



Thursday, June 24th, 2021, at 6:30 p.m.

“Report on TAS Field School plus Announcing Updates to HAS Constitution”

As most of you know, the Houston Archeological Society does not normally hold a June meeting nor do we normally publish a newsletter in June due to many of our members attending the Texas Archeological Field School. However, obviously we have a newsletter this month because you are reading it! We will also have a June meeting for members only on Thursday, June 24th, starting at 6:30 p.m. to discuss some edits to the HAS Constitution followed by reports from members who attended the Texas Archeological Society Field School. HAS members will receive a Zoom link to this meeting shortly.

Members will receive a communication from HAS secretary, Beth Kennedy, highlighting proposed changes to the Constitution. At the June 24th meeting Beth will read the proposed changes to the membership. If you have any questions, email the secretary at secretary@txhas.org. The Constitution committee will report on the changes at the July meeting and then a ballot will be held via email and results will be announced at the August meeting.

The Texas Archeological Society Field School will be held in Kerrville, Texas, this year and, as you heard from Steve Stoutamire at our May presentation the excavations will center on a large prehistoric site on the banks of the Guadalupe River. Several HAS members are attending field school this year and will report on their activities at the June 24th meeting including the prehistoric site, the historic site, the youth group and lab. Heads up!!!! HAS is collaborating with the Hill Country Archeological Association (hosts for Field School this year) to put on a massive book sale and raffle at Field School Friday – Tuesday night. Look for us in the Pavilion before, during and after dinner and following the evening’s presentation. All proceeds from this book sale and raffle will go to TAS. One of the special items to be auctioned at TAS Field School is a fabulous draw trowel handmade by avocational archeologist Bill Birmingham from Victoria. Bill is also a Texas Historical Commission Archeological Steward and has been generously offering these trowels at TAS Annual meetings for several years. You’ve probably seen me and others using one of his trowels in the field! If you’re coming to field school, this is your chance to own one.

See you at the June 24th HAS meeting! Please email me at president@txhas.org if you have questions.



TAS Field School 2021 will be held in Kerrville, Texas June 12 – 19. There’s still time to sign up!



Bill Birmingham draw trowel will be one of the auction items at the TAS Field School.



President's Message – Linda Gorski

HAS members –

First of all, I want to thank all HAS members and friends for attending our monthly meetings via Zoom for the past year. When we had to abandon our in-person meetings at Trini Mendenhall Community Center due to the Covid pandemic we thought for sure we would lose members and that our attendance at meetings would go down. **NOT SO!!!** We had had over 50 HAS members attending the May 20th program on our Zoom link and over 30 people have already watched the program on YouTube!!! In case you missed our latest meeting, or any of our other recent meetings since we started recording them on YouTube, here's the link. Enjoy!!!
<https://www.youtube.com/channel/UCn5-5YXMO2CwgO811GMFQow>

Also, according to the latest report from our membership chairman, Bob Sewell, we have over 220 members for 2021 – close to our record! And YOU ALL have made that happen. Thanks so much for continuing to support us.

As you read on Page 1 of this newsletter, although we normally do not meet in June due to our members attending field school, we will have a Member's Only meeting this month on June 24th at 6:30 p.m. (a week later than our normal third Thursday) to discuss important society business. One of the things we will likely consider at this meeting is when we will go back to having meetings in person. I know many folks are anxious to see everyone and renew acquaintances on the third Thursday of every month. However, many of you – especially our out-of-town members and seniors who have difficulty driving at night – want us to continue presenting the meetings via Zoom and Livestream YouTube. In a perfect world, and with a little technology (thanks to our wonderful tech guru Dr. Liz Coon-Nguyen with help from Bob Sewell) we can actually do both. However, I'd like to hear from anyone who is willing to share their thoughts on attending in person meetings or attending via Zoom. This is not a poll but a chance for members to express their opinions on this subject. One thing to consider is that if we do offer our meetings both in person and via Zoom, we will likely have to give up meeting in the large auditorium at Trini Mendenhall and move to one of the smaller rooms. So please weigh in by contacting me at president@txhas.org.

