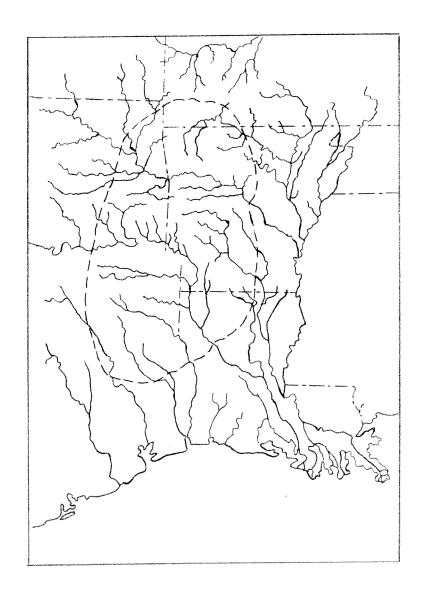
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ARCHEOLOGY



Volume 10, Number 4

January, 2000

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Editor's Page



Welcome to the year 2000, the last year of the second millennium. Just think about it another chance for a big party! And without having to worry about the Y2K bug! Just as soon as people realize this, they're going to concede that this is indeed the correct reckoning!

This is the last issue of Volume 10, actually coming out on time. Volume 11(1) is scheduled to come out in April. I already have material for it, about the Norman site, located just a few miles from the Harlan site in Wagoner County, Oklahoma. We will reprint the original article by J. Joe Finkelstein in *The Oklahoma Prehistorian* and accompany it with an article on the radiocarbon dates from the site by Dan Rogers, Lois Albert, and Frank Winchell, and another article on

site description. Although Norman is an important mound site in the Northern Caddoan Region, little has ever been published about it. Hopefully, this will be an incentive for everyone to renew their subscriptions.

I do have a couple of manuscripts in hand for future issues (Todd and Perttula), but I will need more. Of particular concern, however, is the fact that we have had very little regional news submitted for the last few issues. Thanks much to those who have sent in items. Please send in short summaries of what is going on in your part of the region, so that we can keep everyone up to date.

Hopefully, I'll see you all at the Caddo Conference in Natchitoches. Travel safely!



Regional News



Texas

Current Research in Northeast Texas

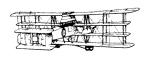
Archeological & Environmental Consultants (Austin and Pittsburg) recently completed the archeological survey of the proposed Lake Naconiche for Nacogdoches County. Lake Naconiche is a proposed 1200 acre floodwater and recreational structure located on Naconiche Creek, a tributary to Attoyac Bayou, in Nacogdoches County, Texas. Timothy K. Perttula was the Principal Investigator, Bo Nelson was the Project Archeologist, and C. Reid Ferring served as the Project Geoarcheologist.

During the archeological survey of approximately 500 acres of lands not covered with swamps or wetlands in the Naconiche Creek and Telesco Creek floodplains, 62 prehistoric and historic archeological sites were found; the three historic sites include a late 19th century cemetery just outside the proposed lake, and two mid-20th century structures. Site density is a very high: one site per eight acres. The sites are situated on small pockets of Late Holocene alluvium, floodplain rises, ridge toe slopes, and on the crest of sandy uplands.

Twenty-five of the sites have prehistoric pottery, and most of these date to the Middle to Late Caddoan periods, but several also have plain sandy paste pottery and dart points indicative of Woodland period use. At least two of the prehistoric sites have well-preserved midden deposits with animal bones, ceramics, and charred plant remains; these sites occur in Late Holocene alluvium. Another eight prehistoric sites have preserved animal bone, suggesting that midden deposits and/or features may be present there.

Our impression is that prehistoric residential Caddoan sites -- probably farmsteads and small villages -- are common throughout the Naconiche Creek valley, as are Woodland sites. Archaic sites are also well-distributed across the project area, and are marked by scatters of chert and quartzite lithic debris, small amounts of burned rock, and an occasional chipped and/or groundstone tool. The Archaic sites tend to occur in areas of deeper sands on upland landforms.

Tim Perttula



Meetings and Events



January 20 - April 30

Geoarchaeological Field School, Gault Clovis site, TX. Included are training in site excavation procedures and geoarchaeology, techniques for photographing and recording archaeological data, laboratory processing and sorting of archaeological materials, and evening lecture series on the application of archaeological theory to field archaeology. Contact: Harry Shafer or Michael Waters, Anthropology Department, Texas A&M University, College Station TX 77843; phone 409-845-5242; email h-shafer@tamu.edu or mwaters@tamu.edu

February

24-26 *1830s* Fur Trade Rendezvous, Fort Towson Historic Site, Fort Towson, Oklahoma. 8 a.m. to 5 p.m. each day. Fee \$1 per car. For more information, call (580) 873-2634.

25-26 *42*nd *Caddo Conference*, Natchitoches LA. This will be early this year because of an early date for SAA and conflicts at Natchitoches during March. For additional information and forms, see the following pages.

March

22-24 Geological Society of America (GSA), southeastern section meeting. Westin Francis Marion Hotel, Charleston SC. Theme section 6: Petrographic and Chemical Methods in the Analysis and

Interpretation of Historic Artifacts. For more information, contact Michael S. Smith, Department of Earth Sciences, University of North Carolina, Wilmington NC 28303-3297; telephone (910) 962-3496; email smithms@uncwil.edu; website http://www.geosociety.org/profdev/sectdiv/southe/00semtg.htm

25 7th East Texas Archeological Conference. Kilgore Junior College, Kilgore TX. See pages following this section for registration forms and call for papers. For more information, contact Mark Walters, Director of Region 4 for Texas Archeological Society; 23703 FM 2767, Kilgore TX 75662; telephone (903) 983-1765; email walters@tyler.net.

April

5-9 65th Annual Meeting of the Society for American Archaeology. Marriott Hotel, Philadelphia PA. For more information, contact the SAA Headquarters, 900 Second St. NE #12, Washington DC 20002; telephone 202-789-8200; email: meetings@saa.org: website http://www.saa.org

9-12 76th Annual Meeting of the Southwestern and Rocky Mountain Division (SWARM) of the American Association for the Advancement of Science (AAAS). The meeting will be held at New Mexico State University. Deadlines for abstracts is 12 February

2000. Please check the web-site for more information and to register online: http://lamar.colostate.edu/~dnash/ If you need further information, please contact: Dr. Donald J. Nash, Executive Director, AAAS SWARM, Department of Biology, Colorado State University, Fort Collins, CO 80523; email dnash@lamar. colostate.edu

14-16 Y2K Fieldtrip, South-Central Cell of the Friends of the Pleistocene, Northcentral Texas; sponsored by the Center for Archaeology Environmental Department of Geography, University of North Texas. The Upper Trinity River Basin will be the focus, with field stops illustrating alluvial/eolian sedimentary environments and alluvial soils. Visits will be made to the Aubrey Clovis site, the George King Dalton site, and several middle and late Holocene localities. For more information, contact: Reid Ferring, PO Box 305279, University of North Texas, Denton TX 76203; fax 940-369-7550: email ferring@unt.edu

