

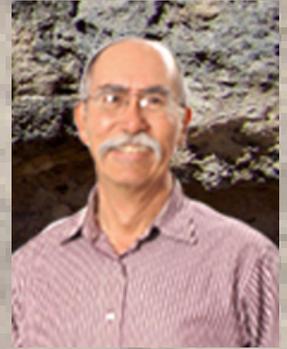
PASTIMES

Newsletter of the Panhandle Archeological Society

April Vol. 31, No. 4

The Panhandle Archeological Society will hold its next meeting on Wednesday April 20, 2011, at 7:00pm, at the Wildcat Bluff Nature Center Science Building, 2301 N. Soncy Road, in Amarillo, Texas. Our program will be presented by Joseph Cepeda.

Joseph Cepeda received his Bachelor of Science and Ph.D. in Geology from the University of Texas at Austin. In the time between those two degrees he earned a Master of Science in Geology from the New Mexico Institute of Mining and Technology. He has been teaching geology at West Texas A&M University since 1977. His research interests early in his tenure at WTAMU were in field mapping and igneous and metamorphic rocks. More recently, his research interests have included the erosional and depositional histories of the Dry Cimarron River in New Mexico and Oklahoma and the Playa lakes of the Texas Panhandle.



Dr Joseph Cepeda

Rocks and Geologic History of the Texas Panhandle and Surrounding Area

Joseph Cepeda

The present-day landscape of the Texas Panhandle is the result of a long period of geologic history. Although the oldest rocks in the Panhandle area are more than 600 million years old, rocks exposed at the surface are no more than about 250 million years old (late Permian). The most extensive rock formations widely exposed at the surface date from the following geologic periods: Permian, Triassic, Tertiary, and Quaternary. These rocks provide four windows into the geologic history of the last 250 million years. Additional clues to the geologic history of our area are provided by rocks that are found outside the Panhandle.

Taken together the evidence in the rocks reveals that the area has been inundated by marine waters during at least portions of the Permian and Cretaceous periods. In the time period between marine transgressions, this area was part of a great river system, the details of which are just now beginning to be revealed. Some of the data suggest that the Panhandle area was near the headwaters of this major Triassic and Jurassic river system—other data suggest the river system originated in the American Midwest. All the evidence indicates that the river flowed from east to west and eventually into the ocean that is today called the Pacific.

Beginning about 15 million years ago during the mid- to late-Tertiary, the front ranges of the Rocky Mountains were uplifted and the response was a vast blanket of erosional debris that was spread across the Texas Panhandle. In places this debris (sand, silt, and gravel) accumulated to a thickness of more than 500 feet. About 100 years ago geologists formally designated this blanket of erosional debris as the Ogallala Formation. Above the Ogallala Formation are numerous deposits of Quaternary age - lake beds, sand dunes, and alluvium as well as a near continuous deposit of windblown silt that has now been designated as the Blackwater Draw Formation.

Geologists have devised a number of chemical, physical, and conceptual tools to interpret the cryptic clues in the geologic record. A number of these tools (with examples) as to how they can be applied to archeological investigations will also be discussed.

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President:
Paul Katz

Vice-President:
Jeff Indeck

Secretary:
Vacant

Treasurer:
Lisa Jackson

Publications:
Rolla Shaller

Newsletter Editor:
Scott Brosowski

Panhandle Archeological Society

Minutes of the March 16, 2011 Meeting

President Paul Katz called the meeting to order at 7:04 p.m. at the Wildcat Bluff Nature Center. 16 members and one guest were in attendance. The guest was Rozanna Pfeiffer, Chief of Interpretation at Lake Meredith and Alibates.

The next meeting of the PAS will be held on Wednesday, April 20 at the Wildcat Bluff Nature Center, beginning at 7:00 p.m. Joe Cepeda will speak on the geology of the Texas Panhandle. On May 18, Gerry Schultz will speak on the paleontology of the Texas Panhandle.

Jeff introduced the evening speaker, Dr. Paul Katz. He spoke about Irish archaeology and archaeoastronomy.