Finally, if you have not received your most recent copies of HAS Journal 142 (10 papers on various aspects of Texas archeology), Journal 143 (dedicated exclusively to archeology in the Western United States) or Report 36 (The Lone Oak Site: 41CD168, A 12,000 Year Occupation in Northern Colorado County, Texas), please email me at president@txhas.org. I have several copies of each of these publications left to distribute and they will give you something good to read during these days and days (and days) of rain 😊

Thanks again for your support of the Houston Archeological Society!
Linda Gorski, President

Houston Archeological Society

Monthly Meeting

May 20, 2021

WELCOME to our HAS Monthly Meeting, held via ZOOM! We are so glad everyone can join us tonight. (**Linda Gorski, President**).

Treasurer's Report (Bob Sewell): Bob reported amounts in the HAS checking and savings accounts. If any member is interested in more information about HAS finances, please see Bob.

Membership (Bob Sewell): Our membership currently stands at 222! In 2019, membership rose to 250; in 2020, it dropped to 195, so we are doing very well with our total number for this year!

Website and Newsletter (Bob Sewell): Our website is going great with no outages. Additionally, our newsletter has received many positive comments. Thanks to those who have submitted articles of such high quality! In years past, we did not publish a newsletter in June, although we did last year (2020). If we receive enough articles, we will probably do another one this June. Linda also thanked Bob for making the newsletter such a success!

New Business

Publications (Dub Crook): Journal Issue #143 (Western U.S. Archeology) was published in January, and HAS Report #36 (Lone Oak Site Phases I and II) came out in April. Please email Linda if you have not received your copies, and they will be mailed to you.

Congratulations (Linda Gorski): Congratulations to Karla Gomez, HAS member, who just received her degree in anthropology and geology from the University of Houston. Karla has been awarded an HAS scholarship to attend the 2021 TAS Field School! Way to go, Karla!

Special Monthly Meeting Announcement (Linda Gorski): On June 24, HAS will hold an urgent members-only meeting to discuss changes to the HAS Constitution regarding how we will conduct business electronically (i.e., via Zoom, etc.). Prior to the meeting, members will receive an email from Secretary Beth Kennedy containing the proposed changes. Additionally, we will discuss a time for resuming in-person meetings. Our discussions will be followed by talks from this year's TAS Field School attendees about their experiences at the Kerrville site.

Tonight's Program: Steve Stoutamire of the Hill Country Archeological Association highlighted an exciting multicomponent prehistoric site in Kerr County in his talk entitled "A Newly Discovered Paleo Indian and Multicomponent Site in Kerr County, Texas." Steve also shared information about the upcoming Texas Archeological Society Field School scheduled for June 12 - 19 at a similar neighboring prehistoric site in Kerrville. More information about this program can be found on page 1 of our May newsletter at <https://www.txhas.org/PDF/>

June Meeting: Special Members Only Meeting to be held June 24th (see above).

Beth Kennedy, Secretary

Houston Archeological Society Awards \$500 scholarship to Karla Gomez to Attend 2021 TAS Field School

HAS Member Karla Gomez, a graduating senior at the University of Houston, has received a \$500 scholarship from the Houston Archeological Society to attend the 2021 TAS Field School in Kerrville, Texas. Karla graduated last week with a B.S. in Anthropology and a minor in geology. However, her true passion is Mayan archeology which she hopes to pursue in the future.

Karla joined HAS earlier this year to gain practical experience in archeological field methods. As with most graduating seniors this year, many field schools in their Junior and Senior years were cancelled due to Covid 19. Karla sought this scholarship to attend field school in Kerrville to gain experience and further her education and experience in archeology to eventually become a professional archeologist.

Karla will be writing an article for next month's Profile about her experiences at the TAS Field School so keep an eye out for it!



Karla Gomez graduating from the University of Houston in May with degrees in anthropology and geology.



Karla Gomez putting her archeological skills to work with the Houston Archeological Society.

