Beyond Documentation: 3D Data in Archaeology

Robert Z. Selden Jr.
Center for Regional Heritage Research, Stephen F. Austin State University, seldenjrz@sfasu.edu

Bernard K. Means
Virtual Curation Laboratory, Virginia Commonwealth University, bkmeans@vcu.edu

Jon C. Lohse

Charles Koenig

Stephen L. Black

Follow this and additional works at: http://scholarworks.sfasu.edu/crhr

Part of the Archaeological Anthropology Commons

Tell us how this article helped you.

Repository Citation
http://scholarworks.sfasu.edu/crhr/263

This Article is brought to you for free and open access by the Center for Regional Heritage Research at SFA ScholarWorks. It has been accepted for inclusion in CRHR: Archaeology by an authorized administrator of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.
The frenetic chaos of westbound traffic on I-10 had morphed into something resembling a well-choreographed ballet. It was a ballet more geared toward a gymnasium in Katy than Houston’s Alley Theater to be sure, but I found myself appreciating its intelligibility. The fact that I had just returned from spending two weeks in Guatemala City, where obedience to traffic laws is as uncommon as vehicles meeting US emissions standards, was undoubtedly influencing my judgment. It was early Saturday morning and my destination was Columbus.

Eight weeks had passed since that last, hectic day in June when the remaining small group of Field School staff and volunteers broke down camp, erected a protective fence around the Cotton Field site, checked all remaining artifact bags and paperwork into the lab, and returned the scattered piles TAS equipment and supplies to the storage trailer. There were no emotive farewells as we departed—each of us understood that this wasn’t the end, but rather just the beginning. And for me, that meant heading back to Columbus on this mid-August morning.

There were no emotive farewells as we departed—each of us understood that this wasn’t the end, but rather just the beginning.

As I pulled up to the Tait House in downtown Columbus, the familiar faces of Rita Tait-Jackson, Ed Jackson, and Sue Gross greeted me from the driveway. Carlos Soto appeared rather suddenly—I hadn’t heard his Prius pulling silently into the next parking space. As I walked up the drive, I couldn’t help but notice the still open units and mounds of excavated soil that dotted the once impeccably manicured lawn. This had been the setting for this year’s youth group investigations (Figure 1), and the units had been left open at Rita’s request. She now mused that they were part of her Halloween plans, and I sensed from Ed’s expression that this had been discussed in some detail.

Doug Boyd and Trudy Williams again directed the 2014 TAS Field School youth area excavations. Ron Ralph took a hiatus this year from conducting site survey to help supervise the youth area (where his grandchildren were among the volunteers). Carol Macaulay-Jameson and Sharon Menegaz provided additional supervision, as well as assistance with completing paperwork and inventorying artifacts, and Johnny and Sandra Pollan graciously shared their expertise in historic ceramic identification with the youth group throughout the week. (A summary of findings written by Doug Boyd follows this article.)

My objectives for the day were simple: count and weigh fire cracked rock and take artifact photos for use in an upcoming article (this one), as well as several upcoming.
TEXAS ARCHEOLOGICAL SOCIETY®

ETHICS
- Members of TAS must abide by all terms and conditions of the TAS bylaws and all Federal and State antiquities laws or regulations.
- TAS does not condone the practice of buying or selling artifacts for commercial purposes.
- TAS does not condone the disregard of proper archeological field techniques or the willful destruction or distortion of archeological data.

EXECUTIVE COMMITTEE
Wendy Lockwood, President
Mary Jo Galindo, President Elect
Waldo Troell, Immediate Past President
Zac Selden, Secretary
Marybeth Tomka, Treasurer
Tamra Walter, Publications Editor
Jonelle Miller-Chapman, Newsletter Editor

ADMINISTRATIVE DIRECTOR
Carole Leezer

Send all membership inquiries, changes of address and other business to the TAS Business Office:
Texas Archeological Society®
Center for Archaeological Research
One UTSA Circle
San Antonio, Texas 78249-0658
(210) 458-4393
FAX (210) 458-4870 (call first)
tasinquiries@txarch.org
http://www.txarch.org

Office hours are on Tuesdays and Thursdays from 9 a.m. to 2 p.m.
During other hours please leave a message on the answering machine.

TEXAS ARCHEOLOGY
Quarterly Newsletter of the Texas Archeological Society®
Editor: Jonelle Miller-Chapman
11201 Pickfair Dr.
Austin, TX 78750-2525
(512) 257-0618
millerjo@austin.rr.com

Opinions, unless otherwise stated, are those of the editor and contributors and do not necessarily reflect the policies of the Society.

COPYRIGHT © 2014 by Texas Archeological Society
All rights reserved. ISSN 0082-2949

Printed at OneTouchPoint/Ginny’s, Austin, Texas

“Texas Archeological Society” and the stylized “A” are registered trademarks of the Texas Archeological Society.
All rights reserved.

A digital version of this newsletter can be found at http://www.txarch.org/Publications/newsletters/index.html

INSIDE

Returning to Columbus
Two Shared Field School Experiences
Youth Group
Annual Meeting
Annual Meeting Schedule
Friday Public Forum
Banquet Presentation
Special Opportunities
TAS Book Festival
Rules of Order
TAS Academies
President-Elect’s Report
Marker for Cyrus N. Ray
Update on JTAH
Beyond Documentation
Texas Historical Foundation
Camp Loagan
Reflections on TASN 30th Anniversary
TxDOT Roadside Chat

NEWSLETTER DEADLINE
Thursday, November 26th

CALENDAR

October 9–11 Mogollon Archaeology Conference, NMSU, Las Cruces
October 24-26 TAS Annual Meeting, San Marcos
Oct 29- Nov 1 Plains Anthropological Conference, Fayetteville

2014 TAS BOARD MEETINGS

September 20th—CAR, San Antonio
October 24 and 26—Annual Meeting, San Marcos
discovering intact structural walls and other features at slightly greater depth.

We also made a surprise discovery at the Bluff site when I commandeered a small group from the survey team to perform reconnaissance investigations a short distance away from the cabin. Ed and Rita had shown me an area located down a path that lead away from the cabin toward the river that they called “the dump” due to the substantial quantity of ceramics they had surface collected from the spot. An early hypothesis was that this might have been where occupants of the cabin tossed their waste. Upon investigation, we indeed observed a number of transfer print ceramics scattered across eroded surface areas along the path. However, we were subsequently unsuccessful in identifying the 19th century trash deposit we sought. Instead, we discovered the foundation features of a second structure, possibly another cabin or outbuilding (Figure 3). And had we not discovered this structure, I may have never come to witness the youthful exuberance that over-takes Joe Rogers in the presence of old tools, or appreciate the extraordinary knowledge he brings to their study. Within the footprint of the new structure, nestled between several loose stones constituting the remnants of a floor, we recovered the rusty, but very identifiable remains of two cast steel woodworking tools. The first of these was a chisel (Figure 2), missing the long-decayed wood of the handle. The second appears to be a form of adze, though I
have yet to find a published reference to anything matching it. Neither would have been common items, but rather the tools of skilled craftsman—providing us with a starting point for identifying their previous owner.

The Bluff site was not my destination this morning however, but rather the old sharecropper’s cabin situated at the road’s fork. The cabin had served as our field lab, and its yard, shaded by a canopy of live oaks, witnessed a constant buzz of activity during Field School. I recalled the sight of floatation bags festively strung from tree limbs and fences as our botanical experts, Leslie Bush and Kevin Hanselka, continued to sieve the smallest of artifacts from beneath a canopy a short distance away (Figure 4). Entering the cabin from the rear door, we walked through the narrow kitchen where during Field School I was always able to find a cup of freshly brewed coffee and an oversized container of cookies. Finding what we were looking for would be an easy task. Marybeth Tomka (our Lab Director) and Jonelle Miller-Chapman had created order out of chaos, leaving the collections well labeled and neatly ordered by excavation area. As we browsed through the artifact-filled tubs that filled the shelving units erected in the dining area and side storage room, the sheer volume of artifacts recovered from the Pyramid site became strikingly apparent.

Pyramid (41CD154), the site we initially identified and surveyed during our first day of preliminary fieldwork back in February, was every bit as prolific as we had anticipated. Waldo Troell served as the site supervisor and was assisted by crew chiefs Tom Williams, Barbara Chadwick, Karen Lacy, and Mike DeGiovine (Figure 5). In many ways the site proved typical for an upland procurement locality: an abundance of tested cobbles and primary reduction debitage, numerous failed preforms, scattered exhausted forms that had been discarded and (presumably) replaced, and temporal mixing within a shallow soil environment (Figure 6). With only 45cm of sandy sediments overlying the sterile subsoil, we realized that there was little hope for intact stratigraphy. Still, the evidence we were able to recover for the long duration of resource exploitation at this locality was exciting. In fact, it was the only area investigated this summer to yield an artifact dating to the Paleoindian period. Our initial exuberance at the discovery of a Midland point was somewhat tempered by the subsequent discovery of a Perdiz point within the same unit…10cm BELOW where the Midland had been recovered. While such evidence for mixing will ultimately limit our ability to discern temporal differences in site use, the evidence we collected this summer suggests that much of the quarrying activity observed dates to the Late Prehistoric period, as artifacts associated within the Austin and Toyah traditions outnumbered all others combined. As an aside, it is worth noting that the crew at Pyramid had by far the best selection of pastries available, including some of the finest kolaches I’ve ever tasted.

