

# HILL COUNTRY ARCHEOLOGICAL ASSOCIATION

Preserving the Past

[www.HCArcheology.org](http://www.HCArcheology.org)



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## GENERAL MEETING

*Saturday*

**September 19, 2015**

**12:30 PM at**

**Riverside Nature Center**

## NEWS FROM THE FIELD

Check out our website for the latest information on the **Kemosabe Project for August 2015. Great photos of field crew, artifacts and lab work crews.** <http://hcarcheology.org/>



## Recreated Pit Roast Offers a Taste of Stone Age Life

by Megan Gannon, News Editor Live Science

Before there was pottery in Cyprus, there was barbecue. And in the spirit of the Stone Age, archaeologists on the Mediterranean island recreated a prehistoric pit feast this summer —

feeding 200 people with pig and goat, slow-roasted underground — to test the cooking methods of Neolithic chefs.

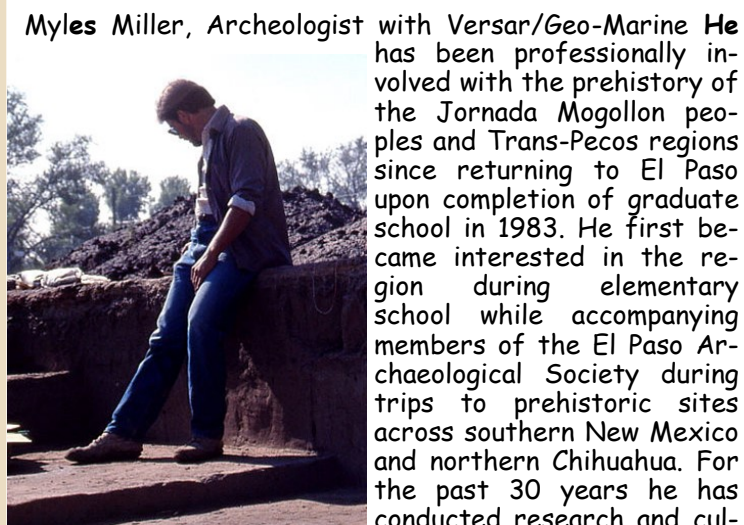
A 9,000-year-old barbecue pit was recently discovered at Prastio Mesorotsos, a site in the Diarizos Valley outside of Paphos, which has been almost continuously occupied from the Neolithic era to the present. It took three years of excavations before archaeologists from the University of Edinburgh got to the bottom of the stone-lined, ash-covered pit, and only last summer could they say with some certainty that they were looking at an ancient oven. But the pit was so big — about 8 feet (2.5 meters) across and 3 feet (1 meter) deep — that Andrew McCarthy, director of the expedition, wasn't sure if cooking in it would actually work.

"I think it's probably the closest to the theoretical maximum that a pit oven of this type could be," McCarthy told Live Science, referring to the fact that too big of a space would've taken too much energy to keep hot enough. "It was kind of at the limits of what's possible. After we reported on what was found, we decided that the best thing to do would be to test our hypothesis in a number of ways."

They scoured local riverbeds for big igneous stones that would retain and radiate heat, and they hauled their choice rocks uphill in sacks or with a yoke made from a stick and baskets — a time-consuming and painstaking task. "We pretty much came to the conclusion that this would have been a slow process of collecting stones — maybe even over the course of years," McCarthy said.

*Continued on page 5*

### Speaker for September 19, 2015 Meeting



Myles Miller, Archeologist with Versar/Geo-Marine He has been professionally involved with the prehistory of the Jornada Mogollon peoples and Trans-Pecos regions since returning to El Paso upon completion of graduate school in 1983. He first became interested in the region during elementary school while accompanying members of the El Paso Archaeological Society during trips to prehistoric sites across southern New Mexico and northern Chihuahua. For the past 30 years he has conducted research and cul-

tural resources management projects throughout the region and has participated in numerous excavations of prehistoric and historic Native American settlements in west Texas, southern New Mexico, and southeastern Arizona. He presently serves as a Principal Investigator with Versar (formerly Geo-Marine, Inc.) and supervises archeological consulting work at Fort Bliss. He will be speaking on:

#### Recent Discoveries and Insights into Prehistoric Ritual and Belief in the Jornada Region of Trans-Pecos Texas

**Abstract:** During the past five years, archaeological and iconographic studies have revealed a rich record of prehistoric ritual and belief in the Jornada region of west Texas and southern New Mexico. Evidence of ritual behavior has been found in pueblo villages, in icons painted on rock art panels and ceramic vessels, in the construction of shrines, and even burned rock middens. Studies of Jornada-style rock art have provided insights into complex belief systems involving animated, sacred landscapes. Analysis of crystals, minerals, fossils, and pigments in ritual deposits in pueblo rooms has identified links with mountains and caves. Together, these studies have explored Jornada cosmology as revealed through ritual landscapes of the region, including natural and cultural features as shrines, caves, and rockshelters. Caves and mountains have several interrelated metaphorical and symbolic meanings, including fertility, access to the underworld, and places of emergence of spirits and water, lighting, clouds, and rain. ( See Texas Beyond Historic website for more information on the Jornada Mogollon culture <http://www.texasbeyondhistory.net/>

### ARCHAEOLOGICAL INVESTIGATIONS



When you put it into  
context, it's sedimentary  
my dear Watson...