Notes on Munitions

The Nock Volley Gun

Part 1 of 2

By Tom Nuckols

In 1960, my parents took me to the theater to see John Wayne's movie, *The Alamo*. I was eight years old, and I assumed that the firearms used by the Alamo defenders in the movie were Winchester rifles. That opinion was based on all of the Westerns that I watched on television at the time. Most of the characters portrayed in those shows, both heroes and villains, were armed with Winchesters.

Shortly after seeing the movie, my parents purchased the movie's soundtrack LP record. I played that record incessantly. I even carried the record with me when the family and I visited relatives; I would play it on their record players.

One time, I left the record sitting in direct sunlight in its cardboard jacket on the back seat of our American Motors Corporation, lime green colored, Rambler station wagon. As a result, the record became badly warped, and I assumed, ruined. Out of desperation, as I figured that my parents would not buy another copy of the record, I tried playing it. To my astonishment the record still played, albeit the sound quality suffered considerably.

One day while vacationing on the Henrichson Ranch in Valley Wells, Texas, in the summer of 1963, we took a side trip to Alamo Village on the "Happy" Shahan Ranch outside of Brackettville, Texas. Alamo Village was a tourist attraction and the set location for John Wayne's *Alamo* movie. I was thrilled to get to stand at the front door of the replica Alamo chapel, the very spot where Wayne's Davy Crockett got stabbed by a Mexican Army lancer in the movie.

As I got older, I began to take an interest in Texas history and munitions, and I learned that the Battle of the Alamo was fought during the era of muzzle-loading firearms and not breech loading Winchesters.

In the early 1990's, I bought a VHS copy of the movie and watched it several times over the ensuing years. With each watching, I detected more of the movie's historical inaccuracies, especially those related to the muzzle-loading firearms wielded by the Alamo defenders. Two of these inaccurate depictions stand out in my mind:

1. Some of Davy Crockett's (portrayed by John Wayne) Tennesseans are armed with Springfield, Model 1873, Trapdoor Rifles, retrofitted to look like flintlock Kentucky rifles. The movie's military advisor, George Ross, found the Springfield rifles in Hollywood prop departments (Clark and Anderson 1994: 39).
2. Jim Bowie, portrayed by actor Richard Widmark, wields a flintlock, seven-barreled, smoothbore, British, Nock volley gun (Figures 1, 2 and 3). Equipping the movie's James Bowie with the Nock volley gun (an original or replica?) was, in my opinion, sensationalism, or what I like to refer to as "pure Hollywood". Matthew Shape says it best when he states: *"There are no historical references to any such guns at the actual 1836 battle, let alone in Bowie's hands. It takes a powerful suspension of disbelief to accept that the British sea service failure somehow found its way some 2,500 miles inland to San Antonio."* (Sharpe 2012).

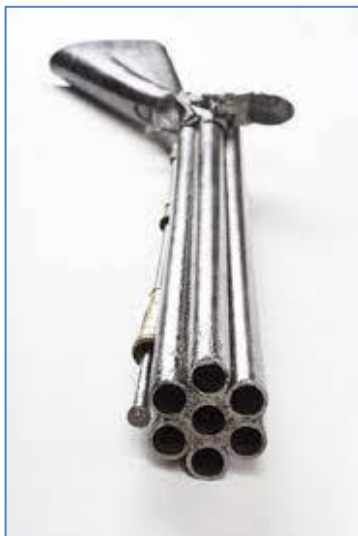


Figure 1 (Left). The muzzle of a Nock volley gun. Notice the ramrod beneath the barrels on the left side. Picture courtesy of Pinterest @ <https://www.pinterest.com/pin/312507661618416760/>



Figure 2 (Above). A seven barreled flintlock Nock volley gun. Picture courtesy of David A. Cushman @ <http://www.dave-cushman.net/shot/volleyguns.html>.