Having photographed the Midland point, several Scal-lorn, and about all the preforms I could handle, I decided to move on to photographing artifacts recovered at Cotton Field (41CD155). Carlos handed me a bag of faunal bone containing fragments of both deer and bison. The last time
I had seen these particular deer bones they were still en-
cased in their earthen matrix, adjacent to a thermal feature
exhibiting large cracked limestone cobbles, black-stained
soil, and a Scallorn point. Now they were clean, and for
the first time I could see the butchering marks left by stone
tools that had long ago cut deep into their surface (Figure
7). Yes, Cotton Field was a truly special site.

Glynn Osburn had improbably discovered the site back
in February, using nothing more than a 4-inch diameter
augur. One week before the start of Field School, TAS
rented a backhoe and a small team of us gathered at Cotton
Field to strip off much of the sediment overlying the
site. This would greatly expedite our excavations. David
Calame joined us that day, and his backhoe expertise
helped guide the endeavor so that we did not disturb the
archaeological deposit while stripping. I had previously
only known David from his listserv posts and from a
time-lapse video of his bison excavation in Burnet County.
It occurred to me then that one of the joys of the TAS
Field School is that it provides you with an opportunity

![Figure 5: Excavations at Pyramid. Area Supervisor Waldo Troell completes paper work in left photo. In right photo,
volunteers pick debitage from their screen.](image)

![Figure 6: Artifacts recovered at Pyramid: a) Scallorn preform; b) Midland point base; c) Scallorn.](image)

![Figure 7: Cut marks observed on deer bone recovered from Cotton Field.](image)

Continued on page 6
to meet people that share your passion for archaeology, that like you are seeking ways to contribute to the state’s heritage, but that you may otherwise never have a chance to encounter in person.

Not long after stripping off the upper sediments to expose the buried archaeological deposits, nature saw fit to provide us with a swimming pool. Two days of heavy rain inundated the Cotton Field excavation area, and none of us knew if the site would be accessible when Field School began. We had just three days. Fortunately, they were hot, sunny days. Unfortunately, the canopy of tall trees shading the site - while creating an idyllic environment for excavation—slowed the rate of evaporation. Site supervisor Tiffany Osburn sought creative solutions to the problem, like having Glynn punch a deep augur hole into one area of standing water in the hopes that it would function as a sort of drain. The volumetrically challenged (but entirely hilarious) plan ultimately and predictably failed, and the southern half of the excavation area, which never fully dried, was not investigated this season. But that mattered little because the northern half yielded more data than we could have imagined.

Bryan Jameson joined Tiffany in supervising excavations, and they were assisted in managing their volunteer army by crew chiefs Shea Maloney, Kathleen Hughes, Diamond Kapanday, Christine Gauger, Wendy Lockwood, Gladys Swanson, and Jay Hornsby (Figure 8). Cotton Field proved to be a multi-component site with clearly stratified and well-preserved Austin and Toyah phase occupations (Figure 9). The upper Toyah phase yielded dense clusters of impressively large mussel shell. One particular cluster was directly associated with a concentration of small, thermally altered, quartzite and chert cobbles. Tentatively interpreted as the elements of bag boil, the feature provides a window into Toyah phase diet and cooking practices. The upper cultural horizon also yielded an assortment of ceramics, including several thin-walled, decorated sherds crafted in an overtly Caddo tradition. Diagnostic point forms included Perdiz, Bonham, and Alba arrow points. In addition to mussel shell, the faunal assemblage included bison and turtle. The many artifacts and features comprising this rich horizon extend through a depth of approximately
40cm, where they give way to 15-20cm of nearly sterile soil. Below that, everything changes.

We only achieved small windows into the Austin phase horizon at Cotton Field this past summer, but the contrast between it and the overlying Toyah phase assemblage is striking. Rather than thermal features indicative of bag boiling, the Austin phase cooking feature excavated shared similarities with those common to the Central Texas culture region: large, thermally fractured limestone cobbles organized in a somewhat open arrangement, and associated with blackened earth. Several Scallorn points were recovered, constituting the only diagnostic tool forms associated with the horizon. Mussel shell was present, but not found in the clusters observed in the upper occupation zone. Also, deer dominated the faunal assemblage, although bison was also identified. Planning for next summer has already begun, and we will be investigating four times the area excavated this season, as this important site will become the foci of prehistoric site excavations during the 2015 TAS Field School.

Somewhere in that vast expanse of Colorado River floodplain that defines the eastern corner of the Tait-Huffmeyer Ranch there must be older buried sites. I still believe that, although all attempts at finding evidence to support that claim have turned up empty. Chris Meis and his survey crew adopted Glynn’s methodology of augur surveying, but with none of Glynn’s good fortune. Numerous augur pits were scattered across the open floodplain, but none produced a site. Unfortunately, it was a theme Chris encountered throughout of the week. Of the several previously unexplored areas investigated by the survey team, few produced any artifacts, and none successfully identified materials in enough quantity and with enough contextual integrity to define a new site. Yet never once during the week did a single member of the team appear dispirited. Archaeological surveyors are a different breed, thoroughly embracing a love for the journey over the rewards of the destination (Figure 10).

Photography took more time than I had anticipated, and I only managed to get to a small fraction of the photo-worthy artifacts. As I drove north on Highway 71 away from the ranch, I almost instinctively turned right onto County Road 101, heading back to camp. Although this was my first ever TAS Field School, I quickly realized that the field camp is always “the other site,” and the treasures it produces will for many of us endure far longer than our memories of the artifacts we so painstakingly recovered from the ground. I had heard many stories over the years, and our cooks Janice, Lori, Linda, and Mary Ann filled me in on several I hadn’t heard (Figure 11). We called our afternoon discussions “Tales from the Kitchen,” and many readers can only hope that names are changed if those discussions ever make their way to publication (which I suggested they should).

The setting for camp was the tranquil country property of Caroline Brown, daughter of Beth and Pat Aucoin, who generously made her land available to us for the week. Jack Pool once again served as Camp Boss (and unofficially as resident fishing pro). Spread across the serene setting, volunteers were apt to find many familiar traditions including Spamarama (where there is no right choice) and Doug Boyd wearing a Hawaiian shirt, grass hula dress, and coconut bra during Margarita Tuesday (Figure 12). Also undoubtedly familiar to many were the sounds of acoustic guitar floating late through the night out of Rowdytown, although everyone will tell you that it isn’t what it used to be.

The Field School Committee did an outstanding job putting together the evening programs, which were musically introduced by entertainment coordinator Christine Buckstead. Lisa Weatherford provided a workshop on mussel shells and their use as prehistoric use as food, tools, and objects of art. Ed and Rita Jackson gave an informative talk on the town of Columbus and the history of the Tait-Huffmeyer Ranch, providing a rich context for our

Continued on page 8
RETURNING TO COLUMBUS, Continued from page 7

investigations. Columbus resident and renowned forensic artist Amanda Danning presented an overview of incredible information that has been gleaned from the skeletal remains of early French settlers in Texas. Gregg Dimmick, author of “Sea of Mud,” discussed the retreat of the Mexican army after their defeat at San Jacinto. Finally, site manager Brian McAuley presented a discussion of recent historical and archaeological research undertaken at the San Felipe de Austin Historical Site. Brian’s talk was markedly appropriate given that archaeologist Jeff Durst of the THC was undertaking small-scale excavations at San Felipe de Austin—along with a handful of volunteers from the Houston Archeological Society—as a Field School satellite project.

Objective reality made the drive back to Houston a comparatively sobering experience. Apparently at some point during the day I had lost my ability to find comfort in the distinction that existed between Texan and Guatemalan drivers. As a calculated attempt to keep my blood pressure within survivable limits I began to contemplate next year’s field school, when the TAS will return to the Tait-Huffmeyer Ranch. The youth group will attempt to achieve a more balanced effect on Rita and Ed’s lawn, excavating the opposite side of the Tait house. Cotton Field excavations will be expanded with new investigations focused on the areas of the site where auger pits yielded the highest artifact concentrations. At the Bluff site, we will follow the walls exposed this summer to determine the dimensions and architectural elements of the cabin locality, while further investigating the new structure associated with the specialized woodworking tools. Additional areas of investigation may be added in the coming year as well, including the possibility of discovering and investigating the Atascosito Crossing, believed to be located somewhere on Amanda Danning’s property. With luck, next year will be filled with many familiar faces, as well as scores of new ones. I am so appreciative to Rita, Ed, Caroline, each staff member, and every volunteer that helped make this year’s TAS Field School such a remarkable success. Was the experience worth sitting in this traffic? Absolutely.