## Celebrate Archeology Month in Texas with HCAA! Saturday October 17



Morning and afternoon speakers.  
Details to follow regarding  
presentations and events.

**Texas Archeological Society  
Events and Trainings**  
TAS Annual Meeting is 23-25 of October.

### Social Hour Goodies

Members are encouraged to bring cookies, snacks, cake, (even healthy food if you must) to share with the other members and guests at the beginning of each meeting. We need volunteers to take home ice chest and supplies after each meeting as we can not leave them at RNC. The volunteer will then bring the ice chest and supply boxes, long with ice and new assortment of canned drinks and bottled water to the next meeting. Looking to see you there!

Editor's note: Earth ovens have been used by primitive man for thousands of years. We are familiar with those we find all over the Texas Hill Country and Southwestern United States. When I was doing field work in Ireland, I saw evidence of hot rock cooking there that wasn't that different from what we find here. The earth oven described by this author is quite different from our hot rock cooking.

## Building Earth Ovens in Ancient Israel

*Food in Ancient Judah: Domestic Cooking in the Time of the Hebrew Bible*

There are a few different types of traditional ovens that are still used today in the Middle East. One of the most common oven types is the *tannur*. A modern *tannur* is a beehive-shaped clay oven, usually close to one meter high, and will typically have two openings: one at the bottom and one at the top. Ethno-archaeological studies show that after a fire fueled by kindling and animal dung is built on the floor of the *tannur*, the ashes are raked out of the bottom opening, before using the top opening to slap the dough onto the interior walls or even the floor to bake. Platters and cooking pots could also be placed on top of the upper opening and used for baking or cooking, respectively. Although most archaeological reports refer to ovens as a *tabun*, they are more like the *tannur* type of oven. The term *tannur* is found in the Hebrew Bible fifteen times, seven of which refer to an oven used to bake bread (Exodus 8:3; Leviticus 2:4, 7:9; 11:35; 26:26; Hosea 7:4, 6–7).

Our experiment began one morning as we excavated by collecting five buckets of sifted dirt (though only half of the last one was used). It is important that the soil contains clay, and the soil at Tell Halif was perfectly acceptable for this experiment. The next day, Tim went down to the kibbutz stables and collected one bucket of straw. We gathered the next afternoon behind the excavation lab and cleared a place to begin our construction of a *tannur*. The ground where the oven was placed was moistened before one bucket of dirt was emptied onto it and the straw mixed in. Water was emptied into the middle of the dirt and straw and was used to knead the mixture together. More water and dirt was added and kneaded until the clay mixture had a medium-stiff consistency. Portions of the clay mixture were laid out in a circle and shaped in such a way as to attach it to the ground. The lower rung was extended to a height of approximately 4 inches, slightly inclining inward, and was then smoothed over. Once the bottom rung was complete, the process was repeated over the following days as the oven slowly dried. Each successive layer, slightly inclining, was added, until the *tannur* was approximately 12.5–13 inches high with a 19.5 inch-wide mouth. To complete the hardening process, a fire was lit using straw and pine cones inside and immediately surrounding the *tannur*'s walls on the outside. A few days later, dough was made using flour, water, yeast and a tiny bit of sugar (honey would have been more authentic, but none could be found. Salt could not be found, as well). After the dough had risen and was kneaded, it was divided into small balls and left to rise further. A fire was lit inside the *tannur* using straw and pine cones. Once the *tannur* was hot enough, the balls of dough were flattened into small loaves and were slapped onto the inside walls. The loaves only needed a few minutes to bake, after which the bread was removed carefully and consumed by the group.



Small loaves of pita bread baking on the side of the oven wall.



**Cynthia Shafer-Elliott, Ph.D.**, is Associate Professor of Hebrew Bible at William Jessup University in Rocklin, California. Dr. Shafer-Elliott has been part of several archaeological excavations in Israel and is currently serving on the staff of the Tell Halif excavations. Her book *Food in Ancient Judah: Domestic Cooking in the Time of the Hebrew Bible* is published through Routledge.

## Daily Essentials of an Archaeologist's Toolkit By Jocelyn Burney



1. Writing utensils (four-color pens, pencils, permanent markers, ruler)
2. Field notebook for recording elevations, site plans and notes
3. Water—an essential for every archaeologist!
4. Gloves
5. Scaled ruler for creating scaled drawings of buildings and features
6. Margin trowel
7. File for sharpening trowel
8. Handpick
9. Leaf trowel
10. Regular trowel (Marshalltown, Philadelphia style)
11. Paintbrush for dusting delicate artifacts
12. Neon string for marking baulks
13. Small tape measure
14. Large tape measure
15. Shaving brush for dusting
16. Scissors
17. Knife
18. Dental pick for articulating delicate items
19. Bamboo picks

*Continued from page 1*

Days before the feast, the team let a fire burn in the stone-lined pit for 24 hours so that the ground, possibly still cold and damp from a wet winter, wouldn't suck the heat out of their oven. The day before the party, it was time to light the charcoals, and cover them with another layer of stones so the meat wouldn't directly touch the heat source. When the oven was ready, the team tossed on the pig, which had been stuffed with bulgur wheat, wild fennel stems, anise and bay leaves before getting sewn up tightly with hemp twine and packed into a blanket. The goat meat had been chopped up and divided into two parcels, spiced with herbs like wild oregano.

