010 National Park Service archeologists from the Southeast Archeological Center (SEAC), NPS VIP archeologists, and 30 volunteers wielding metal detectors joined company to conduct this year's survey. It was the first of a three-year effort.

Working on a shoestring budget, Garza was able to get funding for the survey work from the through the NPS cultural resources preservation program.

Because Palo Alto Battlefield is a relatively new park-"We opened the visitor center in 2004," Garza said-a lot of effort is being made to develop trails for the public to follow which will tell the story of the fighting.

Volunteer metal detector experts from as far away as Georgia and Florida joined local volunteers with experience in Mexican war sites to systematically cover approximately 100 acres of the battlefield in an effort to define battle lines, troop movements and reconcile the physical evidence with historic accounts.

All items were mapped by GPS and carefully bagged for later

ours were contributed to the project, and close to 700 battle-related artifacts were recovered.

"One of the things we've been searching for is the site of the Mexican Army's first flanking maneuver," Garza said. "We found some evidence, but it's not overwhelming. We do feel we are getting closer, however. This year, among other artifacts, we found a US Army breastplate. Its small, round and has an eagle on it."

When the Mexican cavalry tried to do a flanking maneuver against the U.S. troops, they had a four-pound cannon with them. "We found a cannonball," he said.

On May 8, 2010, the park will observe the 164th anniversary of the battle, and will have a variety of living history and ranger programs to mark the occasion.

Additionally, on the first Saturday of each month, the park presents a living history program which includes demonstrations of weapons, tactics, and soldiers from the U.S.-Mexican War era, along with demonstrations of musket and artillery firing.

Palo Alto Battlefield National Historical Park is located at the northeast corner of the intersection of FM 1847 ( Paredes Line Road) and FM 511, approximately five miles north of downtown Brownsville, Texas.

Visit the Web site at [www.nps.gov/paal/](http://www.nps.gov/paal/) for more information about the park, and to learn more about the U.S. War with Mexico.

## Romance of the Tin Can

(continued from page 2)

Thick rubber gaskets made the can air-tight and the crimping of top and bottom was accomplished by folding them over these gaskets.

And then came the most forward step of all development and perfection of the "sanitary can"- a refinement of the "open-top" and the can you see all about you today. The sanitary can was unquestionably the chief factor in bringing tin can production to its present figure of astounding magnitude, and it was the last achievement of revolutionary aspect in the history of the tin can.

## Southwest Federation of Archaeological Societies Annual Meeting

The weekend of April 9th through the 11th the 46th annual Southwest Federation of Archaeological Societies convened their meeting in Hobbs, New Mexico. CVAS was present and represented by Bill Yeates and Claude Hudspeth who presented papers to the members. Also in attendance were Ginger Hudspeth, Tee Maedgen, and C.A. Maedgen. Numerous regional societies were present and were treated to approximately 10 papers during the day, one of which was presented by Evans Turpin of Iraan. At the evening dinner we experienced a brilliant presentation by Dr. Michael Collins on the Gault Site near Killeen. Dr. Collins spoke for more than an hour on Clovis man and the major finds being uncovered at the Gault site. On Sunday our CVAS group traveled to see the Merchant Site on the Pearson Ranch West of Eunice, New Mexico. Our tour guide was Calvin Smith of Hobbs who along with others gathered artifacts and recorded information on the Merchant Site back in the '60s. In closing I'll remind our members that CVAS will host the Southwest Federation meeting in April 2011. We are drawing up our plans now and welcome volunteers to assist with the 2011 Federation project. ....C.A. Maedgen



## For Chadbourne Living History, April 30th & May 1st

Fort Chadbourne Days Living History Event!  
 April 30th - School Day (Schools Only)  
 May 1st - General Public - 8:30 a.m. - 4:30 p.m.

FREE ADMISSION

*Donations gladly accepted!*

Located halfway between Abilene and San Angelo, TX - 12 miles north of Bronte on Hwy 277

See Fort Chadbourne Come Alive!



Antique tractors pulling hayrides to see the buffalo herd, Sutlers, Buffalo Hunters, Archeology Excavations, Native Americans, Artillery-Cavalry-Infantry Drills, Cowboys, Artifact & Sewing displays, Family life on the frontier, Antique gun displays, Black powder shooting, Food vendors, Live entertainment featuring the "Ice House Brass Band", Doug Baum and Camel Corps, and much more! Take a short drive out to the Fort and enjoy all the fun-filled educational activities for the entire family! For more information, call 325-743-2555.



CVAS will be conducting the final wrap-up of the hospital excavation work on Friday and Saturday of Fort Chadbourne Days. Larry reported in a previous meeting that he expected some of the work to consist of lab work, identifying and organizing the artifacts found during the March excavation. Remember, that Friday will be a school education day and we will need volunteers to help explain the various aspects of archeology and the hospital excavation in particular to the visiting classes.