Figure 12: Photos of camp life. On the left, inhabitants of Sin City, where the wine is wonderful and the Spam is so not. On the right, Doug Boyd and his daughter Jenna get into the Margarita Night spirit. (Photos/Christine Buckstead)

Fort Martín Scott Archeology Group

The City of Fredericksburg has appointed the following volunteers as members of the Fort Martín Scott Archeology Group: Joseph Luther, Joseph H. Labadie, C A Maedgen, Tom Ashmore, Jim McCrae, Barry Wagner, Duke Davis, Jimmy Alexander, and Walter Moldenhauer. This working group recently met at the Fort to develop a shared vision of the future of archeology at the historic site. The following Shared Vision Statement was prepared and approved: The archeology at Fort Martín Scott is the foundation upon which all education, interpretation, events, historical preservation, conservation, reconstruction is based. The Fort Martín Scott Archeology Group is now working on a plan of work to achieve this vision. Located in Fredericksburg, Fort Martín Scott was built in 1848 by the U.S. First Infantry and the U.S. Second Dragoons. For more information see: http://www.ftmartinscott.org/
Two Shared Collegiate Field School Experiences

Vanessa Baum

During my time at the TAS Field School in Columbus, I was a member of the survey crew representing Baylor University. Having done only prehistoric excavation prior to Columbus, I was unsure of what to expect on survey. Little did I know that survey at the Tait Ranch would be a bit unconventional? We worked in what could only be called a jungle, with very poor visibility of possible artifacts on the ground. This resulted in day after day of shovel and auger test pits. Though more physically demanding than my previous three weeks of excavation in Coryell County with Baylor, I enjoyed every minute of digging hole after hole with the survey crew. Chris Meis created a very relaxed and welcoming environment for those of us who were inexperienced at survey and the rest of the crew helped out every step of the way, filling gaps in my knowledge and providing me with endless encouragement and information. One of my favorite parts of the day were our water breaks where more experienced members of the survey crew would share stories of previous TAS field schools.

To be honest, archaeology wasn’t high on my list of potential career paths before the TAS Field School this summer. Having always leaned more toward cultural anthropology, I joined Baylor University’s archaeology field school more out of loyalty to Carol Macaulay-Jameson than anything else. Not surprisingly, the people and culture of the Texas Archeological Society completely won me over. I am in awe of the fact that so many of the same people come back year after year to wake up at 5 AM and work hard—for fun. I’m so appreciative of my experience at the TAS Field School. It has really pushed me to more heavily consider archaeology as a real career path and I am certain that I’ll be back year after year to join each summer’s field school.

Jacque Clark

The Collegiate Scholarship for the Texas Archaeological Society Field School was an honor and a blessing to receive this summer. Primarily it helped make the Field School more financially available for me without imposing on my family. The Field School was amazing, to summarize the entire experience into a single word. I had such a great time! I have known for a long time that archaeology was something that piqued my curiosity but I had never truly given much thought to it as a career. When my Archaeology professor, Carol Macaulay, told me of our attending the TAS Field School I was excited for the experience it would provide, but still had not considered the thought that I would fall in love so fast. And that is truly what happened at the TAS Field School. I fell in love. This scholarship made it easy to forget about the money and to focus on the wondrous experience happening in my life. The dig kit I received was super helpful and I look forward to using it more in the future. Finding such amazing things from the past and hearing about discoveries others were making was unforgettable and amazing. After the Field School was over and I went home and couldn’t stop telling my family and friends about how phenomenal the Field School was and I can say confidently that I will be looking forward to next summer’s Field School!
Youth Group at the Tait House

Douglas K. Boyd

The Youth Group worked at the historic Tait House, 41CD153, located at 526 Wallace Street in the city of Columbus. It was pretty rough duty, digging in the manicured St. Augustine grass lawn in the abundant shade provided by giant trees and the magnificent antebellum house. Charles W. Tait built this house in 1856–1858, and it has been continually maintained and occupied by members of the Tait family. While the big house is in great shape, many other improvements once existed on this city block but were removed long ago, and their stories can only be revealed through investigations of the archeological remains.

Ed and Rita Tait Jackson were wonderful hosts, and the Youth Group was large and enthusiastic as usual. The number of participants varied through the week, with 43 to 75 people working on the site each day (21 to 34 kids). Besides the archeology, the youth group took a field trip to visit the nearby San Felipe State Historical Park and the kids participated in a variety of other fun and educational activities.

Before beginning the field school, a ground penetrating radar survey and metal detecting surveys provided evidence of buried features that corresponded with locations of two historic structures that appeared on a 1928 Sanborn Fire Insurance map and a 1930 aerial photograph. With this information in hand, the archeological units were laid out to test specific locations, and this proved to be very productive. The group excavated 21 units, most of which were 2x2-m in size, and documented nine historic features. In one area, the excavations exposed three brick pier pads that defined the northern edge of a former house. In another area, a large brick pavement was investigated, and the evidence suggests this was an outdoor patio or work area associated with another structure.

All of the excavations yielded artifacts dating from pre-Civil War to the mid-twentieth century, but the majority of datable items were manufactured in the nineteenth century. One of the most exciting finds in the youth area was several sherds of large plates and serving platters decorated with a distinctive blue transfer-printed floral design. Rita Tait Jackson immediately recognized that these sherds had the same floral design that was on the Tait family china at their Dry Creek Plantation in Alabama. The family brought some or all of this china set when they came to Texas in the 1840s, but some of the pieces got broken and scattered over time. These ceramic sherds provide a tangible link with the family’s Alabama roots. Even more exciting, one of the sherds that was dug up in the west lawn had a maker’s mark stamp that identifies this ware as the “Fancy” pattern of stone china made by John & William Ridgeway, one of the Staffordshire potteries in England. The company was only in operation from ca. 1814 to 1830 (according to Godden’s Encyclopedia of British Pottery and Porcelain Marks), and English-made pottery was very popular among southern plantation owners at the time. This is just one example of the interesting finds from the 2014 Youth Group excavations, and it is certain that many more secrets remain buried in the Tait House lawn.

The TAS Nominating Committee is offering the following members for election as Officers at the 2014 Annual Meeting in San Marcos

- President Elect: Karen Fustes
- Secretary: Zac Selden
- Treasurer Elect: Becky Shelton
- Newsletter Editor: Ron Jorgenson
- Region I Director: Doug Wilkens
- Region 4 Director: George Avery
- Region 11 Director: Reeda Peel-Fleming
- Region 12 Director: Matthew Elverson
- Nominating Committee Chair: Margaret Howard

Sincerely, the TAS Nominating Committee 2014: Joe Rogers, Chairman, Bryan Jameson, and Clint Lacy
The 85th TAS Annual Meeting in San Marcos is rapidly approaching – just ask those folks who are helping to put it together! Deadlines are looming, with the submissions for symposia abstracts, etc., already behind us; the deadline for information on individual papers and posters, September 1, will be past by the time this is published. Hotel reservations should be made by October 2; after that, what is left of our block of reserved rooms will be released. Advance registration for the meeting will extend through October 6; after that date, fees will increase. The deadline to reserve a table in the Book/Exhibit Room also is October 6. Online registration will end at midnight on October 17.

The 2014 meeting is jam-packed with activities. The Council of Texas Archeologists and the Texas Historical Commission Stewards will have their meetings; the TAS Board will gather twice. The Box Lunch/Annual Business Meeting has been extended to two hours. There will be oodles of papers; posters will be viewable, too – Margaret Howard and Britt Bousman are our Program Co-Chairs. The Silent Auction always has a range of items so that something should appeal to each of us; May Schmidt am-auction@txarch.org is accepting donations. The Book-Exhibit Room will also be an attraction, especially with this year’s Authors’ Book Signing Event arranged by Steve Davis. Nick Morgan am-book-exhibit@txarch.org will be overseeing the vendors and exhibitors. Jennifer Anderson am-volunteers@txarch.org will be overseeing a small army of volunteers, while Ron Ralph and Elliot Richmond am-wranglers@txarch.org have a go at keeping up with our equipment needs. There are tours to the Center for Archaeological Studies and the Gault School of Archaeological Research/Gault Archaeological Project Lab at Texas State University, options to take a discounted Glass Bottom Boat tour of Spring Lake, (bring your TAS badge to receive the discount), and a tour of the La Belle exhibit at the Bullock Texas State History Museum in Austin, all arranged by Karen Fustes am-tours@txarch.org. Additional tours to Ezell’s Cave Preserve have been arranged by Ron Ralph. Focal points for the weekend will be the Public Forum (guest speakers Amy Borgens and Fritz Hanselmann), the artifact IDing, and the Council of Texas Archeologists Careers in Archeology Social Friday evening; the Annual Business Meeting mentioned above; and the Saturday evening social and Banquet (guest speaker Doug Owsley). Yep, lots to do!

With so much going on, your hosts are open to individuals/companies/agencies that wish to help support the meeting with a donation or a sponsorship—printing the programs, supplementing the guest speakers’ honoraria (Dr. Owsley’s honorarium goes toward his assistants’ salaries), loaning a data projector/laptop, contributing toward a break with something besides water, munchies for the Careers Social…. All contributions will be noted in the program and at the event horizon, as it were. If you have such an inclination, please contact me am-organizer@txarch.org to discuss options.

We are doing our best to make the 2014 Annual Meeting memorable (in a good way) and hope you are setting plans into motion to join us in San Marcos. We would love to see you there!