The business meeting began at 8:05. The minutes of the February 16, 2010 meeting were approved unanimously; motion by Scott, second by Jeff.

Lisa gave the Treasurer's report. The current operating balance is \$1,868.20.

Rolla gave the Publication Committee report. The current checking account balance is \$2,620.34, plus \$5,000 in a CD. Jeff has scanned the two Pollyanna Hughes manuscripts for Scott and Joe D. to evaluate for possible publication.

There was a discussion about the upcoming Science Day at Lamar Elementary School in Amarillo, scheduled for Friday, April 15. Opinions were expressed as to whether the activities should be a series of demonstrations (e.g., tool making, corn grinding, pottery making) or just one activity that the students would participate in and then be able to take something away with them. The consensus was to focus on artistic expressions, such as rock art, beadwork, and ledger drawing. Both prehistoric and historic examples of techniques and designs would be shown to the students by a PowerPoint presentation for a few minutes, and then they would be given a blank paper plate and a marker so that they could make their own drawing or designs based on what they had just seen. PAS members would be in the classroom to assist and encourage. Anyone wishing to participate between 8:30 and 2:00 should contact Paul at: Katzes-PRIAM@msn.com He will make up a schedule and coordinate the PAS participation.

Our website is growing, largely due to submissions from Courson Archaeological Research. To access it, it is necessary to use the complete URL:

<http://www.txpanhandlearchaeology.org> It is recommended that this be bookmarked.

Rolla reported on the status of the 2011 Southwestern Federation of Archaeological Societies annual symposium, hosted by the Concho Valley Archaeological Society on Saturday, April 9 at Fort Concho. Joe. D. represents the PAS with his paper. At least four other PAS members are planning to attend. There is no registration fee this year, and no evening banquet. The featured speaker, Dr. Bruce Dickson from TAMU, will speak in the afternoon. There will be Sunday field trips.

Scott provided an update on the 2011 CAR Field School, which will be held from May 23 - June 10. The first two weeks will investigate prehistoric sites, including Eastview, Spider Peak, and Chill Hill. The third week will be devoted to metal detecting at historic sites. Registration is free to PAS members, and a catered meal plan is available. The enrollment will be limited to 50, and it is filling rapidly. Many of the enrollees are students, who will be able to earn college credit.

Scott also updated the Stone Age Fair at the museum in Perryton on Saturday, April 23rd from 10:00 - 5:00. There is no charge for table space for those wishing to display collections. Security will be provided.

The meeting adjourned at 8:35 p.m.

"A Little Daub'll Do Ya," But More Is Better

Daub: A material used around the world in the construction of buildings for at least 6000 years. Usually the mixture consists of locally acquired clays or other sediments, mixed with water...yeah...mud. The daub is applied by hand to some kind of frame or latticework and allowed to dry, forming a plaster that aids in repelling the elements. Some cultures used grass, straw or other fibrous materials to improve cohesion. The material may be used on floors, walls, and roofing or around hearths.

When a house burns the varying temperatures involved may alter the daub by a "firing" process that mimics that of making pottery. The varying proportions of fuel and oxygen affect the daub through oxidation or reduction and produces "burned daub." Through this process some of the daub may really become "pottery-like," and will be impervious to water, while other daub will not. The structure will now be exposed to the elements and site formation processes that will partially deteriorate some of the daub and cover and protect other sections.

What all this means to archaeology is what the daub can tell us about the structure. The layers of the different daub types may serve to protect the underlying surfaces, structural elements, artifacts and ecofacts. The pieces which were "fired" can act as negative molds and reveal details about structural materials such as size, orientation, species and possibly even seasonality. The impressions made by sticks, reeds, grass or even hand prints may be preserved. Other impressions may contain evidence of lashings that reveal more structural information. The daub itself may have inclusions or voids that tell if the material was procured locally or brought in as an "exotic" for specific reasons. Coloration of the daub can tell of the different temperatures involved in the destruction of the structure and provide some elements of event sequence. The amount of daub and its melted residue may be a clue to the size and arrangement of the structure and the labor involved in its construction.