May

15-19 32nd International Symposium on Archaeometry. Maria Isabel Hotel, Mexico City. One of the topics for the meeting is Chronology of Early Humans in the Americas, convened by Gunter Wagner. The main theme session for the symposium will be "Geophysical Study of Archaeological Remains Under Cities". Registration rate is \$220 USD for regular, institutional, or academic; \$85 for currently enrolled students, and \$85 for accompanying person. This fee includes a reception on Sunday evening and guided

tours and receptions on three evening at the National Museum of Anthropology and the Museum of the Great Temple. Tickets for the Thursday evening closing banquet will be \$35 USD. A postconference full-day excursion will visit the archeological site of Teotihuacan and conclude with a banquet/reception; cost will be \$25 USD per person. Other excursions will be announced later. You can register online at the website. For more information, contact Archaeometry 2000. Institutio de Investigaciones Antropologicas, UNAM, Circuito Exterior s/n. Ciudad Universi-taria, Del. Coyoacan, Mexico City, DF 04510; fax 52-5-622-52-5-665-2559; email: 9651 or archaeom@servidor.unam.mx; website: http://www.archaeometry.unam.mx Rates at the hotel will be \$100 USD + tax per room, single or multiple occupancy. There are less expensive hotels in the area for students. The fact that there are reception/buffets on several evenings will reduce food expenses. The hotel is on the Avenida Reforma, near Chapultapec Park and the National Museum Anthropology.

19-21 The Third National Conference on Women and Historic Preservation. Mount Vernon College, Washington DC. Submit proposals for presentations (papers, panels, or workshops) on any aspect of women and historic preservation to: Gail Dubrow, Conference Chair, Conference on Women and Historic Preservation, Preservation Planning and Design Program, University of Washington, PO Box 335740, Seattle WA 98195-5740; email: womenpres@hotmail.com; website:

www.caup.washington.edu/WomenPres

21-24 16th Biennial Meeting, AMQUA, Continuing Education facility, Hilton Inn, Fayetteville, Arkansas. The theme of the meeting is Climate Variability. A welcoming party and Tuesday night dinner are included in the registration fee. Short courses and field trips will be offered before and after the meeting. A limited number of travel grants will be available by competitive award for students, based on their paper abstracts. For more information, see the AMQUA website at http://vishnu.glg.nau.edu/amqua/ or contact the meeting chair, Peggy Guccione, phone 501-575-3354, email guccione@comp.uark.edu, or the program chair, Robert Webb, phone 303-497-6967, email Robert.S.Webb@noaa.gov

June

Conference. Jerusalem. There will be sessions on archaeology, calibration of the ¹⁴C time scale, geophysics and geochemistry of ¹⁴C, cosmogenic radionuclides, environment paast and present, global change, glaciology, hydrology, oceanography, geology, and soils. Contact: 17th International Radiocarbon Conference, PO Box 29041, Tel Aviv61290, Israel; phone +972-3-517-5150; fax +972-3-517-5155; email trgt@netvision.net.il; website: http://www.radiocarbon.co.il/

July

10-14 50th Annual Meeting of the International Congress of Americanists. Warsaw, Poland. The theme is "Praying

for Rain: Style and Meaning as a Response to the Environment in Ancient American Art and Architecture". This symposium will address art and architecture as the most tangible and enduring manifestation of human reaction to the environment in the Americas. Interdisciplinary papers will incorporate ecological, archeological, ethnohistorical, and art historical data. For more information, contact E. Michael Whittington, Curator of Pre-Columbian and African Art, Mint Museum of Art, 2730 Randolph Rd., Charlotte NC 28207; telephone (704) 337-2074; fax (704) 337-2101; email: mwhittington@mintmuseum. org, or Virginia E. Miller, Associate Professor, Department of Art History, University of Illinois, 202A Henry Hall, 935 W Harrison St., Chicago IL 60607-7039; telephone (773) 413-2467; fax (773) 413-2460; email: vem@uic.edu.

12-14 5th International Ancient DNA Conference. Manchester, England. For more information, contact Terry Brown, email adna5@bi.umist.ac.uk

November

15-19 The 99th Annual Meeting of the American Anthropological Association, San Francisco Hilton and Towers, San Francisco CA. The theme will be "The Public Face of Anthropology". The submission deadline is April 19, 2000. For more information, contact AAA meetings, 4350 N Fairfax Drive, Suite 640, Arlington VA 22203-1620; telephone (703) 528-1902 ext. 2; email: imeier@aaanet.org

Letter from Mark Walters

January 1, 2000

I would like to invite you to attend and participate in the 2000 East Texas Archeological Conference to be held 8:30 AM to 4:30 PM Saturday, March 25, 2000 on the campus of Kilgore Jr. College in historic Kilgore, Texas. Kilgore College has offered the use of their new Student Center Ballroom for this occasion. In addition to being a very adequate facility, we will be able to enjoy a catered box lunch without having to worry with leaving the campus at noon. The adjoining Kilgore Oil Museum is a must for those who have never been. Kilgore is easily reached from all areas of Northeast Texas and has three new motels in addition to several others. A list is enclosed.

The purpose of this conference is to provide a service to the general public and TAS members on a regional level by sharing information concerning local projects, recent research relevant to the East Texas area, and areas of concern in the future. If you have information concerning the East Texas area that you would like to share I encourage you to fill out the enclosed call for papers form and return it to Tim Perttula as soon as possible.

Also, enclosed is a registration form that I encourage you to fill out and return to me promptly, noting the March 15 deadline for the catered lunch. Please make copies of these forms and give to friends and come and join us in Kilgore.

One other note of interest. Douglas S. Frink, OCR Carbon Dating, Inc., plans to attend and discuss the OCR (Oxidizable Carbon Ratio) for dating archeological features. We also hope to have a field trip with Mr. Frink Sunday morning to a nearby site for some hands on experience.

Yours truly, Mark Walters

Kilgore Hotel/Motel Facilities

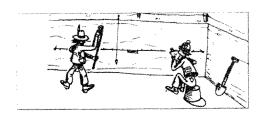
Best Western Inn of Kilgore 1411 N. Highway 259 903-986-1195

Days Inn 3805 N. Highway 259 903-983-2975 Holiday Inn Express 3298 N. Highway 259 903-986-3533

Kilgore Community Inn 801 N. Henderson Blvd. 903-984-5501

The Ramada Inn 3501 N. Highway 259 903-983-3456

8th Annual East Texas Archeological Conference Registration Form



Time & Date: 8:30 a.m. to 4:30 p.m. March 25, 2000 Place: DeVall Student Center - Ball Room Kilgore Jr. College, Kilgore, Texas

Name(s):			
Address:			
Phone: Home()	Work()	email()	occontinuos
Meeting Registration:	# of persons @	\$3.00	
Catered Box Lunch:	,	\$6.00 Jamount \$	

Registration must be received by March 15th to reserve lunch.

Registration at the door will be \$5.00. Lunch not included.

Please return your completed registration form today.

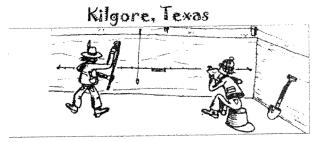
Enclosed is a list of area motels.