Schedule for the 2014 TAS Annual Meeting
Embassy Suites, San Marcos

Friday, October 24
Registration: 8:00 AM-6:00 PM; East Corridor
Silent Auction & Book/Exhibit: 8:00 AM-5:00 PM
CTA Meeting: 8:30 AM-12:00 noon
Steward’s Meeting: 1:00 PM-2:00 PM
Concurrent Sessions: 2:00 PM-5:30 PM
TAS Executive Committee: 2:30 PM-3:30 PM
TAS Board Meeting: 3:30 PM-4:30 PM
Public Forum: 7:00 PM-8:30 PM
Artifact Identification: 8:45 PM-10:00 PM
CTA Careers in Archeology Social: 8:45-10:30 PM

Saturday, October 25
Registration: 7:30 AM-3:30 PM; East Corridor
Silent Auction & Book/Exhibit: 8:00 AM-5:00 PM
Concurrent Sessions: 8:00-12:00 and 2:00-5:00 PM
Poster Sessions: 8:00-12:00 and 2:00-5:00 PM
Book Signing: 9:00 AM-4:50 PM
Luncheon & Business Meeting: 12:00-2:00 PM
Cash Bar Social: 6:00 PM-10:00 PM
Banquet: 7:00 PM-10:30 PM

Sunday, October 26
TAS Executive Committee: 7:30-9:00 AM
TAS Board Meeting: 9:00-10:30 AM
Welcome to the 2014 Friday Evening Public Forum

We have a two-for-one offering for our Public Forum this year, a presentation on the Monterrey shipwrecks by Amy Borgens (State Marine Archeologist, Texas Historical Commission) and Frederick “Fritz” Hanselmann (The Meadows Center for Water and the Environment, Texas State University). You may remember that there was a live feed from an exploration ship investigating these shipwrecks in July 2013. The site was initially discovered by the Shell Oil Company southeast of Galveston during a survey of potential drilling locations in 2011.


Some Information about our Guest Speakers

Amy Borgens was appointed State Marine Archeologist at the Texas Historical Commission in June 2010. As the State Marine Archeologist, Amy is responsible for the preservation, protection, and investigation of shipwrecks in all state-owned waters. She earned a bachelor’s degree in Fine Arts from Purdue University and received her master’s degree from the Nautical Archaeology Program at Texas A&M University. She has worked in the field of Texas and Gulf of Mexico maritime archeology since 1997 and has been associated with notable shipwreck projects in Texas, Louisiana, Oklahoma, Canada, and Turkey, including La Belle (1684), HMS Princess Charlotte (1814), Heroine (1838) and USS Westfield (1863). In addition, she participated in the remotely operated vehicle investigations of four early 19th-century shipwrecks in the Gulf of Mexico known as the Mardi Gras Shipwreck and Monterrey Shipwrecks.

Frederick “Fritz” Hanselmann is a Research Professor and the Chief Underwater Archaeologist/Dive Training Officer with The Meadows Center for Water and the Environment at Texas State University. He is the director of the Meadows Center’s Underwater Archaeology and Exploration Initiative. Having worked on underwater sites from a wide variety of time periods, his research ranges from submerged prehistoric deposits in springs and caves to historic shipwrecks in Latin America and the Caribbean, including the wreck of Quedagh Merchant, abandoned by Captain Kidd in 1699 off the coast of Hispaniola. Fritz led the first-ever archeological survey of the mouth of the Chagres River in Panama as the initial phase of the ongoing Rio Chagres Maritime Landscape Study and recovered cannons from the site where Henry Morgan’s ships were lost in 1671, initiating the Lost Ships of Henry Morgan Project. He is the co-director of other underwater archeological projects in Colombia, Mexico, and Texas. Fritz also focuses on capacity building and training for archeologists and heritage managers in less developed countries, as well as the development of marine protected areas and underwater preserves. He is a GUE Cave and Technical Diver, a Nautical Archaeology Society Tutor, a certified scuba instructor, an ambassador for Halcyon Dive Systems, Aquadive Watches, a member of the Body Glove Dive Team, and a fellow of the Explorer’s Club.

Fritz holds an MA in Anthropology and an MPA with a focus on submerged cultural resource management from Indiana University. He is also a PhD Candidate in Anthropology at Indiana University.
The 2014 Banquet Presentation: A View into the Past—the Long Ago Past

We are excited to have Dr. Douglas Owsley as our Saturday evening Banquet speaker. Dr. Owsley had a rapt audience at his 2007 Banquet presentation in San Antonio, where he provided insights into life in 17th century Jamestown. His topic in 2014 will focus on Kennewick Man in Washington state and the human remains from Horn Shelter No. 2 in Bosque County, Texas. We are hoping that we will be able to have copies of the new Kennewick Man publication available at the meeting for purchase and book-signing.

Douglas Owsley is Division Head for Physical Anthropology at the Smithsonian Institution’s National Museum of Natural History in Washington, D.C. Owsley received his BS degree in Zoology from the University of Wyoming and his PhD in Physical Anthropology from the University of Tennessee. He is considered one of the foremost forensic anthropologists at work today. He has identified remains from news-making crime scenes, mass disasters, and war zones, including Jeffrey Dahmer’s first victim, the Waco Branch Davidian compound, the 9/11 Pentagon plane crash, and war dead from the former Yugoslavia.

He is fascinated with the wealth of information that can be recovered by studying the human skeleton, not just the cause of death, but also details about the life of a person. In addition to forensic case work, he is conducting extensive research on historic and prehistoric populations from North America. These include the remains of 17th-century colonists, Civil War soldiers, such as the crew of the *H.L. Hunley*, and ancient Americans. Highlights of his work on Jamestown Island were featured in an exhibition at the National Museum of Natural History entitled *Written in Bone: Forensic Files of the 17th-Century Chesapeake* (2009-2014).

Dr. Owsley was instrumental in advocating for the right of scientists to analyze the nearly 9,000 year-old Kennewick Man skeleton discovered along the Columbia River in Washington State. Without his intervention and subsequent analysis the important information provided by the Kennewick Man remains would more than likely have been lost to science. He is the co-editor of *Kennewick Man: The Scientific Investigation of an Ancient American Skeleton* (2014, Texas A&M University Press), a volume that presents in great detail what has been learned from this discovery.

Closer to us, Dr. Owsley has studied the remains of a man and a child buried some 11,000 years ago in a shallow grave in Horn Shelter No. 2 (41BQ46), overlooking the Brazos River in Bosque County. The grave was discovered in 1970 by Albert Redder and Frank Watt, who carefully excavated and documented the site.

Interpreting Kennewick Man and the Double Burial from Horn Shelter No. 2

We are delighted to have Dr. Owsley speak to us about these sites and the humans who lived there so long ago. The Kennewick Man and Horn Shelter No. 2 burials present a rare opportunity to learn about Paleoamericans and the conditions experienced during the early Holocene. This presentation examines the secrets that these bones have held for so long.
Special Opportunities During Annual Meeting

Visit The Gault School of Archaeological Research and the Gault Archaeological Project Lab

Friday October 24, 10:30-3:00pm

The Gault School of Archaeological Research and the Gault Archaeological Project at Texas State University have invited members to tour their on-campus research lab to see artifacts, and to hear and talk with the archaeologists who work on the Gault Project. The major excavation work is complete at Gault and the focus now is on interpretation. http://www.gaultschool.org/Home.aspx

Visit the Center for Archaeological Studies Lab Friday October 24, 10:30-3:00PM

By Todd Ahlman, Director

The Center for Archaeological Studies (CAS) is a research center and Texas Historical Commission certified curation facility located on the Texas State University campus. CAS’s mission is to provide learning and training opportunities for Texas State University students and to be stewards for the many archaeological sites located on University properties. CAS is also home to a library of over 5000 books and reports on Texas archaeology. Our curation facility houses over 100 collections and 85,000 artifacts and includes materials from 12,000 years old to the recent past. The most impressive collection comes from the Spring Lake Site. The Spring Lake Site is a collection of archaeological sites around the San Marcos Springs located on the Texas State University properties. Coined as the longest continually occupied location in North America, the Spring Lake Site has been the focus of archaeological investigations since the 1970s.

The CAS tour will include a review of our curation facility, collections, and library. We will also have on display artifacts from the Spring Lake Site, including materials from the 2014 investigations, Joel Shiner’s underwater excavations, Texas State University field schools, and University property CRM projects. This will be the first time that many of the materials will be available for viewing and is a unique chance to see artifacts from the longest continually occupied site in North America.

The Meadows Center for Water and the Environment serves as an integrating mechanism for the university’s multidisciplinary expertise in aquatic resources. Texas State is home to a distinguished array of departments and research centers engaged in critical scholarly work on water management issues. The Meadows Center’s projects create new opportunities to disseminate this significant repository of knowledge and information to the community at large. In addition to its biological resources, Spring Lake is also a State Antiquities Landmark. It was first investigated in the late 1970s and yielded a few Clovis points and thousands of other artifacts. Archaeological research continues today through the Meadows Center’s Underwater Archaeology and Exploration Initiative (http://www.meadowscenter.txstate.edu/research/underwater-archaeology.html). The original excavation site is part of the glass bottom boat tour.”

The Meadows Center has graciously offered for TAS Members to take Glass Bottom Boat tours at a discounted rate of $7. You can visit on your own Friday through Sunday (Oct 24-26). http://www.meadowscenter.txstate.edu

This activity will be on-your-own: just show your TAS AM Registration Badge.

Bullock Texas State History Museum—La Belle Exhibit

Bullock Texas State History Museum—TAS Special Tour Sunday, October 26, 2014, begins 11AM

By David Denney, Director of Special Projects

The ship La Belle was part of the 1684 ill-fated expedition led by the legendary explorer Robert Cavelier, Sieur de La Salle. The ship sank in Matagorda Bay in 1686 dooming the French Colony. La Belle was rediscovered in 1995 and excavated by the Texas Historical Commission in 1996-1997.