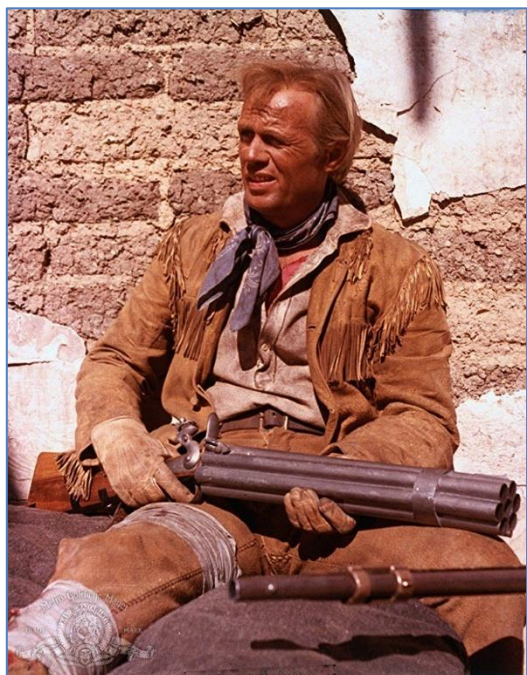


Figure 1. A scene from John Wayne's movie *The Alamo*. Jim Bowie, played by actor Richard Widmark, is seen with his Nock volley gun. Throughout the movie, Widmark's Bowie is never seen with the necessary accoutrements for a person using a muzzle-loading firearm; a powder horn and shot pouch. However, that seems to be a moot point anyway. How could anyone in a battle, carry around enough lead bullets and black gun powder to use the Nock gun as it was intended, i.e., volley fire? Picture courtesy of Pinterest @ <https://www.pinterest.com/pin/487092515945586411/>.

References and Other Sources

- Clark, Donald and Christopher Anderson
1994 *JOHN WAYNE'S THE ALAMO. The Making of John Wayne's 1960 Epic Film*. Midwest Publishing, Hillside, IL.
- Kane, Thomas J., Editor
1960 *THE ALAMO. The Mission that Became a Fortress...The Fortress that Became a Shrine* (souvenir movie book). Sovereign Publications, United States.
- Sharpe, Matthew
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Gault Site Maintenance Day is here again, again!



Volunteers Needed!

Saturday, June 26th 8:30 AM - 1 PM

The rain may have delayed us but there is still lots to do!

Once a year we ask for help with all the chores that are easier accomplished with many hands helping. We work on projects from 8:30 until noon and then the GSAR provides a "Thank You" BBQ picnic. After everyone eats more than they should, you go home with a sense of accomplishment. We always have a good time and your contribution of a half day really makes a difference at the site.

We need your **RSVP** by June 19th if you can attend so that we can plan for lunch. We ask that you wear good work clothes and good shoes/boots, bring gloves if you have them and water (we will have plenty of refills available). If you have a bow saw, limb loppers or a good hoe we could use more as we need to get rid of some juniper and prickly pear. We also could use a couple of people with pickup trucks to move limbs to our burn piles.

Click on the following link to register

<https://gaultschool.z2systems.com/np/clients/gaultschool/eventRegistration.jsp?event=12&>

Being Prepared for Summer Excavation Activities

By Michael Woods, RPh

As we all prepare for the upcoming summer excavation events scheduled by our local societies and our state society, there are a few items that came to mind so that we all could have a safe, enjoyable summer with our Archeological buddies.

For our “newbies” in Archeology, you can find a great article from our prior HAS **The Profile Vol. 9**, Issue 10, by Geoff Mills and Beth Kennedy for the basic Archeological “tool kit” one should have prior to going afield.

For all of us there are a few safety and health issues which came to mind to help everyone have a safer more enjoyable season excavating in our summer Texas heat. The author is including some references for further reading and how to build a basic first aid kit.

Basic First Aid and First Aid Kits

Everyone should have a basic first aid kit with them in the field. This would at least include some Band-Aids of various sizes along with some antibiotic ointments (if not allergic to them). Some basic first aid that we all know of washing minor cuts and scrapes with soap and water to prevent potential more serious infections is sometimes ignored. While discussing cuts, scrapes and puncture wounds, another reminder is for everyone to update their Tetanus vaccine as recommended by the CDC (<https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>).