Mail Registration Form to: Mark Walters 23703 FM 2767 Kilgore, Texas 75662

Checks Payable to: Friends Of Northeast Texas

East Texas Archeological Conference

March 25th, 2000 Kilgore Jr. College DeVall Student Center - Ball Room



Call For Papers Conference General Topic: East Texas Archeological Update

***	Name:
**	Paper Title
4 [‡] +	Abstract: (150 words) You may email your abstract to TKP4747 @ aol.com
**+	[Need: Smin 10min 15min 20min
***	1 Need: Projector_Overhead_Display Table_Other_

Return To: Timothy K. Perttula Ph.D 10101 Woodhaven Drive Austin. Texas 78753-4346

February 25 - 26, 2000

Northwestern State University Department of Social Sciences Natchitoches LA 71497

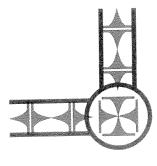
Call for Papers

Conference General Topic:

Y1K to Y2K -The Caddo and Their Neighbors

Individual paper	Session (# of participants)
Name:	
Paper Title:	
Abstract (150 words):	act to lottw@alpha.nsula.edu

(Please also fill in reverse side of page)



February 25 - 26, 2000

Northwestern State University Department of Social Sciences Natchitoches LA 71497



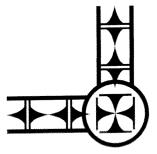
Equipment needed for presentation, if any:

Do you need a table for book sales? ____ yes ____ no

Will you be bringing item(s) for the silent auction? ____ yes___ no If yes, please record items below or email your list to lottw@alpha.nsula.edu

Hotel accommodations:

A block of rooms has been set aside for the Caddo Conference at the Ryder Inn in Natchitoches for February 24, 25, and 26. The price of these rooms will be \$45.00 + tax. To reserve one of these rooms, please call Ryder Inn at (318) 357-8281. A list of motels and bed & breakfasts in Natchitoches was in CAN 10(3).



Registration Form



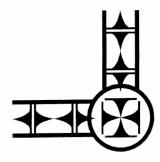
Pre-registration:	\$10.00
Registration at conference:	\$12.00

Please make check payable to: The NSU Anthropological Society

Name: —	
Title: —	
Organization:	
Address:	
Total # of people:	Amount enclosed: \$

Mail completed registration form to:

The NSU Anthropological Society Department of Social Sciences Northwestern State University Natchitoches LA 71497



The Oklahoma Prehistorian, Volume II(1)

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¹ March, 1939

Bio-File²

David A. Baerreis, author of "Two New Cultures in Delaware County, Oklahoma" in this issue, has done most of his archaeological work with the University of Oklahoma. He is at present supervisor of the WPA Archaeological Project in Delaware County. Previous to this, Mr. Baerreis assisted in excavation of village sites at Wynnewood and Pauls Valley, Okla. under sponsorship of the University of Oklahoma.

Mr. Baerreis studied at New York Jr. College and the University of Oklahoma.

H.R. Antle, Oklahoma-born author of "A Bluff Shelter in Pontotoc County, Okla." in this issue, has written several anthropological and historical papers for Oklahoma Historical Society's *Chronicles of Oklahoma*. He has written two papers that have been approved for publication in *American Antiquity*.

Mr. Antle has assisted in the excavation of the Wagoner mound and the Wynnewood village site, sponsored by University of Oklahoma. His graduate work was done at University of Oklahoma.

Clark Field: The Society has elected Clark Field, collector and authority on Indian basketry, as its President for 1939. Mr. Field was active in organization work

of the Society, and has been a trustee since the Society's inception.

In accepting the presidency, Mr. Field announced that "if the Oklahoma State Archaeological Society wants to live and grow it must justify its existence by making a worth-while contribution to society. So far we have only entertained ourselves."

"We are amateurs," he said, "not scientists. If we adopted a long-term program, such as classification of potshards of Oklahoma sites or extended our surveys of sites in Oklahoma, it would give us the needed interest to develop a society. Besides, it would be lots of fun."

Philbrook: Through the "WP" monogrammed gate, Tulsans soon will be entering into Philbrook Museum, repository of art, anthropological, archaeological and botanical exhibits.

Philbrook — palatial mansion and landscaped terraces — was donated to Tulsa by Mr. and Mrs. Waite Phillips.

The Oklahoma State Archaeological Society, it is believed, will have a definite part in establishing Philbrook as a center of archaeological learning.

Mr. Phillips is a life member of the Society.

² The Oklahoma Prehistorian included short biographies for authors and society officers, as well as other facts of interest.

TWO NEW CULTURES IN DELAWARE COUNTY, OKLAHOMA3

David A. Baerreis

The Mode site (*ed. note*: 34DL39) is an extensive village site on the banks of Grand River. Only a small portion of the site has been explored as yet, so the scope of our knowledge of this aspect will soon be considerably expanded.

Cultural remains were found scattered through about three feet of soil and in three cache pits which extended below this into yellowish, sandy subsoil. The pottery found in the various levels appeared to be quite homogeneous.

The paste of the pottery ranges in color from grey-black to brown, red or buff. A slip, usually red or buff, is sometimes present on the exterior or both exterior and interior. The temper is predominantly shell, occasionally grit or pulverized pottery being added. In all cases shell was the most abundant tempering material. The texture is variable, being occasionally soft and crumbly but normally hard and firm. The variation in texture is possibly due to a leaching action since in a large

percentage of the pottery the shell temper had dissolved leaving shallow pits. When a sherd is broken the original shell temper can still be seen in the interior. Medium sized temper (2-4 mm) is found in 66% of the pottery. The thickness of the sherds is predominantly thin and medium, with 53% thin (under 3 mm) and 42% medium (3-6 mm).

Several types of vessels can be recognized from the rim sections. A common form was the wide-mouthed bowl. The most abundant was the olla, the rim usually being very short and ranging from straight to recurved and flaring. Basal sherds are all flat and round in outline.

Only 7% or 50 out of the total number of 726 sherds bore a decoration (*ed. note*: see Figure 1). The body decorative elements consist of broad trailed lines, fine trailed line, incised lines and a wedge-shaped punctate element formed by pressing a small cylinder, such as a reed, held at an acute angle into the soft clay. The broad

³ Condensed from reports of the Delaware County section of the WPA Archaeological Project under the direction of Dr. Forrest Clements of the University of Oklahoma. [ed. note: WPA reports are filed at the Oklahoma Museum of Natural History, The University of Oklahoma. In addition, several boxes of WPA records are curated in the Western History Collection archives, The University of Oklahoma.]