When the museum was being designed in 1998 it was determined that the ship would come to the museum fully assembled. A giant roll-up door was built into the side of the museum (at the garage entrance) to accommodate the 53’ x 18’ ship. In 2008 it was determined that the best approach to completing the conservation process was to disassemble the ship again and freeze-dry its timbers to remove the remaining water. A 37’ foot long freeze dryer was built to accommodate the length of the ship’s longest timber. This new conservation approach also eliminated the transportation challenge of moving the entire ship from Collage Station to Austin in one piece.
The Bullock Museum’s exhibit planners decided this was an interpretive opportunity that could not be passed up. The special exhibition opening on October 25, 2014 is planned around the course of the six-month live-assembly of the hull timbers by the conservation team. The ship is being reconstructed, timber-by-timber, in full view of visitors over the run of the exhibit.

**This special Texas Archeological Society tour** will give participants an early view of the reassembly work at hand. David Denney, Director of Special Projects at the Bullock Museum, will lead the tour.

Taking a visitor-centered approach to interpretation, technology will allow visitors to expand their knowledge and deepen their appreciation. Thus, the overall experience will include: touch pad technology that showcases multiple views of artifacts; a 35’ wide screen media presentation of footage of the excavation (you may recognize several of your colleagues in the footage - albeit some 19 years ago); sound effects of the massive equipment used during the excavation; and first-person interviews from the practitioners involved. A scale model of the ship will be cut in half to show visitors how it would have been loaded and where the crew would have worked, lived, and slept. One of the most poignant and rare artifacts in the exhibit is the one visitors will encounter when they leave the gallery—the original French monarchy’s archival document listing La Belle as “lost.”

After the assembly is complete the ship will be moved to the museum’s main exhibit atrium in May 2015. The completed exhibit with the fully restored La Belle will open to the public on November 21, 2015. TAS Registration Badge [http://www.thestoryoftexas.com/exhibits/upcoming-exhibits](http://www.thestoryoftexas.com/exhibits/upcoming-exhibits)

---

**BTAS Prices Slashed!**

Get the 1962-1982 volumes for **$10**

More recent volumes are **$5**

*Buy a Ticket for a chance to win a collection of Bulletins at the Annual Meeting*
Getting There

Dr. Beth Erhart, chair of the Anthropology Department, has facilitated our visits to campus by supplying 15-passenger vans for our travel from the Hotel to the Gault/CAS Labs and back to the hotel. The Vans first pick-up at the hotel will be at 10AM. You must sign-up to have a seat reserved on the van at the time you want. We expect the vans to make a round trip hourly until 1:30PM, and make the last trip to return visitors to the hotel to leave the campus at 2:45PM.

NOTE: Meadows Center and Spring Lake Glass Bottom Boat Tours are on your own.
Bullock Museum Tour is on your own.

Maps and Directions will be available at the Registration Desk for the Meadows Center/Spring Lake and the Bullock Museum.

Register for any or all of these tours by contacting kefustes@yahoo.com

Schedule for A Walk in the Dark

We are offering three early morning tours for a visit to Ezell’s Cave Preserve. If you want to have a look at some other time that can probably be arranged on semi-short notice.

Friday, Saturday and Sunday mornings (October 24-26) will begin at dark thirty or 6:45 AM (sunrise is at 7:39).

Please call or e-mail me at am-wranglers@txarch.org to insure we are on for that morning. We will meet in the west parking lot of Embassy Suites and carpool from there. The drive is 3.6 miles and takes approximately 7 minutes. I would give you the address but that would take all the fun out of it. I can say it is near Wonder Cave.

Wear tennis shoes or boots and bring a drink if you wish. A headlamp or flashlight might be in order if you do not wish to stumble about. If times change, I will let you know. An associate or I will lead the tours.

Ron Ralph, Cave Preserve Manager
Texas Cave Management Association
Home: 512 280-9648; Cell: 512-797-3817

Rules of Order

For the TAS Business Meeting of the General Membership

Delegates: Current dues paying members of the Society are delegates to the Annual Meeting and have one vote per membership. Dues must be current and not in arrears. Nonmembers may not vote or make motions, but may attend the luncheon meeting.

Motions: Motions should be submitted to the President and Secretary far in advance of the Business Meeting so they can be included on the Agenda. All motions not listed on the Agenda shall be in writing, signed by the maker of the motion and carried to the President.

Obtaining the Floor: In order to obtain the floor for debate or to make a motion, the member will stand, address the chair, and raise their hand, then wait to be recognized by the President.

• Members/Delegates shall have three (3) minutes to make or present a motion.
• A motion must be seconded before it can be placed for action.
• One (1) minute shall be allowed for: question, answers or debate on the motion.
• The presenter of motion may speak to the support of motion only after several board members have responded to the motion and must contain their remarks to one (1) minute.

Parliamentary Authority: In matters not specifically addressed by these Rules or in the Bylaws of the Society, the current edition of Roberts Rules of Order Newly Revised shall be the parliamentary authority.
TAS Academies for 2015

and

TAS Celebrates 10 Years of Academies

TAS will be offering a Historical Archaeology Academy and a Ceramics Academy in Spring 2015. Please watch for more details available at the Annual Meeting and in the Winter Newsletter!

The Texas Archeology Academy sessions began 2003 after a year’s work on curriculum. The core academies are Texas Archeology 101, Lithics and Ceramics.

Archeology 101 includes several sessions in the classroom and a field day. These have been held at Houston, San Antonio, Fort Worth, San Angelo, El Paso, Corpus Christi, Tyler, Belton, Georgetown and Victoria. This academy offers an overview of archeology within anthropology and a definition of good field techniques. After power point lectures, students practice what they learned by working in the field. Archeology 101 is very popular and often requested. These are repeated every two or three years.

In Lithics classes, participants learn that projectile points are not the archeologists dream. Lithic debitage tells much more. One of the most popular segments of this academy is the demonstration of how to make stone tools. Numerous collections have been recorded after owners attended this academy. Lithics has been taught at San Angelo, Victoria, Fort Worth, San Antonio, Houston and Uvalde.

Ceramics Academy offers a keen look at pottery from ancient and historic times. Participants leave with a “pot” that they made after a demonstration by local potters. They also learn the diagnostic value of potsherds that often can put a time frame on a site. Ceramics sessions have been conducted in Dallas, Huntsville, San Antonio, Bastrop, Midland, San Marcos and College Station.

Other Academies have offered a variety of learning for TAS members and recruited new members as they are well-publicized on a regional basis. Rock Art, Historical Archaeology, Big Bend: A Regional Study, Geoarcheology, and ArcheoBotany have informed and instructed TAS members about recent archeological techniques.

We are proud that Academy sessions have been running for more than ten years. We often have folks request a specific Academy so they can catch a topic that they missed. If you have a new idea for a two-day course or would like to lobby for a topic or location, contact the Committee chair, David Yelacic, dyelacic@gmail.com and let him know your thoughts.

Dr. Harry Shafer answering a lithic technology question for an attendee at the 2014 Lithics Academy.

TAS Book Festival

There will be a special TAS Book Festival/Author’s Book Signing Event at the October TAS Annual Meeting. We will welcome eleven of our most distinguished book authors who will be in attendance to sell and sign their new publications. This special event will be held in the Book Room all day Saturday, October 25th beginning at 9:00 a.m. There is no charge to attend the TAS Book Fest and it will be open to the public to allow students and non-members the opportunity to participate. The authors will have copies of their books to sell and sign and will also sign previously purchased copies. Authors may take a few moments to introduce their books and speak about their writing efforts. The TAS Book Fest honors the authors in our group and is sponsored by Support Texas Archeology and History Research (S.T.A.H.R.). Here is the full roster of Authors scheduled for this event: Mike Collins and Clark Wernecke, Mary Black, Tom Hester, Gregg Dimmick, Harry Shafer, John Arnn, Britt Bousman and Bradley Vierra, Linda Gorski and Louis Aulbach. We hope to see you there!
President-Elect’s Report: Digitizing the Bulletin for Website Distribution

By Mary Jo Galindo

In the last few months, I have been spearheading an effort to get past issues of the TAS Bulletin digitized for posting in the members-only area of our website. The Texas Historical Commission has graciously allowed us to unbind and scan 12 volumes that are no longer in TAS’s inventory. We will rely on our inventory stock for the remainder of the publications that are not presently available through Gustav’s Library reprints. We have identified several volumes as priorities and will proceed with scanning the volumes in that order. As this is an on-going process, I will keep the membership appraised of our progress.

Speaking of inventory stock, the Executive Committee has approved dropping the price of the older BTAS volumes (1962-1982) to $10 in an attempt to sell our remaining supply. If you prefer holding a book in your hands as you read, or being able to see them on your bookshelf, here’s your chance to get them at a bargain price. As these volumes sell out, we will make the digital versions available. We have 50-100 copies of the more recent volumes in our inventory, so the price for those will be dropped to $5. The price of the ever-popular 1995 Volume 66 “red book” will remain at $75, but there are only a couple hard copies left, so now is the time to act. Look for an opportunity to purchase copies of the Bulletin at the Annual Meeting. I also encourage you to buy tickets for a chance to win a collection of multiple Bulletins at the San Marcos meeting.