One can do this by either receiving the single vaccine of Tetanus (Td) or in a combination vaccine of Tetanus, Diphtheria, and Pertussis (Tdap). One or the other of these is recommended every ten years (see prior CDC reference). Additionally, everyone should take a basic first aid course which includes CPR. Basic First Aid Kit Preparation Reference (<https://blogs.cdc.gov/publichealthmatters/2021/05/first-aid-kits/>).

Another great item to have is the **FREE** First Aid App on your cell phone from the American Red Cross (see your cell phone app store).

Water Consumption – Avoid Dehydration

In this Texas heat and humidity, everyone should have an adequate supply of water and electrolyte replacement drinks before heading afield. It would be a good idea to begin hydrating prior to leaving for field work and take regular water breaks throughout the day. Once you begin to feel thirsty, you are already 1% to 2% dehydrated (**Wilderness First Aid Field Guide** by Thygeson, A.L., et al., Second Edit., P.170).

Ticks

Ticks can carry a wide variety of diseases so the best plan is to prepare the best we can prior to going afield. One can use a good bug repellent with approved ingredients such as DEET along with other recommendations by the CDC (https://www.cdc.gov/ticks/avoid/on_people.html) to avoid them. Sometimes they are just unavoidable no matter what preventative measures are taken. It is recommended that if a tick does become attached, have in your first aid kit a special set of tweezers designed for the safe removal of the little arthropods. It is suggested that if the tick is removed within 24-48 hours, there is much less chance of any disease being transmitted to the human host. (<https://www.cdc.gov/ticks/index.html>).



Venomous Snakes



Yes, we do have venomous snakes in Texas as well. One should be able to recognize the coloration of our venomous snakes in Texas. We have the three pit vipers, Rattlesnakes, Copperheads, and Water Moccasins or Cottonmouth, and then there is the Coral snake (remember red on yellow – kill a fellow). Each of these species lives in generally different type of terrain so know which one lives in the type of terrain you will be working, watch where you are walking, and never stick your hands in areas where you cannot see what might be in that brush pile or under/on the rock. Generally speaking, the best advice is to give any snake plenty of room, and there should not be any problems.

Bees, Wasps, and Hornets

Probably the best way to deal with these stinging insects is to avoid them if at all possible. However, sometimes we just get “zapped” by them even when we are very mindful of their immediate presence. The first thing to do if it is a bee sting (since only bees leave their stinger imbedded), is to look for, and if found, **scrape the stinger** off with a fingernail or credit card. Next **for NON-Allergic folks** (that is for those folks who have never had a severe allergic or anaphylactic reaction) one can apply an ice pack and take an age-appropriate dose of an antihistamine (e.g., Benadryl – another good item for your first aid kit). If anyone has ever experienced a severe reaction such as an anaphylactic reaction, you should have your Epinephrine kit (Epi-Pen) close by ready to administer a dose as directed by your Physician and the directions on the injector. Anyone who has ever experienced an anaphylactic reaction to bee, wasps, hornets, or ant bites should always let someone in the group know about your reaction, wear some sort of medical alert ID tag, and have your Epi-Pen close by and know how to use it. (**Wilderness First Aid Field Guide** by Thygerson, A.L., et al., Second Edit., P.46). **Note:** Epinephrine Pens are available generically so you should be able to purchase them at a reduced price with a prescription from your physician.



Conclusion

These are just a few reminders that come to mind from my field experiences. As you know there are others out there to be mindful of. Take care of yourself, your buddies, and have a safe summer field season!

Archeo Corner: The Texas Archeological Research Laboratory (TARL)

Wilson W. Crook, III

As residents of the State of Texas we are blessed with an abundance of archeological resources, ranging from Paleoamerican to Historic in age. Few states can boast the number of sites, the breadth of significant discoveries, and the number of organizations dedicated to uncovering Texas' archeological legacy. However, despite this rich inheritance, few of our fellow Texans are aware of one of our greatest archeological resources which lies on the northwest side of Austin at the Texas Archeological Research Laboratory or TARL.



The Texas Archeological Research Laboratory at the J. J. Pickle campus of the University of Texas in Austin.