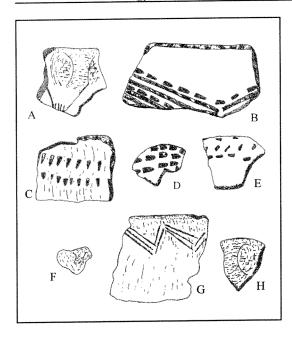


Figure 1. Sherds from the Mode site: a) strap handle, fine trailed decoration; b) punctate lip, punctate and broad trailed decoration on body; c,d,e) punctate decoration on body sherds; f) small decorative handle; g) incised decoration; h) strap handle.

trailed lines occur bordered by punctate elements or in a pattern where two trailed lines alternate with punctate elements. The punctate elements occur alone in horizontal rows of vertically placed elements, rows of horizontal elements and a combination of horizontal and vertical elements. The incised lines are found in diagonally opposed groups of two or three lines forming a zig-zag pattern, and in alternate areas of vertical and diagonal lines. The fine trailed lines are found in a single zig-zag line with short trailed lines at the lower angle.

Ten of the 18 decorated rim sherds found have a decoration on the lip. Seven are the

ordinary wedge-shaped punctate type already described placed parallel to the curve of the rim. Two were set diagonally to the rim and one sherd had a diagonally notched lip. Three handles bore punctate impressions upon the handle itself.

Only nine projectile points were found. Of these, four were large stemmed points. The remainder were small triangular points. The large stemmed points were all found close to the surface, only one being found below the plow line. The small triangular points were considerably deeper, two being found in caches. They appear to be definitely tied in with the culture, whereas the connection of the large type is problematical.

End scrapers were present both in the regular strata and in caches. They varied in shape but normally taper in the back. Some were carefully retouched on all edges, whereas others were retouched only on the end and had a slight dorsal keel. Flake knives and side scrapers were common. One flake knife has its opposing edges beveled on opposite sides of the knife.

Stone drills are long and slender with the base carefully finished. Both a round base and a convex base were found. Three chipped axes were found well below the plow line. The axes are double-bitted, contracting at the center of the implement, with one end the primary cutting edge. A piece of chert, 19.6 cm long and triangular in cross-section, has been worked into what would serve admirably as a fist axe. The blunt end has been pecked until no sharp edges were left on the chert while

the pointed edge is sharp and unworn.

One polished celt of a light, porous limestone was found. Sandstone abrading stones were abundant. A few of these are rectangular and bear wide, straight grooves that could be used as shaft polishers. The remainder are irregular in shape and have tapering grooves probably used for sharpening bone implements. Rounded pecking stones were numerous. Oval shaped manos of sandstone and limestone, carefully worked into shape, were found. More abundant, however, were irregular muller stones with one surface showing its use in grinding.

One rib was found having a narrow edge carefully polished and bearing a series of notches. A blunt antler tip, possibly used as a flaking tool, was also found.

The decorative complex bears a decided resemblance to the Oneota Aspect. Additional excavation is necessary to increase the number of decorative patterns, and to confirm or deny the inclusion of the various implements mentioned in the cultural pattern. The assigning of the chipped axe, which is so abundant in surface material of this region, to a definite culture seems important.

Our second new culture was found at the Cooper site at the mouth of Honey Creek (ed. note: 34DL33 and 34DL49). The material here was also found scattered through the top soil.

The pottery complex is entirely different. The paste is normally grey or black. A soft slip, red or buff in color, almost approach-

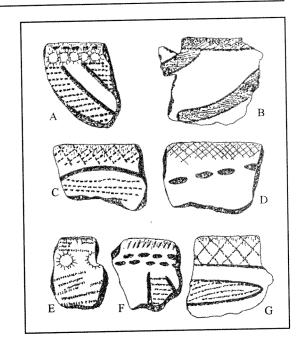


Figure 2. Sherds from the Cooper site: a) punctate decoration near lip, row of medium nodes pressed from the interior on rim, bands of toothed comb impressions bordered by trailed line on body; b) diagonal rouletting on rim bordered by trailed line on body; c,g) cross-hatching of toothed comb impressions on rim, rouletting bordered by trailed line on body; d) incised crosshatching on rim, large ovoid punctate impressions on body; e) horizontal rouletting on upper part of rim, row of large nodes pressed from the interior below, scattered rouletting on body; f) small diagonal incisions on rim near lip, two horizontal rows of oval punctate impressions on lower part of rim, toothed comb impressions bordered by trailed line on body.

ing a wash, is usually present. The temper is entirely grit, either crushed flint or limestone.

Decorative elements consist of broad trailed lines, rouletting or dentate stamped impressions, large and small nodes formed by punching from the interior of the vessel, round punctate impressions and,

rarely, impressions of a cord-wrapped stick (ed. note: see Figure 2). These elements are arranged in definite patterns on the vessels. A narrow band of decoration consisting of diagonal rouletting or incising, or cross-hatching of rouletting or incising, bordered on the lower edge by a broad trailed line, is usually present on the rim. Below this is often found a single and sometimes a double row of large or small nodes. Occasionally depressions take the place of the nodes. The body of the vessels is normally decorated by rouletting or short trailed lines, bordered by a shallow, broad trailed line, arranged in varying patterns.

The olla is present here also, but no flat bases were found. Both straight and recurved rims are present. A unique feature is a rim type which expands abruptly in thickness as it approaches a flat lip. Projectile points are almost exclusively the large stemmed types, usually with a flaring heft. End scrapers are very abundant, both with a high, rough dorsal keel and flat, carefully chipped types. Bunts are numerous. Large drills and projectile points reworked into drills appear to be characteristic of the culture. Oval manos and metates were found. One cupstone was present. A small adze-like implement of polished stone was found.

The decorative pattern is similar to some of the Hopewell material. The Renner Site near Kansas City excavated recently by Waldo R. Wedel appears to contain a number of similar decorative patterns. Excavation has not been completed at this site and it is possible we may be able to obtain some house patterns from post molds partially uncovered recently.

Update on Publications About These Delaware County Sites

Lois E. Albert

The Cooper sites, considered a Hopewellian incursion into northeastern Oklahoma, were presented briefly in an overview of Oklahoma archeology (Bell and Baerreis 1951). The sites were located near the mouth of Honey Creek, at its junction with Grand River. They are now innundated by Grand Lake. Baerreis (1953) studied the pottery further, breaking it down into types. A more detailed study of the pottery, as well as a partial one of the lithics, was done by Purrington (1970) as his dissertation research at the University of Wisconsin. These studies were summarized, with some added information, by Vehik (1984) in a discussion of Oklahoma's Woodland period occupations.

Freeman (1962) used Baerreis' analyses

and discussion of the Mode site presented in this paper and in WPA reports, combined with those of other sites in the area, in a summary of the Neosho focus. A more complete discussion was presented in her dissertation (1959). The Mode site sherds were used in a comparison of Woodward Plain and Neosho Punctate by Freeman and Buck (1960). Wyckoff (1971) also mentions the Mode site in a synthesis of information about the Caddoan area, and in his dissertation (1980).

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A BLUFF-SHELTER SITE IN PONTOTOC COUNTY, OKLAHOMA

H.R. Antle

In the wildly rugged hills near Canyon Springs, in southeastern Pontotoc County, Oklahoma, a unique sandstone formation has produced evidence of once sheltering a prehistoric people.