As a reminder, BTAS volumes can be purchased online at: http://www.txarch.org/Publications/btas_sales/index.php
To see a complete list of articles for each volume, go to this URL and select “All” or the particular volume you are interested in:
http://www.txarch.org/Publications/btas/index.php

Marker for Cyrus N. Ray, Founder of TAS

The marker for the founding Father of the Texas Archeological Society was placed on his resting place in Oakwood Cemetery in Ft. Worth, Texas the week of May 12, 2014. The gravesite can be found in the Montgomery Johnson Family plot beside his wife, Mary, who preceded him in 1960. They had no children, but two nieces. We sought permission from the family, who gave us their support to purchase and place the marker. Many TAS members donated money at the 2013 Annual Meeting to help pay for the marker. It lies among beautiful, old oak trees with a gentle breeze blowing through the area. It has been by privilege to work on this project and see it accomplished. Past President Waldo Troell at an Executive Board Meeting first proposed this tribute to our founder in 2013. Many thanks to Waldo and all the TAS members who helped make this project possible.

Wendy Lockwood
New Members

Todd Ahlman & Ashley McKeown
Dottie & Randy Allen-Zumwalt
Laura Berghuis
Abigail Brown
Penny Bryant
Bradley Chase
Mike DeGiovine
John Florida
Vernon Gibson
Bruce Grethen
Cathy Heyman
James Horner
Donald W. Johnson
Diamond Kapanday
Zachary Lindsey
Dominic Kain Miller
Carol Montedonico
Ann Moreau
Charles Northcutt
Tami O’Brien
Jason Petty
Rebekah Planto
Allyson Plantz
Curtis & Marian Schonenberg
Jim Sievers
Kevin Stingley
Ashley Vance
Jeremy Velazquez
Barbara Weishuhn
Phillip Welborn
Jim Welch
Cheryl & Aria Wood

Donors Fund
Council of Texas Archeologists

Multicultural Program
Council of Texas Archeologists

Native American Field School
Scholarship Fund
AR Consultants

Undesignated Donations
Gladys Swanson

REMINDER—SILENT AUCTION—REMINDER

Keep looking around and gathering together donations for our TAS (fundraiser) Silent Auction at Annual Meeting.
Items do not need to be archeology related. Items can be sent to May Schmidt, brought to the September board meeting or brought directly to Annual Meeting.

Update on the JTAH

Greetings! The new “Journal of Texas Archeology and History,” a Study of the Texas Borderlands Region is now online and available at the click of a button. Articles have completed the peer review process and are posted at this all-digital publishing website: www.JTAH.org. Additional articles are at various stages of the peer review process and will be added in the coming weeks. Volume 1 remains open through December 31 and a new volume will open on January 1. Currently you will find the following articles plus a Special Publication:

Shrub, Scrub, and Grass: The Importance of Shrubland and Grassland Plant Communities to the Diet of the Late Prehistoric (A.D. 900-1535) Hunter-Gatherers of the Eastern Trans-Pecos Region of Texas, by Casey W. Riggs

Post of Lampasas: Forgotten Reconstruction Era U.S. Army Post (1867-1870), by Richard S. Jones

Evidence for a Long-Distance Trade in Bois d’Arc Bows in 16th Century Texas (Maclura pomifera, Moraceae), by Leslie L. Bush

Special Publication #1. A Bibliography of the Archeology, Bioarcheology, Ethnohistory, Ethnography, and History of the Caddo Indian Peoples, Compiled by Timothy K. Perttula

Authors and Researchers are encouraged to visit the JTAH website where details on manuscript submittal may be found. Additionally, we welcome other Special Publication ideas to be submitted. Thank you.
Beyond Documentation: 3D Data in Archaeology


Introduction

As the costs associated with the collection of 3D data continue to plummet, there is little doubt that the number of available archaeology-related 3D datasets will increase dramatically in the coming decade. While our analytical procedures continue to evolve as new applications are contemplated, analyses of 3D data are increasing in frequency within the archaeological literature. In this article, we seek to provide a brief overview of a few examples from our own research and explore some possibilities that may add value to existing collections. In the following pages, we discuss some of the ways that 3D data have been used in studies of morphometrics, public archaeology, excavation, and comparative endeavors.

With the rise of projects like Smithsonian X3D (2014) and the Virtual Hampson Museum (2009), alongside large digital repositories like the Digital Archaeological Record (tDAR) (2014), analytical value can be seen in easily accessed comparative databases that are becoming something of a reality. The digital nature of 3D data also allows for novel collaborations in ways that were previously unavailable. One example of this can be seen between the Center for Regional Heritage Research (CRHR) at Stephen F. Austin State University and the Virtual Curation Laboratory (VCL) at Virginia Commonwealth University. A selection of Caddo ceramics (the Middlebrook Collection) from East Texas was scanned at the CRHR and emailed to Virginia, where digital proxies of the vessels were animated, printed, painted, and exhibited. Additionally, one of the scans from a recent CRHR project (FIN-S7 from the Vanderpool Collection) is on display in a virtual museum in the United Kingdom (Melaney and Rigby 2014) that is open 24/7, including holidays. Through these collaborations, national and international publics are gaining access to collections that may otherwise remain unseen.

The most common method of 3D data collection occurs with a laser scanner; however, other methods (like photogrammetry) are also employed to create point clouds and textures. While the comparative advantage of the more regularly-employed 2D models has a great practical advantage (less time and data storage), they also reduce 3D objects to 2D approximations (Shott and Trail 2010). Data collected from both 2D and 3D datasets often do not exhibit a strong correlation, and 3D is seen as preferable since it is more faithful in both shape and dimensionality to the original object (Archer and Braun 2010; Shott 2014; Shott and Trail 2010).

Morphometrics

The application of geometric morphometrics (GM) (shape analysis) to archaeological datasets developed in the early 2000s, and—perhaps not surprisingly—began with the analysis of stone tools (Figure 1). The use of 3D morphometrics has helped to further elucidate changes in lithic morphology within specific archaeological sequences (Lycett et al. 2010; Lycett and von Cramon-Taubadel 2013), and is well-suited for interactive 3D models, but impractical for manual applications (Shott and Trail 2012). In contrast to standard orthogonal analyses (e.g., length, width, thickness, stem width, etc.), GM preserves information on the geometric relationship between dimensions (Shott and Trail 2010; Tompkins 1993), and has been used...
to analyze projectile points (Buchanan 2006; Charlin and González-José 2012; Grosman et al. 2008; Thulman 2012), formal tools (Lycett et al. 2010; Ioviţă 2011), flake scars (Clarkson 2013; Clarkson et al. 2006; Sholts et al. 2012), and the remaining cortex found on stone tools (Lin et al. 2010).

Unlike stone tools, few treatments have so far been explored for ceramics; a few cursory applications for small samples of Caddo vessels (Selden 2013, 2014; Selden et al. 2014), and another more objective analysis of Second Iron Age ceramics (Wilezek et al. 2014). One of the principal limitations to an analysis of ceramic vessel shape is the fact that ceramic classifications remain largely focused upon decorative motifs. Noting the additional attributes associated with variation that occurs in ceramic vessel shape may provide for a more fluid understanding of how morphology and motifs might/might not align, although the amount of data necessary to commence such a comparative undertaking is formidable and time-consuming to collect. However, it may be possible to use a modified paradigmatic classification model (see Perttula 2014), where decorative (qualitative) and morphometric (quantitative) data is coded to provide for a more holistic (inclusive?) approach to the analysis of whole/reconstructed vessels.

Public Archaeology

Archaeologists have an ethical obligation to reach out to the general public who directly or indirectly support our research, and often give their time freely to help us with our excavations and analyses. The Virtual Curation Laboratory (VCL) at Virginia Commonwealth University has placed a strong emphasis on public outreach from its establishment in August 2011 (McCusA tion 2013; Means 2014a, b, c, d, e; Means et al. 2013a, b). While the VCL’s experiences do not cover the full range of potential 3D documentation has for outreach, we have had fairly consistent results and learned some lessons that can aid others exploring outreach through virtual archaeology. In what, for lack of a better phrase, we can call the shiny principle, audiences of all walks of life and the full gamut of exposure to archaeology are interested in watching a 3D scanner’s lasers record the topological attributes of an artifact—particularly if this task is carried out in a darkened room. In general, we have found that there is little interest in manipulating a digital model on a computer screen with the exception of those individuals who already have a strong background in archaeology. Animations of 3D artifact models do attract the public’s attention if displayed on a computer or tablet screen, particularly when the animations are in color.

Ironically, the real power of 3D documentation of artifacts as a public outreach tool comes when digital artifact models are made more-or-less real again through 3D printing. Printed replicas of virtual objects create a tactile dimension for public outreach. Many individuals seem to enjoy handling an object, even if they know it is not real. They understand that they will never be able to touch the real artifact, either because it is too fragile or too unique, or because it is protected behind glass in a museum display. Being just a few steps removed from the real artifact is apparently still close enough for most people. Plastic artifact...
replicas can also be readily incorporated into on-site public interpretations. After an artifact is translated into a virtual form, it can be further manipulated in ways that can engage members of the public that might otherwise show little interest for the real object. The power and potential of 3D documentation for public outreach and interpretation has only begun to be realized (Coates 2014; Means 2014a, e).