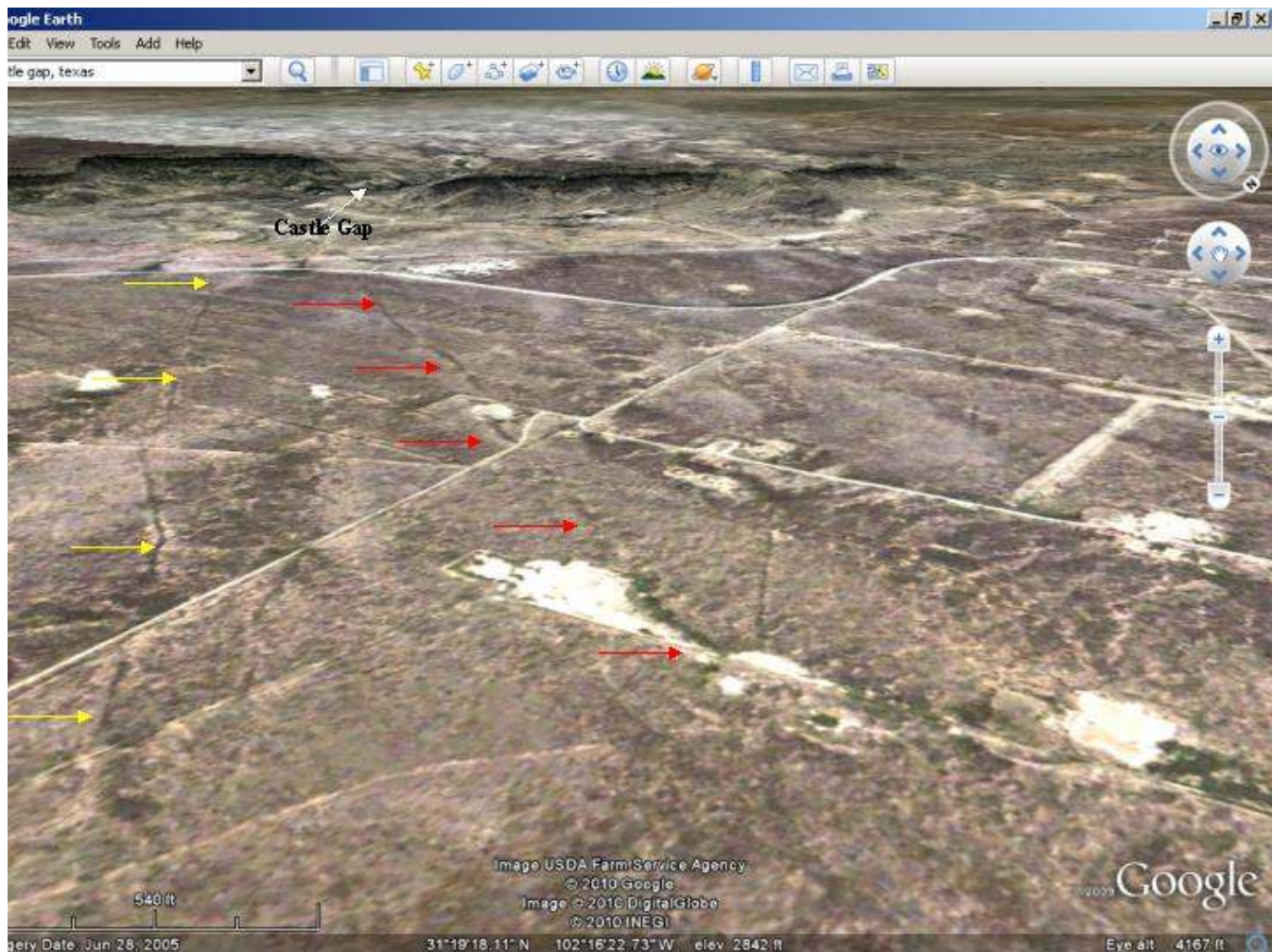
Tom Ashmore will have a limited number of CDs available at this month's meeting with the reports of our recent CVAS projects of Johnson's Station and Paint Rock for those members without Internet access.

# Castle Gap —Two Trails

By Tom Ashmore

When Charles Goodnight and Oliver Loving made their first cattle drive to New Mexico they weren't quite sure what they were getting themselves into. After 72 hours non-stop with no water they passed through Castle Gap, just 10 miles from the Pecos River. The cattle became crazed for water and when they passed through the gap and could smell the water they burst into a run. They ran so hard that the ones behind the leaders pushed them right across the river so they could not even stop to drink. After the herd crossed the river Goodnight turned them back to the water to get their fill. After a few days of rest they started what remained of the herd up the east side of the Pecos, heading northwest toward the southeastern boundary of New Mexico. Their herd of 2,000 was now down to about 1,500. Hundreds were lost on the three-day waterless trek and hundreds more died in quicksand along the river.

Thus began the many cattle drives across West Texas and on to New Mexico and Colorado. Goodnight followed the old Butterfield Trail, which was the Immigrant Road before that. I had traced the Butterfield Trail from Fort Chadbourne all the way to Head of the Concho Station via Google Earth. I wondered if any of the trail could be seen around Castle Gap. When I went looking for it the trail was quite obvious on the eastern side of the Gap. What struck me, though, when looking was that I could see another trail, not as clearly defined, but paralleling the wagon trail. It took me a few minutes to figure it out. This is the remains of the cattle trail. The trail on the left, with yellow arrows, is the wagon trail. The trail on the right, with red arrows, is the cattle trail. The cowboys knew that if they let the cattle actually follow the wagon trail they would destroy it as a road. So they kept their herds paralleling it.





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.

*CVAS is a non-profit organization whose purpose is to bring together people who have an interest in archeology and whose mission is to protect the historic and pre-historic resources of the region.*

*Meetings are held on the fourth Thursday of every month except July, November and December.*

### 2010 CVAS 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: Cynthia Purcell, 1532 Loop Dr, San Angelo, TX 76904

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