Technically, the sandstone is of the Wilcox series, and is faulted to a position above the McLish limestone beneath which it normally lies. The fault line runs from the north southward a distance of 25 yards, then runs at right angles to the east for 40 yards. The sandstone ranges from 6 feet in height on the northern extremity to 35 feet along the southeastern portion. Multiple fractures, generally parallel to the fault lines, have been recemented with dissolved siliceous material to make a

highly resistant formation. Erosion takes place by exfoliation, giving to the rock mass, at a distance, a granitic appearance. Because of slanting fracture lines, the foot-wall of the fault, overthrust as it is, has broken off in places to form huge over-hangs that afford plentiful protection from the weather. It was in such an area evidence of a prehistoric habitation was found.

A preliminary excavation of the site disclosed the majority of archaic material lay within a 55 foot mass. This area included two fair-sized shelters with a kitchen-midden fronting each, the latter merging into the shelter debris. [ed. note: see Figure 1 and Table 1) On the wall of

Table 1. Measurements of Shelter.*

Shelter depth †	25	24	29	30	20	23	16	30	17	12	11
Roof overhang †	17	16	14	15	14	14	15	13	12	10	9
Height (front) ‡	7	8	7	9	6	5	3	10	8	4	1
Height (back) ‡	1	3	4	2	4	1	2	3	3	3	3
Midden (ash) †	1	0	0	2	2	3	7	4	4	6	3

- * measurements apparently in feet
- † horizontal measurement
- † vertical measurement

the lesser shelter was a pictograph, one of the main points in identification of the culture here represented.

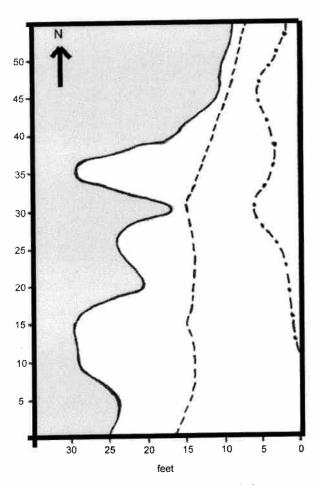


Figure 1. Map of Pontotoc County Shelter Site.

The kitchen-midden varied in depth from an inch at its eastern extreme to 1.5 feet within the shelter proper. On the surface, its limits were easily discerned by blackened ash showing in sharp contrast to the white sandstone. Excavation of this entire area yielded bones, shells, charcoal, nuts, and various artifacts throughout the

deposit. As excavation approached the rear of the shelters it was marked by an increase in the number of artifacts recovered, and a corresponding decrease in bone and ash. Rock detritus made digging quite laborious, because fragments of considerable size often overlaid cultural materials, a fact which clearly indicates antiquity. No burials were found, but perhaps exist in the unexplored areas.

MATERIAL CULTURE: Under no conditions can a complete picture of the material culture of any group be presented from meager information gained by excavations which yield only the least perishable objects, such as stone and polished bone. Centuries of seepage tend to disintegrate most items of every-day existence, such as baskets, clothing, and wooden artifacts. Only by a comparison with recovered materials from better preserved sites of corresponding age and culture, can a true appreciation be had. As the more antiquated cultures are sparsely represented by cultural remains, interest should lie in their antiquity, unprepossessing though they may be.

BONEWORK: Deer, turkey, rodents, turtles, terrapins, and mollusks were represented in the 108 bone fragments found. Of this group, 20 or more were identified has having served as some sort of implement. Bone implements were made by splintering the long bone and utilizing the splinters. The cannon-bone of the deer, naturally grooved and easily split, and with its divided articular surfaces for a handle, served well in the production of awls and punches. Bones of lesser animals were merely sharpened, the

condyles serving as handles.

Antler-tips, whose rounded points could hardly have been used for penetrating purposes, were found in association with flint chips and rejects. It is assumed they were used as flaking tools. Roberts (1), and other investigators, offer this theory of usage through observations of more recent Indians who employ this means of producing concoidal fractures in the finer dressing of projectiles.

The scapula, mandible and pelvis of a deer were found in the shelter debris. The first two were unmistakable implements, their worn edges showing use as scrapers. The pelvis, the right half, was too gnawed by rodents to determine whether it had been used. However, the broad, sharp edge of the ilium could have served the purpose of a dressing tool. The mandible contained four well-preserved teeth, polished by rubbing.

SHELL-OBJECTS: Several fragments of fresh-water mussel shells were found. They were so crumbly that any surface markings would have long since been obliterated. Hardly more than the thickened area about the hinge-line remained on most specimens. Their probable use was as "spoons", scrapers or pendants. Generally the shells were lying within each other, stacked, perhaps, for future use.

A few land snails, perforated and in a position to suggest having been strung, were obtained within the confines of the larger shelter.

Among the shell-group will be mentioned the finding of a number of fossil brachiopods. As fossil-bearing formations are some distance away, it is surmised that they appear among the finds through human agencies (2).

Several sandstone concretions had been worked into useful objects. They were somewhat egg-shaped and ranged from 2.5 inches to 6 inches in length. Their surface was slick and shiny from rubbing, from this appearance, receiving the classification of rubbing-stones. Although carefully examined, not the slightest trace of painted decoration was found upon the surface.

Far back in the greater shelter, a pitted hammerstone was found. It was nearly 3 inches in diameter and about 1.75 inches thick. The edges showed multiple chipping unintentionally produced by pecking at resistant objects. The small pits at the centers of the flat sides were purely of human origin, the scars resulting from abrasion at that point being quite visible.

It would be interesting to know the distribution and range of this latter type of artifact. The writer has found it in several cultural horizons. Kidder and Guernsey (3) report it in remains superimposed upon materials akin to the finds herein reported.

Within the lesser shelter a red-stained, typically-shaped mano was found. It has probably been used in the reduction of hematite into powder suitable for use as paint. The ochre is identical with the substance used in painting the pictograph on the wall. A similar find was reported

from the rock shelters of Val Verde County, Texas (4).

A dozen small concretions, about the size of a marble, made up the remainder of the unchipped stone objects. Only a conjectural use could be applied to them.

CHIPPED IMPLEMENTS: In this group are included spearheads, scrapers, knives and other artifacts produced by intentional flaking. The flinty material comes from the Woodford Chert, an outcropping of which occurs near-by. It has a fine concoidal fracture and was much used by primitive Indians of this region.

There are some 50 objects that could fall, tentatively, into the category of use as scrapers. A secondary chipping along the edges and a generally rounded arelliptical [ed. note: or elliptical?] shape removed them from the class of rejects. Some of this group may have served the purpose of knives. The scrapers varied in size from 1 to 3 inches in length. As a rule, the centers were relatively thick. Many more flakes, receiving no classification as some form of tool, may have been used by the aboriginals for one purpose or another.

One definitely-formed scraper will be described to typify this class of implement. It is a little over 2 inches long, 1.5 inches wide at its greatest width, and 0.5 inch thick at the middle. The elliptical form is somewhat off balance, the constant of one edge resulting in the dissymmetry.

The knives found fall into four distinct types. The first, large, and with a rounded base, suitable for use without being hafted. Second, a long and slender blade with a square base which, when hafted, would be a fair dagger. Thirdly, a blade resembling a spear point but with a stem on one side; this type, when hafted, resembled greatly the paring-knife of modern culinary use. The fourth type is a small triangular form that may have been used as a skinning knife. The knives were the best worked of all the chipped implements found.