In time the daub may find its way to the surface to alert the archaeologist to the presence of the structure. The structure then tells us about those who lived there. Which is the ultimate goal of playing in the mud in the first place, isn't it?

Joe D. Rogers



Common Artifacts of the Southern High Plains: Quartzite Boiling Stones

One of the more typical artifacts recovered at prehistoric sites of the Southern High Plains are quartzite boiling stones. These artifacts are most commonly recovered at Archaic and Ceramic period residential sites and hunting camps of the region. Boiling stones were typically about fist-sized and had water worn surfaces. Suitable pebbles were often procured from the Ogallala Formation and other secondary gravel sources. With repeated heating and cooling events the pebbles would fracture and were discarded. Exterior colors of these pebbles are often gray, pinkish red or maroon and often retain some discoloration from heating. Fractured interiors display quartz crystals and mica flecks that give them a "sparkly" appearance. Boiling stones are easily distinguished from hammerstones used for flintknapping or fracturing bison bone by the absence of battering along their edges.

The process of stone boiling involved directly heating fist-sized stones in an open fire until they were thoroughly heated, usually about 30 to 45 minutes. These stones were then transferred to a vessel containing water until the boiling point was reached. Additional stones were added to maintain a boil. Vessels used included stomach paunches suspended from a tripod or quadpod and shallow, basin shaped pits dug into the ground and lined with a green bison hide. A variety of foods, including tongue, heart, kidneys, soups, and many others, were prepared using this method. Bone grease, a key ingredient in making pemmican, was also obtained by boiling bison bone fragments in water.

Additional sources containing information on early cooking techniques and recipes used by inhabitants of the Great Plains include "Buffalo Bird Woman's Garden" by Gilbert L. Wilson, "The Indian Tipi: Its History, Construction, and Use" by Reginald and Gladys Laubin, and "Feasting and Fasting with Lewis & Clark: A Food and Social History of the Early 1800's" by Leandra Zim Holland.

Scott D. Brosowske



PAS Member Highlight

1. **How long have you been a member of PAS?** 6 Months

2. **What first sparked your interest in archaeology?** Finding stone artifacts at oilfield locations around Midland, Texas when I was a kid. A later trip to Mesa Verde sealed the deal.

3. **What is your best find or most interesting moment with PAS or with archaeology in general?** Finding a broken knife blade and two coscojos near Wolf Creek. I'm still easily amused.

4. **If you could have any choice, what would be your dream find, site, or location?** Hard to say, everything is still pretty exciting. It's highly unlikely, but it would be really cool if I could find my great-grand dad's dugout somewhere in Beaver County.



Stacy L. Brown

5. **What would be your vision for PAS in the next ten years?** I would like to see PAS return to its roots and become a vibrant, outgoing organization with a vast array of year round educational programs and activities for all ages, families, students, etc.

6. **What is your favorite archaeological site or topic?** Any pre-history or history of the Texas Panhandle.

7. **Tell us a little bit about yourself:** I was born in Perryton, raised in Midland, recently retired from the United States Coast Guard, and moved back to the family farm in Perryton.