TARL was established in 1963 as a facility to store, record and preserve the University of Texas' ever-growing archeological collections. The creation of TARL in part continued the legacy established by the late J. L. Pearce who, as the first chairman of the Department of Anthropology at the University of Texas, personally instituted the purchase and recording of archeological material from the state. In the 57 years since its inception, TARL has expanded its role from preservation and curation to also include the training of students and the sponsoring and publication of cutting-edge research. While the perceptions of every person who has come into contact with some aspect of TARL will be different, I can only relate my personal experiences which have always been nothing but immensely positive and of great assistance to my own research.

One of TARL's original "prime directives" was the recording and preservation of site data and information from the state. This section of TARL was headed for years by former TAS President, Carolyn Spock. Carolyn and her team coordinated all the individual site records and are the group who grants a new trinomial number to each new site recorded. With Carolyn's retirement, this critical job has been taken over by Jean Hughes. Not only do they keep track of each site in every county, but they retain additional notes on almost every site. On many occasions I have written to TARL with a request about information about a site in the Upper Trinity River watershed, and within hours of receiving my e-mail, I have been provided me with critical previous research information as well. When you consider that our state has well over 50,000 recorded sites, this type of knowledge is an unbelievable asset.

Another of TARL's *raison d'être* is the curation and preservation of the state's collections. For years, this task fell under the direction of Laura Nightengale. After Laura's retirement, it now is under the capable hands of Marybeth Tomka with assistance from Annie Riegert. If I had to choose one word to describe these staffers and their work, it would be "passionate". Each sherd, each biface, each worked flake receives the same loving attention given to a perfect ceramic vessel or paleo dart point. The collections from all over the state are stored in a new, temperature-controlled vault – cabinet upon cabinet, tray upon tray. When you first see the State's collections, it is a little hard to take in the literally hundreds of thousands of carefully preserved parts of our archeological history. But above and beyond the site collections, TARL also houses invaluable "type collections" which provide researchers with already identified point and ceramic types to aid in identifying their own research efforts.



Marybeth Tomka at work with some of the TARL reference collections

Recently, I visited TARL to hear a lecture by HAS member Dan Worrall. At the last minute, I asked Marybeth if I could see the curated material from several sites in Kaufman County which were part of my re-evaluation of the Carrollton phase Archaic. When I arrived at TARL, Marybeth had painstakingly pulled all of the material and had it laid out on a worktable for me complete with a microscope so I could examine any artifact in more detail. There are few other institutions that would go to such lengths to help an individual researcher. And Marybeth, if I didn't say it enough then, thank you, thank you, thank you for just being you!

As great as the preserved collections are, Marybeth would be the first person to point out that there remain many tens of thousands of artifacts that remain outside the care of the temperature-controlled vault due to the lack of space and money for more permanent curation. If you ever wanted to be a part of preserving our state's archeological legacy, a gift to the "Friends of TARL" and dedicated to the collections and their preservation is money well spent.



Susan Dial, coordinator of the "Texas Beyond History" project.

One of the greatest aspects of TARL's mission is the dissemination of archeological knowledge to the general public. The public face of this effort is the incredible website, "Texas Beyond History", run by Susan Dial and her team of volunteers. If you have never accessed Texas Beyond History and explored its pages (www.texasbeyondhistory.net), you have missed one of the finest virtual educational tools available on archeology in the United States. By clicking on any of the roughly 50 identified sites across the state, you can explore a wealth of information including detailed site descriptions, artifact photos, and artist reconstructions of prehistoric life. If you have children, exploring Texas Beyond History with them is a must! And yes, the first comment that you will make after reviewing the site is, "Well that's great, but it is missing information from my area or from this site". Susan has a remedy for this; she will gladly accept your enlistment in the project and contribution of knowledge. For if Texas Beyond History is anything, it is an evergreen project that is constantly growing and expanding.

Another aspect of TARL's research resources is their library. The TARL library contains copies of virtually every major state and local society publication that has ever been printed. Even when I could not find a copy of an issue of the Dallas Archeological Society's publication at SMU, TARL had a copy and willingly let me xerox whatever I needed for my research.