As in the case of the scrapers, some of the unclassified sharp-bladed chips may have been utilized as knives. Their association with the definitely-shaped tools, and their occurrence, would indicate they might be more than mere unused chips or rejects.

According to Roberts (5), the chief distinction between spear and arrow points is based largely upon size. By this classification, the projectiles found at the site under discussion, with one exception, would come under the heading of spear points. The exceptional specimen was removed from near the surface (2 inches deep); this fact, coupled with its superior workmanship, removes it to a later and more advanced culture.

Most of the projectiles were approximately 2 inches in length; the ones less than 2 inches had originally been longer but, due to breakage of the point and a subsequent resharpening, were reduced in blade length.

Because of the nearly standard size of the points, it is assumed the short throwing spear, and its accompaniment, the atlatl,

was the chief weapon. As these two implements, especially the latter, have been amply described in previously published literature, it will not be discussed here. No traces of an atlatl were found; as mentioned before, only the most unperishable of materials were found at this site, the climate being not at all suitable for preservation due to the prolonged seasons of rain.

Only the projectiles removed from a decided subsurface position will be considered as having an undisputed relation with the culture responsible for the other materials found. These artifacts. though the crudest of any points yet found in the East Central Oklahoma area, still follow familiar patterns of design. The flaking process involved shows best the lack of finesse generally distinctive of later cultures. Often in the primary flaking, a third or fourth of the projectile's face would be chipped at a single stroke. The rule followed was to shape the point, then dress the edges by a secondary chipping. The result was a serviceable, though somewhat thick, projectile.

The spear points were sorted and grouped into 5 distinct classes; distinctions were made according to shape, form and size of the various parts. The classification was carried through from the simple to the complex forms.¹

PROJECTILE CLASSIFICATION CHART: Class I. Wide neck, tapering to a

somewhat pointed base; no notch; small barb formed by union of stem to blade; stem slightly less than one-half total length; edges of blades straight to point.

Class II. Wide neck, tapering to a somewhat pointed base; no notch; width of neck proportionally less relative to greatest width of blade than as in Class A, resulting in a more prominent barb; edge of blade with suggestion of a curve to point.

Class III. Base of stem notched and nearly as wide as neck; small barb produced by disproportional union of stem to blade; edge of blade slightly curved to point.

Class IV. Stem rounded at base; base as wide as greatest width of blade; wide notch at right angle to long axis of blade, resulting in a very large tang on stem; blade tapers inward below barbs, then widens to taper again to the point; body of blade thick and heavy (6).

Class V. Stem with slightly curving base; tang sometimes narrower at neck; notch at acute angle to long axis of blade; barb sharp and generally long.

Sub-class a.Blade edge curved to point.

Sub-class b. Blade edge straight to point.

The structural parts of the projectiles are taken from the Handbook of the American Indian, by Hodge, *Bulletin 30, Bureau of American Ethnology*, page 90-.

Classes II and V predominate among the

¹ The author's, not a standard, classification.

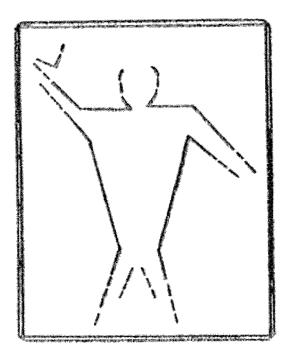


Figure 2. Pontotoc Pictograph.

finds.

PICTOGRAPHS: On the north wall of the lesser shelter was the square-shouldered, triangular-figured pictograph of a man. [ed. note: see Figure 2]. The left arm pointed downward, while the right arm was bent, holding aloft, at the extreme, a narrow triangular object. The whole figure was 14 inches high and 5 inches across at the shoulders.

The ochre used was of powdered hematite. The paint had penetrated the sandstone to a marked depth, thereby preserving itself from the ravages of time.

Red stains at other places on the wall indicate probability of other pictographs having adorned the walls; erosion has since effaced them, should they have existed.

BASKETRY: A small mass of very badly decayed grass fibers from the larger shelter was the only indication of any thing remotely suggestive of basket or sandal work. Were it not for the fact that fibers lay criss-crossing, the specimen would have been discarded entirely. Absence of such destructible material does not mean it failed to exist; on the other hand, the culture may have been so far removed into antiquity that weaving and basketry were as yet unknown. The fragmentary evidence shall merely raise the question of existence.

POTTERY: Not a vestige of a shard, or even a remote suggestion of pottery-making was found. Although the whole area about the site was examined carefully, the same results were to be had. It is therefore a positive conclusion that ceramics were unknown to this particular group.

FOOD STUFF: In addition to animal food, some charred acorns and hickory nuts were disclosed during investigation. Agricultural products were entirely lacking. By the food matter, the people appeared to be at least a semi-nomadic type, seeking shelter among the rocks, foraging afield to search for food.

SUMMARY:

- 1. The archaeological site was situated in a rock shelter.
- 2. A square-shouldered, triangular figure

- of a man was painted, as a pictograph, on a wall.
- Kitchen-midden deposits showed use of native animal and some plant life as food.
- 4. Evidence of agriculture not shown.
- 5. No pipes or indication of use of tobacco.
- 6. No evidence of use of bow.
- 7. No evidence of knowledge of ceramics.

CONCLUSION: From a comparative study of this site with material from the

Southwest, stressing heavily the presence of the pictograph and its distinctive shape (7a & b), the writer concludes his find is perhaps cognate with the Basket Maker culture of the Southwest; by the apparent semi-nomadism and the absence of pottery, it would fall into the phase termed by Roberts (8) and Morris (9), Basket Maker II. More recently Roberts has suggested that reclassification be made and the terms Basket Maker and Modified Basket Maker used (10). In that case, the find herein discussed would be listed under the Basket Maker.

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- 2. Pearce and Jackson. *Prehistoric Rock Shelter in Val Verde County, Texas*. Pp. 68-69, reports the finding of fossils among the beigabe excavated.
- 3. Kidder and Guernsey, 1919, Archaeological Explorations in North East Arizona. *Bureau of American Ethnology Bulletin* 65:130, plate 52. Washington.
- 4. Pearce and Jackson, op. cit., p. 88.
- 5. Roberts, op. cit., p. 138.
- 6. Roberts, op. cit., Plate 28, specimen g, is listed as a single find of this type of point; the writer, however, obtained

- duplicates of this form from Pontotoc County.
- 7a. Roberts, op. cit., p. 121, asserts that the square shouldered, triangularbodied human figures are very characteristic of the Basket Maker culture.
- 7b. Pepper, G.H., *Ancient Basket Makers of Southwestern Utah*, pp. 13-15 places the use of life figures, such as this, as a forerunner of the pottery designs of later phases.
- 8. Roberts, op. cit., pp. 3-4.
- 9. Morris, A., Digging in the Southwest.
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Abstracts of the 24th Caddo Conference, University of Arkansas, Fayetteville, March 19-20, 1981

Burnett, James F. Jr. (Mississippi Department of Archives and History) *Late Prehistoric Deer Hunting at the Albertson Site (3BE174)*

An age study was carried out on deer (Odocoileus) teeth from strata 1-3 of the Albertson site, a bluff shelter in northwestern Arkansas. In this study, the sample age distribution from combined strata 1 and 2 (Neosho and pre-Neosho) is compared to the sample age distribution from stratum 3 (Caddoan and Woodland occupation). Adult teeth were age by counting incremental growth lines in tooth cementum. Sub-adult deer mandibles, with teeth still in the eruption sequence, were aged by comparison with modern sub-adult mandibles for which the age and month of death are known. In addition. male deer skulls from the site were examined for presence or absence of antlers. Skulls with antlers present were examined to determine their stage in antler growth at the time of death. These techniques provide information on prehistoric deer population characteristics, hunter selectivity for certain age classes, hunting techniques such as communal drive or solitary stalking, and seasonal use of the Albertson site by deer hunters.