PAS Website

Type in the complete URL as shown

<http://www.txpanhandlearchaeology.org>

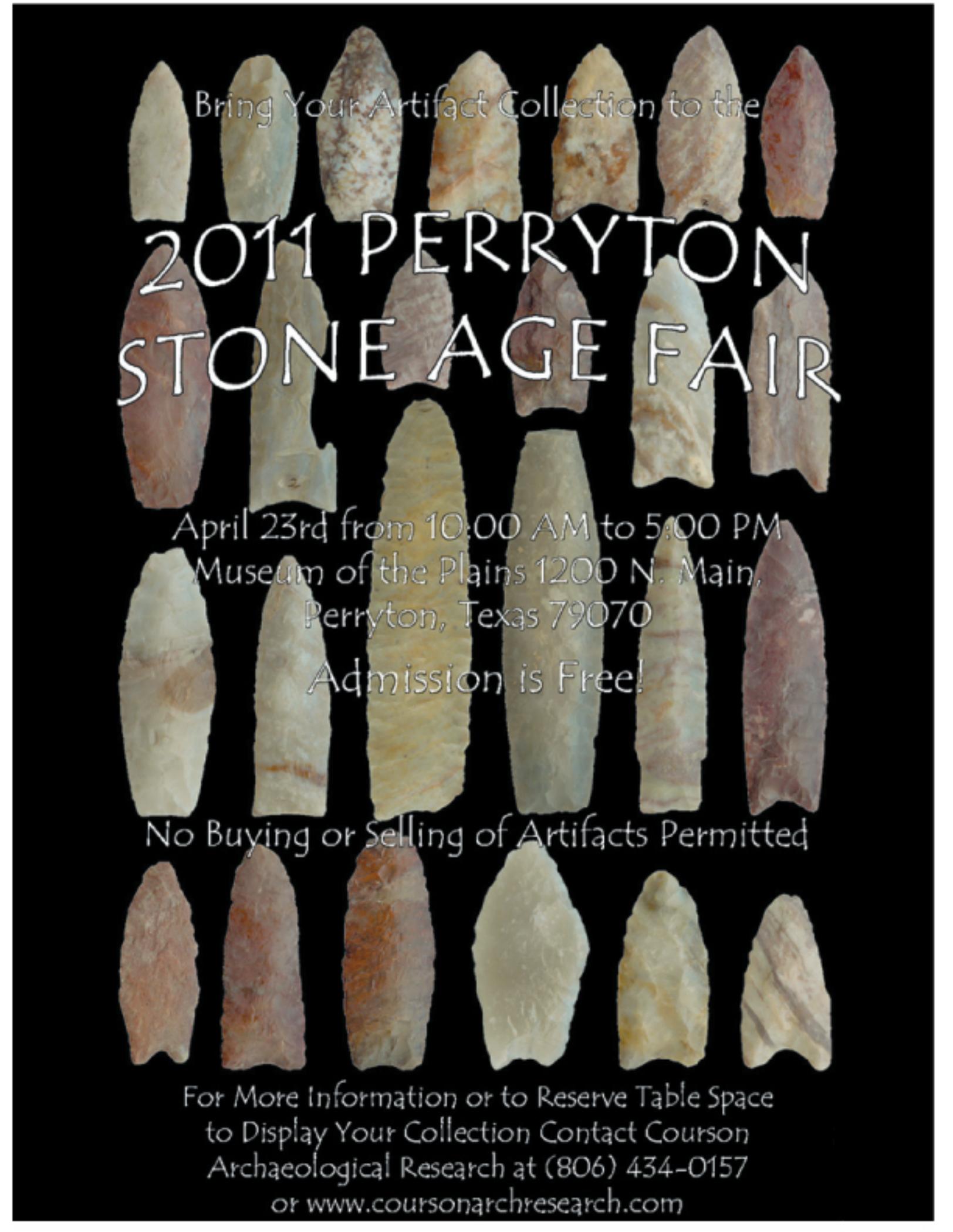
CAR 2011 Field School

Courson Archaeological Research will be conducting its 2011 Field School from May 23rd to June 10th. The first two weeks will be field excavations at two Antelope Creek phase sites and a defensive late Archaic encampment near the Canadian River. The third week will consist of metal detecting historic period sites. PAS members may attend at no cost, other than catered meals if desired. For more information, check our website:

www.coursonarchresearch.com

Upcoming Events, and Announcements

- **Southwest Federation Of Archaeological Societies**, April 9th, 2011, San Angelo, Tx.
- **Lamar Elementary Science Day**, Friday 15, 2011 8:30 am to 2:00 pm Amarillo, TX.
- **Perryton Stone Age Fair**. Museum of the Plains, Perryton, Texas. April 23, 2011 10:00 am - 5:00 pm



Bring Your Artifact Collection to the

2011 PERRYTON STONE AGE FAIR

April 23rd from 10:00 AM to 5:00 PM

Museum of the Plains 1200 N. Main,
Perryton, Texas 79070

Admission is Free!

No Buying or Selling of Artifacts Permitted

For More Information or to Reserve Table Space
to Display Your Collection Contact Courson
Archaeological Research at (806) 434-0157
or www.coursonarchresearch.com