Lastly, TARL has once again after ten years of absence become a center of some of the most important archeological research being conducted in the United States via the work by Mike Collins and his Prehistory Project associated with the Gault School of Archeological Research. If you do not know, the Gault site (41BL323) is, along with Chaco Canyon, Mesa Verde, Poverty Point, Cahokia and Meadowcroft Shelter, one of the most important archeological sites on the North American continent. Research has found a complete intact record of almost 20,000 years of continuous occupation at the site and is providing some of the best evidence in North America for the earliest colonization by humans of our continent. As many of you know, for almost two decades I have had the immense pleasure of getting to know and work with Mike and his team of Clark Wernecke, Tom and Nancy Williams, Sergio Ayala, Mike Quigg, Alan Slade, and Jennifer Gandy. Most university anthropology departments should be blessed with such a breadth of talent and expertise! I cannot begin to tell you how many times I have emailed or texted one of these researchers with a question and/or archeological problem and always get an immediate response that proves of great help with new and critical information. I really think of Mike, Tom, Nancy, and Sergio as my "second family".

In summary, I would like to give my fellow HAS members the same message I have told the staff at TARL many times in the past. I grew up in Texas but over the course of graduate school and early work career, I have also lived in Michigan, Colorado, and Virginia – all states that have tremendous archeological legacies and active research programs. But none of them has an organization comparable in resources and commitment to excellence to TARL. Moreover, none are so willing to work with and aid avocational archeologists in progressing their research. As a result, we in Texas are doubly blessed; first with the means to link grassroots field work with professional resources and second, with the facility to record, store and curate our discoveries.



Dr. Michael Collins, head of the Prehistory Project located at TARL.

The Two-Barrel Clay Oven

by Louis F. Aulbach, Linda C. Gorski, and Robbie Morin

The importance of fresh bread in the diet of the soldiers of the U. S. Army during World War I can be seen in the establishment of the Camp Bakery at Camp Logan (Houston, Texas) with industrial grade portable ovens. Yet, during the times in which a military company was in the field away from the main body of the larger organization, the mess sergeant of each company was expected to provide fresh baked bread to the men of his unit. To do this, the bakers in training at the Bakers and Cooks School at Camp Logan (see Figure 1) were instructed in the construction of expedient ovens while in the field.¹



*Figure 1. The Bakers and Cooks School at Camp Logan.
(Barbara Chadwick Collection)*

One popular small scale field oven was the so-called two-barrel clay oven. With a minimum of special materials, a cook or baker could construct a small oven in the field using the natural materials of the land where the camp was set up. Once in operation, the two-barrel clay oven was an effective bakery for a company unit.

The construction of the two-barrel clay oven began with the selection of a plot of level ground about five feet by ten feet that had been cleared of brush. The materials for the oven were then assembled at the site. As the name implies, two small wooden barrels were needed to form the cavity of the oven. These barrels were usually containers for salt or sugar that were often found among the mess supplies. The other materials were found in the area, namely, clay, sand, and hay or grass.

The two barrels were prepared by removing the lids from each one. The bottom of one barrel was removed while only a small portion of the bottom of the second barrel was removed. The barrels were then placed on the ground in a line, with the front barrel open on each end, and the second barrel having the partially open end facing to the rear. The typical salt barrels, such as those made by the Morton's Salt Company, were 29.5 inches in length with a center diameter of about 21.3 inches and a top and bottom diameter of about 18 inches. The two barrels together had a length of about 59 inches, or nearly five feet.²

The next step was to cover the barrels with moist sand. Prior to applying the sand, the seam where the barrels came together was filled with hay to prevent the sand from falling into the oven cavity. Similarly, the hole in the end of the rear barrel was also stuffed with hay. Moist sand was then lightly spread over both barrels to completely cover them with a layer of sand two inches thick on the top and splayed outward at the bottom to about 4 inches.