The team packed more herbs on top of the meat, before sealing the oven with stone sand and a clay-and-mud mixture. Then they lit another fire on top of the closed pit so that heat wouldn't escape overnight.

Not until the party time were they able to excavate the meat and perform a taste test. "I think it was a success," said McCarthy, adding that he was nervous about how the meat would turn out. "It really was delicious. You could taste the lemon wood and the carob and the bay leaf. It infused into the meat."

Not only was the team able to feed nearly 200 guests who were happy to take part in the experiment, but they also ate leftovers for a week. Leftovers may have sustained prehistoric partygoers for even longer.

YES, THEY STILL COOK WITH HOT ROCKS . HERE IS A MODERN RECIPT FOR

### **HOT ROCKS" CHICKEN**

**3 rocks (water-smoothed from seashore or creek bed), 1 to fit in chicken cavity and 2 smaller ones to fit under folded-back wings**

**3 lb. charcoal (lava rocks in propane grill okay, too)**

**1/2 c. butter**

**2 or 3 drops Liquid Smoke (optional)**

**Salt, pepper, and other seasonings to taste**

**2 - 3 lb. chicken**

**HEAVY DUTY aluminum foil**

**Several newspapers**

**Cardboard box**

**Make sure you have dense rocks; as porous rocks and water could make an explosive situation!**

**Clean rocks and dry THOROUGHLY. Heat rocks directly on coals until very hot. Coat rinsed and dried chicken with butter mixed with Liquid Smoke. Selected seasonings will now adhere nicely; coat well. Place on a large piece of foil. CAREFULLY handle hot rocks with tongs and oven mitts. Wrap in separate pieces of foil and immediately place large one in chicken cavity, the smaller ones under each wing. Quickly wrap chicken in foil, then in several layers of newspaper - the more the better. Place in the cardboard box or an insulated carton designed to keep hot foods hot. Should be done in about 3 hours. Good idea if you fire up the grill for lunch. Prepare the chicken at lunchtime and it's ready for dinner. Serve with salad and bread. Unusual, but likely to get the creative juices flowing for other adaptations.**

## Remember your HCAA Membership dues for 2016

### Membership In HCAA brings opportunities to hear great speakers and training opportunities

The Hill Country Archeological Association is classified as a Section 501 (c) (3) organization under the Internal Revenue Code and all donations, including membership dues, are tax deductible.

#### Dues Schedule

- ☐ Student (full time only) \$10
- ☐ Individual, Institutions and Societies \$25
- ☐ Family \$30
- ☐ Contributing \$50
- ☐ Supporting \$100
- ☐ Life \$250
- ☐ Patron \$500

#### Business Class Membership:

- ☐ Business \$250
- ☐ Corporate \$500

Make Checks payable to Hill Country Archeological Association and mail to:

HCAA, P.O. Box 290393  
Kerrville, TX 78029-0393

ADDITIONAL REGISTRATION FORMS CAN BE FOUND AT HCAA  
WEBSITE

[www.hcarcheology.org](http://www.hcarcheology.org)

If you are renewing please make note of any changes to your phone, address or email.

*Keep up to date with HCAA activities  
Check our website regularly  
[hcarcheology.org](http://hcarcheology.org)*

*Remember you can order anything from Amazon.com  
through the HCAA website and our club will benefit.*

# HILL COUNTRY ARCHEOLOGICAL ASSOCIATION

**HCAA BOARD  
WILL MEET SATURDAY  
MORNING  
SEPTEMBER 19, 2015  
AT 10:00 AM  
RIVERSIDE NATURE  
CENTER.  
MEMBERS ARE  
WELCOME TO  
ATTEND**

HCAA  
PO Box 290393  
KERRVILLE, TX  
78029-0393

## A REMINDER

The HCAA is thankful to the many land owners who graciously allow us to survey their property for archeological sites. We should constantly remind ourselves that:

All artifacts found on their property belong to them. HCAA members keep no artifacts.

If an archeological site is identified on their property, the location of the ranch should remain confidential.

We visit a property only with owner's permission.

We do not hold a land-owner liable for injuries which occur while on their property.

We encourage, and enjoy, the participation of the landowner in our activities.

The HCAA offers its archeological activities as a community service.

HCAA members will not intentionally violate the terms and conditions of any Federal or Texas Antiquities Statutes, as same now exist, or shall hereafter be amended or enacted, or engage in the practice of buying or selling of artifacts for commercial purposes or engage in the willful destruction or distortion of archeological data or disregard proper archeological field techniques.

PLACE  
POSTAGE  
HERE

ADDRESS CORRECTION REQUESTED