Baugh, Susan Thomas (Oklahoma Archeological Survey) *The Chronological* Sequence at the McCutchan-McLaughlin Site, 34LT-11, Latimer County, Oklahoma

Continuing research on midden mounds in southeastern Oklahoma has prompted a revision of the previously defined "Fourche Maline focus". In order to better clarify regional and temporal boundaries, this focus, once considered to be uniform, has been divided into two discrete assemblages: the Wister phase, a Late Archaic manifestation dating from ca. 1500 B.C. or 1000 B.C. to ca. 200 B.C. or A.D. 1; and the Fourche Maline phase, a Woodland assemblage dating from ca. 200 B.C. or A.D. 1 to A.D. 800-1000.

One factor contributing to the recognition of these two phases was the need to date the appearance of ceramics and arrowpoints at these sites. Because stratigraphic units are not always well-defined at several sites, a reliance upon radiocarbon dating has been essential. As a result, a large number of radiocarbon dates have been received in the last few years and have made a major contribution to assemblage definition.

A series of 19 radiocarbon dates from the McCutchan-McLaughlin site, while supporting this division, show some variation as to when this major material culture change took place. The data from

34LT-11 will be presented in conjunction with dates from similar sites in adjoining valleys of southeastern Oklahoma. Based on this information, it is postulated that changing economic and environmental situations affected site density in the transitional period from Archaic to Woodland occupations in southeastern Oklahoma.

Cheatham, Scooter (University of Texas) and Diane Young (Texas A&M University) Reconstruction of a Caddo House

This paper describes an experimental archaeology project sponsored by the Texas Parks Department at the George C. Davis site. Using an architectural model ethnographic derived from archaeological sources, a crew of seven constructed a replica of a Caddo house. Aboriginal tools were produced and employed for much of the work. Efforts were also made to duplicate building materials used by the Caddo. The structure was completed in December, 1981 and will be in the State Historic Park upon the park's opening this year. Implications of this experiment in terms of Caddo architecture and tool use will be discussed.

Collier, Marcus R. (Arkansas Archeological Survey) A Tentative Settlement Pattern Study of the Late Prehistoric Period, Madison Co., Arkansas

In the summers of 1980 and 1981 in conjunction with the University of Arkansas Museum excavations at 3MA22,

the Huntsville Mound site, the Arkansas Archeological Survey sponsored twelve weeks of pedestrian survey of portions of the War Eagle Creek area, Madison County, Arkansas. Sixty prehistoric and five historic sites were discovered or revisited. Of the sixty prehistoric sites, fifteen were found to be representative of the Mississippian period manifest by the presence of shell-tempered ceramics from the shelters and typed projectile points from the open sites. Nine open sites with unmistakable Mississippian components seriously question previous theories of Mississippian settlement patterns for the Northwest Arkansas Ozark Mountains. A rudimentary lithic analysis has been implemented and along with other site survey data such as site size and environmental situation, site type is suggested. These data will help provide information that will facilitate understanding the settlement system in the late prehistoric and with further investigation, the role of the Huntsville site in the Ozarks. Mound Recommendations for further work in the War Eagle Creek area will also be presented.

Corbin, James E. (Stephen F. Austin University) Archaeological Investigation at the Washington Square Mound Site, 1981: A Lesson in Humility

Archaeological investigations at the Washington Square Mound site (41NA49) focused on delineating a ceramic concentration in one area of the site, a large soil anomaly discovered in the 1980 season, and the excavation of a burial in

the Reevely-House mound. The soil anomaly was thought originally to be a large, shallow Caddoan-age pit, somehow related to a ceramic concentration. After intense infield and lab analysis, it was determined that the ceramic distribution bore no relationship to the soil anomaly. Further brilliant field work, local history, and a trip to the local friendly soil scientist eventually demonstrated that the soil anomaly was an aberrant soil horizon (locally) produced by recent (1930s -1940s) activities associated with the Nacogdoches High School. Alas, our "dance floor" turned into a very localized A_2 horizon.

Duncan, J.E. (Arkansas Archeological Survey) and **Alice Ashenden-Duncan** (University of Arkansas) Point Remove, 3CN4, an Introduction

This is a report on the past collections and excavations, the presently available archeological materials, field records, and publications, and the recent evaluations of materials and other data from the Point Remove site.

Possible cultural interpretations from the archeological/museum records will be presented. A statement of further work needed on existing materials and upon the necessity to extend, the now possible, interpretations of the site will be given.

Early, Ann (Arkansas Archeological Survey) *The East Site Revisited*

The East site (3CL21), a major early Caddoan mound center in the

Antoine/Little Missouri river valley, has been part of the archeological literature since artifacts from the site were illustrated in Newell and Krieger's Davis report in 1949. Over the last 40 years several amateur archeologists have excavated at the site, but it has never been the focus of professional investigations, and its role in regional Caddoan cultural history has been poorly defined. Recently new artifact collections and records have become available, and it is possible to offer an archival and ceramic evaluation of the site. These data, in addition to two completed archeomagnetic dates from the site, help offer a new characterization of the site suitable as a starting point for future research into the region's Caddoan settlement/subsistence system.

Guderjan, Thomas H. (Department of Anthropology, Southern Methodist University) Big Rock: A Stratified Woodland and Caddoan Rockshelter on the Southwestern Periphery

Big Rock Shelter, located in Henderson County in north-central Texas, lies between the Neches, Sabine, and Trinity river basins, at the very periphery of the Caddoan area. The stratified, well protected context enabled a high degree of preservation to be encountered. The faunal evidence, combined with the lithic, ceramic and botanical remains, reveals a good picture of the utilization of the shelter from 1600 BP to ca. 900 BP. Further, the walls of the shelter are covered with pictographs which represent a glimpse into prehistoric representational art.

Hart, John (Northeast Louisiana University) *The Ceramics of the Washington Square Mound Site, Nacogdoches County, Texas*

Three new tentative types based on the ceramics recovered from Washington Square — Nacogdoches Engraved, Washington Square Punctate, and Reevely Brushed-Incised — are described. Untyped wares from the site are described as well. The primary basis for these descriptions is decorative modes.