Excavation

No matter where you work as an archaeologist, at one point or another you will be tasked to document and map something: an excavation unit-layer, a feature, or perhaps even an entire site. Depending on the size, morphology and complexity of what is being recorded, this routine, essential task can become daunting and time consuming. Pioneered by our colleague Mark Willis, archaeologists in Texas and across the world have begun using a new technique to produce highly-accurate site maps and generate 3D data with sub-millimeter resolution: Structure from Motion (SfM) photogrammetry (De Reu et al. 2013; Kenmotsu et al. 2012; Kjellman 2012; Liebman et al. 2013; Miller et al. 2012).

SfM is a digital photographic method that requires taking dozens—or sometimes thousands—of overlapping photographs of the subject (object, surface, feature, landscape, etc.) being recorded. These photographs can be taken from a drone, kite, blimp, held on the end of a pole, or simply by holding the camera in your hand (Willis et al. 2014). These photographs are then processed using specialized software that digitally stitches the photographs together—rendering 3D models, digital elevation models (DEMs), and orthographic photos of the subject matter. The Ancient Southwest Texas (ASWT) project at Texas State University has employed SfM to document landscapes, sites, features, excavation units, stratigraphic profiles, and rockshelter walls during our ongoing efforts in the Lower Pecos Canyonlands (Koenig 2014). Using the 3D data collected via SfM, we are able to analyze site morphology and stratigraphic changes, measure the volume of sediment excavated from each unit-layer, and preserve critical aspects of the site as we encounter it. Archaeological excavation and testing is inherently a destructive process, and the practice of excavation destroys intact deposits. Through the use of SfM, we are able to create a 3D record of archaeological sites, and the archaeological process. By creating 3D records of each excavated layer, level, and unit we can digitally preserve a record of primary context that is normally destroyed during excavation.

Comparative Collections

Another area where digital (especially 3D) data has real potential value is in curation. As the number and volume of curated collections continues to grow, archaeologists should be seeking new ways to put those collections to use through comparative analyses. The long-term value of artifact collections is not limited only to the historical significance of these holdings, but also lies in their ability to contribute to evolving research questions that may arise as our understanding about certain culture areas or practices continues to grow. As new patterns are defined in the archaeological record, referencing existing collections can be one way of verifying that these patterns extend beyond only a single site or deposit. Easily accessible digital data can be a boon for student, avocational, or professional researchers in cases where opportunities to travel to visit repositories in person may be limited. Often times, only certain basic measurements are taken when a collection is initially analyzed and described. For stone tools, this commonly includes length, width, and thickness, and perhaps a few other dimensions depending on the analyst’s particular interest or project requirements. However, subsequent researchers may be interested in other details that were not included in the original analyses. Online 3D digital renderings of collections would allow anyone with Meshlab (free 3D software) (Meshlab 2014) and Adobe Reader (see Felicísimo et al. 2013) to
collect their own data from collections, including previously studied ones, in ways that are tailor suited for that researcher’s interests. The addition of this technology to our intellectual toolkit also allows for the digital aggregation of public and private collections that too often remain unreported (see Pitblado 2014; Shott 2014).

One example of how this practice might help our general knowledge of the prehistoric past involves the shift from Late or Terminal Archaic to Late Prehistoric periods. This was one of the major transitions in most state wide regional chronologies, and is most often defined by the adoption of bow and arrow technology over spears and atlatls. While the exact nature and dating of this transition is a challenge (Lohse et al. 2014), another, related issue involves correctly identifying just which point styles best represent aspects of this shift. Overall point length and even maximum width may be poorly suited for accurately determining which types were used with arrows and which were likely to have been spear tips. This is especially true with transitional styles like small Darls, Fairlands, Edgewoods, and other types. One recently proposed index for distinguishing darts from arrows (Hildebrandt and King 2012) involves summing a point’s maximum thickness and neck width. Using this index, specimens measuring less than 11.8mm are identified as arrows, while those measuring greater than 11.8mm are identified as darts. In Central Texas and nearby regions, which types traditionally thought to occur around the end of Archaic commonly fall above or below this threshold? Based on this index, do any types seem to occur as both darts and arrows? We do not have these answers because we have not visited most of the curational facilities to measure extant collections. But if these holdings were available in digital (3D) format, it would be possible to answer these and other questions with relative ease.

Conclusion

The production of 3D proxies for various artifacts and landscapes yields a powerful platform for analysis, but it is equally important to note that each 3D model, itself, has a unique set of digital attributes that warrant discussion (see Archaeology Data Service 2009; Oxbow Books 2013). Each of us sees great potential in the application of this technology to the practice of archaeology; importantly, we also agree that once collected, all 3D models should be made publicly accessible barring publication embargos, mandated texture exclusions for culturally-sensitive objects, etc. By making an effort to continually push beyond documentation, we are effectively making an intellectual investment in altering the current practice of archaeology through providing ourselves—and others—with the analytical foundation needed to more accurately characterize the dynamic nature of these (intellectually) valuable artifacts.

References Cited

Archaeology Data Service


Kenmotsu, Nancy A., Leonard Kemp, and Lawrence L. Loendorf 2012 Jornada Rockshelters as Special Places: Investigations of 13 Sites along the Otero Mesa Escarpment, Fort Bliss Military Reservation, Otero County, New Mexico. Historic and Natural Resources Reports Nos. 11-12 and 11-26, Environmental Division, Fort Bliss Garrison Command, Fort Bliss, Texas.

Kjellman, Erik 2012 From 2D to 3D—A Photogrammetric Revolution in Archaeology? Unpublished Master’s Thesis, Department of Archaeology and Social Anthropology, University of Tromsø.

Liefman, Matt, Chester Walker, and Jennie Sturm

Lin, S. C., M. J. Douglass, S. J. Holdaway, and B. Floyd

Lohse, J. C., S. L. Black, and L. M. Cholak

Lycett, Stephen J., Noreen von Cramon-Taubadel, and John A. J. Gowlett

Lycett, Stephen J. and Noreen von Cramon-Taubadel

McCuistion, Ashley
2013 Promoting the Past: The Educational Applications of 3D Scanning Technology in Archaeology. *Journal of Middle Atlantic Archaeology* 29:35-42.

Means, Bernard K.
2014a Virtual Curation and Virtual Collaboration. In *Blogging Archaeology*, edited by Doug Rocks-Macqueen and Chris Webster, pp. 121-144. Landward Research Ltd. In Association with Succinct Research and DIGTECH LLC.

Means, Bernard K., Ashley McCuistion, and Courtney Bowles
2014b Two Years Before the Past: Activities in the Virtual Curation Laboratory @ VCU from August 2011 to December 2013. *Quarterly Bulletin of the Archeological Society of Virginia* 69 (1):3-16.

Means, Bernard K., Ashley McCuistion, and Clinton King

Means, Bernard K., Ashley McCuistion, and Courtney Bowles

Melaney, Mark, and Ken Rigby

Miller, Myles R., Lawrence L. Loendorf, and Leonard Kemp
2012 *Picture Cave and Other Rock Art Sites on Fort Bliss*. Historic and Natural Resources Report No. 13-36, Environmental Division, Fort Bliss Garrison Command, Fort Bliss, Texas.

Meshlab

Oxbow Books (Corporate Author)

Perttula, Timothy K.

Pitblado, Bonnie L.

Selden Jr., Robert Z.
2013 Exploratory 3D Documentation and a Preliminary Geometric Morphometric Analysis of NAGPRA Vessels from the Washington Square Mound Site (41NA49), Nacogdoches County, Texas. Reports in Archaeology No. 1. Center for Regional Heritage Research, Stephen F. Austin State University, Nacogdoches.

Selden Jr., Robert Z., Timothy K. Perttula, and Michael J. O’Brien

Shotts, S. B., D. Stanford, L. M. Flores, and K. T. Wärmländer

Shott, Michael J.

Shott, Michael J. and Brian W. Trail

Smithsonian X3D

The Digital Archaeological Record (tDAR)

Thulman, D. K.

Tompkins, Charles N.

Virtual Hampson Museum

Wilczek, J., F. Monna, P. Barral, L. Burlet, C. Chateau, N. Navarro

Willis, Mark D., C.W. Koenig, and S.L. Black
2014 Archaeological 3D Mapping: The Structure from Motion Revolution. Manuscript on file, Department of Anthropology, Texas State University—San Marcos.
Texas Historical Foundation Awards Gift to Produce New DVD about the Gault Site

AUSTIN, Texas—The Texas Historical Foundation made a formal presentation of an $8,000 check to the Gault School of Archaeological Research on June 2. Director Dr. Tami Erickson presented the grant award to GSAR representatives, Dr. Clark Wernecke, executive director, and Dr. Mike Collins, chairman. THF funds will be used to produce a second, 30-minute DVD and a companion study guide explaining how excavations and research at the Bell County site have added new evidence to hypotheses about the peopling of the Americas. In 2008, THF provided funds for “An Adventure in Time,” the first short video explaining the importance of the work underway at the Gault Site.

David D. Martinez, THF president, said “We are proud to once again partner with the GSAR as this educational video sheds new light about Texas’ earliest inhabitants. We anticipate that this updated DVD will be a welcome resource for teachers in social studies classrooms across the state.”