The next step was to apply a clay layer over the whole oven. A clay mixture was made by combining clay with hay, straw, or grass until the mixture was fairly stiff. Beginning at the base, the clay mixture was applied over the sand, working upward using one's hands. The clay was applied about 12 inches thick at the base and tapering to about six inches thick at the top. A "shoulder" was formed at each side on the front end of the trench to hold a sheet metal door to the oven. This shoulder was extended to the front of the oven proper, so that the sheet metal door fit flat against the oven chamber.

At this point, when the clay oven has been formed, it was allowed to rest for 24 to 48 hours. A hole was cut into the rear of the oven where the hay was placed in the broken bottom of the barrel. This hole provided a draft for the oven that offered an excellent means of regulating the heat.

The next stage in the making of the oven was to burn out the wooden barrels that formed the cavity of the oven. A fire was started in the oven with only enough wood to ignite the barrels. A large fire would burn too quickly, and the oven would cave in. When the barrels were burned out, the sand was scraped out from the top and sides of the interior, and then, discarded. At this point, the oven was completed and ready to use (see Figure 2).



*Figure 2. Three two-barrel clay ovens were set up in the area adjacent to the office of the Bakers and Cooks School at Camp Logan.
(Barbara Chadwick Collection)*

The procedure for baking bread in the two-barrel clay oven in the field followed a simple procedure that was coordinated with the making of the bread dough. The first step was to start a fire in the oven as soon as the dough was mixed and set to rise. A moderately brisk fire was kept up for about two hours. Then, when the dough was punch down and placed in pans, the coals were spread evenly throughout the oven, and all the drafts were tightly closed for about a half hour to equalize the temperature in all parts of the oven.

It was then time to check the oven temperature. Without a thermometer, the technique was the "counts" method. The door was opened, and the baker stuck his hand in for a count. If he was able to keep his hand in the oven for a count of seven, the temperature was proper level. If more than 10, the oven was too cool to bake the bread properly. And, if the count was less than seven, the oven was too hot.

An oven of the two-barrel size was able to handle five pans of bread. The standard pan was 12 inches by 24 inches in size for a two-pound loaf of bread. One oven run of five pans made fifty rations of bread, an amount sufficient for a company meal.

If more bread was needed, a second baking run was possible. Another fire was started in the oven for about 30 to 45 minutes. The coals were then drawn, and the oven was closed for 15 minutes. The oven was then ready for a second bread baking run. To make it more convenient to handle the bread in and out of the oven, a two-foot-wide trench was often dug in front of the oven.

As far as we know, the archeological investigations at the Camp Logan site have uncovered no evidence of these expedient type ovens. The evidence for the presence of the two-barrel clay ovens comes solely from the historical photographic record of one of the buildings of the Bakers and Cooks School shown above.

Footnotes

1. This article is adapted from our forthcoming publication entitled *Inside Camp Logan: The Daily Life of Soldiers at Houston's World War I Training Camp* that is to be published in the late fall of 2021.
2. "Antique Wooden Morton's Salt Barrel." *eBay*, accessed May 10, 2021, <https://www.ebay.com/itm/284105058837>

References

Manual for Army Cooks (New York: Military Publishing Co., 1916), 142-144.

Manual for Army Bakers (Washington D. C.: GPO, 1917), 104-108.

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Houston Archeological Society Monthly Meeting Programs for 2021 6:30pm Third Thursday of every month (Until further notice meetings are virtual for members only)

July 15 – **Gary Pinkerton**, Trammel's Trace – the First Road from Texas to the North.

August 19 - **Dr. Catherine Jalbert, Shannon Smith** – Archeology at Levi Jordan and Varner Hogg Plantations.

All **Houston Archeological Society** meetings are normally free and open to the public. However, due to the COVID-19 situation they are currently being conducted virtually for members only. For more information about HAS then visit our website at www.txhas.org or email lindagorski@cs.com. You can also join our Facebook page at <https://www.facebook.com/groups/123659814324626/>

Please submit articles for publication to *The Profile* Editor Bob Sewell at newsletter@txhas.org. Please submit articles for the June issue no later than 24th July, 2021.

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