Since 1954, the Texas Historical Foundation has funded preservation and education projects around the state and helps promote the cultural legacy of Texas. The group’s main efforts include its award-winning Texas HERITAGE magazine and a preservation grants program. For more information, or to join the Foundation, use the on-line membership form found on the organization’s website, www.texashistoricalfoundation.org.

Spotlight on Historic Camp Logan

Linda Gorski

One of the most interesting chapters in Houston’s history was written in what is now Memorial Park along the banks of Buffalo Bayou. For it was here that the U.S. Army’s sprawling Camp Logan was built in 1917 to house 44,000 soldiers as they trained for combat in WWI. The thing that surprises us is how little you will hear or read about Camp Logan in any of the books on Houston’s history. Even the Handbook of Texas dedicates just one paragraph to it!

The Heritage Society Museum Gallery in Sam Houston Park is changing all that with an exhibit that opened to public on August 13th entitled “Answering the Call to Serve: Camp Logan, Houston, Texas 1917-1919.” Co-curated by Houston Archeological Society President Linda Gorski and HAS Vice-President Louis Aulbach, the exhibit contains artifacts, letters, post cards, photographs and other items from the museum’s archives as well as from personal collections of several Houstonians including Robbie Morin who has one of the largest collections of Camp Logan ephemera in the country. The exhibit is scheduled to run through November 15, 2014.

On August 21st, Gorski and Aulbach presented a program, part of the Heritage Society’s Finger Lecture Series, in the Heritage Society Tea Room which adjoins the museum gallery. The lecture was entitled “Camp Logan-Houston’s World War I Emergency Training Center.” This presentation was a tribute to the soldiers who trained at Camp Logan, including nine Medal of Honor winners and seventy-one African American soldiers who won the French Croix de Guerre! They also signed copies of their new book Camp Logan Houston Texas 1917-1919.

Gorski and Aulbach will repeat this program on November 4 at 6:30 p.m. at the Houston Museum of Natural Science in the Wortham Giant Screen Theater. See http://store.hmns.org/Selection.aspx?item=2362&sch=613784 for more information.

Louis Aulbach and Linda Gorski invite you to see the history of Camp Logan displayed at the Heritage Society Museum Gallery in Sam Houston Park.

Texas Archeology ✦ 25
Reflections on the 30th Anniversary of the TASN

Rebecca Shelton, THC

The Texas Archeological Stewardship Network (TASN) is described as a group of highly trained and motivated avocational archeologists who assist the staff at the Texas Historical Commission, yet there is much more to their contributions than this brief description implies. Since this year is the 30th anniversary of the network, several conversations were held with some tenured Stewards to understand the depth of contributions made by the members, and to reflect on their accomplishments over the years.

In the Beginning

The TASN was first developed by State Archeologist, Robert Mallouf with assistance from Larry Banks, then archeologist for the United States Army Corps of Engineers, Southwest Office, along with Jim Word and Bill Richmond of the Texas Archeological Society (TAS). It was 1984, and the Texas Antiquities Code had been in place for 15 years. Due to many factors, such as budget and staffing cuts and the vast scale of the state, the small staff of archeologists at the Texas Historical Commission was unable to investigate each new discovery or to follow up on every report of looting and destruction of sites. Consequently, the Office of the State Archeologist reached out to experienced avocational archeologists for help, and the TASN was born. Several of the first 10 Stewards to be invited to assist in the preservation and interpretation of the states’ irreplaceable resources, such as Sheldon Kindall, Richard (Dick) Gregg, Enrique Madrid, Bob Turner, and Jacque Jacquier, were already actively assisting with site identification and recording.

Kindall saw the invitation to join the TASN as a natural progression from his participation in the TAS. “We enjoy looking for sites and learning the history,” and the formation of the network enabled him and others to participate on a statewide level. Jay Blaine, TASN member since 1992, agreed that the network has provided him with many research opportunities, as well as the ability to collaborate with professionals and avocational archeologists.

When Blaine was selected by the Stewardship Advisory Committee, he accepted the invitation. He continues to accept the role as a Steward as he sees the value that the TASN provides the archeological community as a whole. “One of the foremost tools required for good archeology is communication” he noted, and this involves a “clear need to share timely information, and other resources, among professional and avocational archeologists.”

In addition to the commitment to sharing information, another one of the strengths of the TASN is the diversity of the membership, with each Steward bringing their experiences from professions such as engineering, education, the military, and the field of medicine. “They are a group of dedicated individuals with a variety of talents” that share a common passion, said Blaine.

Subsequent Decades

By 1994, the TASN membership had grown to 50 individuals. In addition to recording sites and assisting landowners, the Stewards have been asked by the THC staff to participate in a wide variety of preservation related activities. These include conservation of artifacts, participating in large scale surveys, conducting excavations, providing public outreach, and in some instances, to speak before the state legislature and senate on behalf of archeological resources. When asked about some of their tenure highlights, a few projects stood out for R.C. Harmon, such as La Belle, the Gault site, and the Wilson-Leonard site. Gregg, Kindall, and Madrid explored and recorded sites along much of the Texas coast line. Nothing is too tedious for this group, and after block excavations were completed at Wilson-Leonard, Harmon admitted that he “spent one year sorting material under a microscope for artifacts like the inner ear bone of a fish, thinning flakes, hackberry seeds, etc. In 1997-1998, Dan Potter, retired THC regional archeologist, developed a resurvey project with the TASN to measure the rate of site survival in Texas. Gregg noticed a “significant change in site condition” and a high rate of site loss. This study resonates to this day, and it reinforces the importance of recording sites so the information they contain may be preserved.

The TASN continued to grow with the launch of the Marine Stewards program in 2002, and by 2004, the overall membership reached 124. Yet, as with every organization, change is inevitable. With the modification of the Texas Health and Safety Code, Chapter 711 in 2009, excavations of burials on private property by members of the TASN ceased. Yet Gregg, a self-taught osteologist, does not regret the opportunities he had and is grateful for what he was able to contribute. Gregg stated that one of the highlights
as a steward was finding a copper needle while working at 41FB2, a large, Archaic to Late Prehistoric campsite and burial ground that is now, unfortunately, destroyed.

Despite the severe staff cuts at the THC in 2009, and the subsequent loss of the Stewards publication, The Cache, the TASN membership has continued to contribute to publications and present their findings at regional meetings and conferences. Blaine is currently working on a publication of his findings from Winkler 1, a pure Midland period site in West Texas. As for field work, Kindall has spent the last several years working with THC regional archeologist Jeff Durst in the search for Champ d’Aisle in Liberty County.

The Future of the TASN

The future for the TASN holds more challenges, yet equally, more opportunities. The mission to identify and document sites is still as urgent today as it was 30 years ago, and the need for landowner assistance continues. In May of 2014, the Archeology Division nominated 12 new Stewards to join the network. They all accepted, and joined the rest of the members this August at the annual workshop in Kerrville. To hear more about what the Stewards are working on, please join us in October at the TAS Annual Meeting for the Symposium as we celebrate the 30th anniversary of the TASN and the 45th anniversary of the Texas Antiquities Code.
Recently, TxDOT archeologists have had the opportunity to evaluate several proposed transportation projects with recorded sites in the area of potential effects. In the example discussed below, the combination of archeological fieldwork, project planning, and coordination with district personnel achieved avoidance of the site in question without impacting the transportation goals.

**Bridge Replacement Project in Motley County**

Prompted by a proposed bridge replacement project in Motley County that included a temporary road to bypass the construction area, TxDOT archeologists Chris Ringstaff and Jim Abbott conducted National Register of Historic Places (NRHP) / State Antiquities Landmark (SAL) testing at prehistoric site 41MY31. Located in the Caprock Canyonlands, the site is situated on an alluvial terrace capped by Late Holocene to Modern dune deposits. Material was found in both the alluvium and dune sand. Although analyses are ongoing, the investigations encountered three burned rock features and a probable pit feature. The site is in proximity to Lingos Formation gravels which were utilized for hearth stones and as a chipped stone raw material resource. Several flakes of Tecovas jasper were also identified.

The burned rock features consisted of small concentrations of burned quartzite cobbles with sparse chipped stone flaking debris, a few faunal elements, and a single sample of in-situ datable carbon that provided a date around 5757 BC. During mechanical trenching, a pit feature was cleanly bisected by the trench (see Figure 1) measuring approximately 60 cm in diameter and 45 cm in depth. Pit fill sediment was excavated separately from the surrounding matrix. Subsequent analysis of the charred organic material revealed post oak, mesquite and acacia charcoal. Samples of the wood charcoal were submitted for radiocarbon analysis and yielded ages between approximately 5522 and 5781 BC.

As the potential NRHP / SAL eligibility of 41MY31 became increasingly apparent during excavations, meetings were concurrently conducted in the field between TxDOT archeologists and Childress District engineering and environmental staff. Because of the engineering flexibility in the placement of the proposed temporary bypass road, it was agreed that a redesign would be the best course of action thereby avoiding impacts to the site, mitigation costs and scheduling delays. As a result, the currently proposed revised design shifts the proposed temporary road to completely avoid impacts thus preserving 41MY31.

![Figure 1. Feature 4 as seen in north wall profile of Backhoe Trench 5, site 41MY31.](image-url)