Hoffman, Michael P. (University of Arkansas Museum) *An Arkansas Spiro: The Research Potential of the Bowman Site*

The Bowman site (3LR50) is a major Caddoan ceremonial center on Red River in Arkansas which has been extensively excavated, but about which almost nothing has been published. The recent acquisition by the University of Arkansas Museum of a major collection and records from the site has stimulated this paper, which is an attempt to relay its excavation history, findings, and research potential. The Bowman site, located on the north side of Red River, near the Oklahoma state line, consists of eight mounds and at least three cemetery areas. It escaped early notice by pioneer excavators like C.B. Moore, and it was not until the 1940s that recorded excavation began. M.P. Mirior and associates from Texarkana excavated three cemeteries at the site; his records and materials from his work reside at the University of Arkansas Museum. In 1964 and 1965 Joe Shurtleff and associates

from the Texarkana area obtained a lease to dig the dig. They excavated two burial mounds and tested the others for burials. Although much of what was found has been dispersed, maps, records, photographs, and a significant quantity of the artifacts with associated provenience information are in the University of Arkansas Museum. Stratified shaft burials with large quantities of grave goods in Mound One provide data on practically every Caddoan phase in the region. Unusual preservation circumstances in Mound Two allowed preservation of wooden perishables. An engraved shell cup in Mound Two was probably made at Spiro. The site provides great potential for various social stratification and political studies. A major attempt to locate, photograph, and study existant Bowman materials is sorely needed.

Hoffman, Teresa L. (University of Arkansas) *Late Woodland Manufacturing Processes in Mound D at the Toltec Site*

A general model of chipped stone manufacturing processes is proposed as a means of examining the technological relationships between tools and debitage in lithic assemblages. This model is employed in the classification, analysis, and interpretation of chipped stone artifacts from Mound D at the Toltec site (3LN42), a late Woodland mound center near Little Rock, Arkansas. Assemblages from premound and mound occupation strata are compared for evidence of similarities and differences in manufacturing practices. Additionally, the manufacturing sequence for Rockwall

points is examined and technological relations to other analyses are also addressed.

Irvine, Marilee (Southern Methodist University) Evidence of Caddo Influence in North-Central Texas: Site Data from the Richland Creek Project

A survey conducted near Corsicana for the 50.000 acre Richland Creek Reservoir recorded some 234 prehistoric sites within the project boundaries. Forty-three of these sites were subsequently tested and the artifacts analyzed. The analyses performed included both lithic and ceramic identifications as well as faunal identifications, human burial analysis, and soil analysis. The data from these analyses indicate that the majority of the sites contain some Caddo artifacts from the types of points and pottery identified, with one site possibly having a small hamlet or other structure. Future work will be aimed at trying to assess the amount of Caddo influence, and from what area it may be coming.

Kay, Marvin (Department of Anthropology, University of Arkansas) Radiometric Chronology of the Huntsville Mound Site, Madison County, Arkansas

Investigations by the University of Arkansas Museum, the Arkansas Archeological Survey, and the Department of Anthropology have secured radiometric samples from Mound A, the largest of the four Huntsville mounds. Radiocarbon samples and three matched archeomagnetic samples were taken from

primary contexts from discrete mound surfaces, and have been submitted for dating. This paper briefly summarizes the stratigraphy of Mound A, its associated radiometric assays, and compares these with other radiometrically dated Caddoan manifestations in the western Ozark Highlands.

Loveland, Carol J. and **L. Duane Loveland** (Utah State University) *A Biocultural Study of Cranial Deformation as Practiced by the Caddo Indians*

Intentional cranial deformation practiced by the Caddo Indians may be viewed as one of man's more interesting attempts to modify the human anatomy. The crania from the Kaufman-Williams site (41RR16), Red River County, Texas, almost all of which exhibited parallelofronto-occipital deformation, were grouped into three deformation classes (slight, moderate, and extreme) both visually and quantitatively through the use of two deformation indices. Of the 56 crania observed, only four (two males, two females) were judged normal or slightly deformed. Comparisons were made of 12 cranial indices and 15 cranial measurements among the three deformation classes. Trends were noted indicating a general breadth increase with more extreme deformation, except that minimal frontal breadth decreased. Explanations for this exception in terms of binding techniques is given. Results suggest that many craniofacial measurements and indices are deformation related and should be used with utmost caution in population distance studies. The

frequency of occurrence of the deformation types through time produced no obvious differences nor did a comparison of the deformation classes with the quantity of pottery found with the burials.

McDonald, Jeanine (Stephen F. Austin University) *Archaeological Investigation at the Reevely-House Mound, Washington Square Mound Site (41NA49)*

1981 investigations in the Reevely-House Mound and vicinity concentrated on clearing a proposed sewer line route and the excavation of a burial pit discovered during the 1980 season. E-W trench in Dr. Carroll's front yard revealed a burial pit well beyond the present confines of the mound. In addition, the trench showed that we will probably never know the original size and shape of the mound since historic landscaping has lowered the present ground surface in the mound vicinity well below the original surface. The burial pit (a little over 2 m deep) contained the remains of two individuals and thirty-four ceramic vessels. The excavation also revealed another burial pit, bringing the known total for the mound to seven (including the pits excavated in 1987 and 1980).

Miller, John E. (Arkansas Archeological Survey) *The Washington Site Revisited*

Participants in the 1981 Arkansas Archeological Society's Summer Field Training Program contributed over 1200 hours to exploratory excavations in Mounds 4 and 6, and in three off-mound areas at M.R. Harrington's Washington Site in Hempstead County, Arkansas. A major late Fourche Maline/Caddo I period occupation was confirmed. There is evidence of a shift in settlement pattern and site use beginning around A.D. 1100.

Mires, Ann Marie (University of Arkansas) Regional Variation of Human Adaptation in the Caddoan Area

In the period from AD 700 to AD 1700, the Caddoan area was the stage for the development of the Mississippian tradition. Within this area, defined by the contiguous states of Oklahoma, Arkansas, Louisiana and Texas, there were regional developments which were monitored by social, ecological and biological factors. In the two major subareas, the Arkansas River Valley and the Red River Valley cultural development included the establishment of sedentary villages of indigenous peoples, maize horticulture, and social distinction and cultural complexities not present in the precursory Fourche Maline or Coles Creek cultures. After AD 1400, the two areas diverged culturally, the Arkansas Valley being affected by the Eastern Plains culture, and the Red River Valley continuing its sedentary lifestyle, but with changes in the social structure of the communities.

Whether in a area, or within a subregion, human populations must adapt to the totality of their environments which includes the ecological social, and biological setting. Culture is the adaptation of a group to their total environment and the ability of the culture

to articulate these factors is termed adaptive efficiency. In prehistoric human populations the health aspect of adaptive efficiency can be measured by the incidence of specific and nonspecific, skeletal and dental manifestations.

Within the two subareas, published analyses of Caddoan skeletal material were examined and tabulated by time period (Caddo I - Caddo V) so that a comparative analysis of both regional and temporal adaptations could be performed. The distinctions in the incidence of specific and non-specific skeletal and dental manifestation on a regional and temporal basis are explained in terms of corresponding social and biological factors.

Moore, Michael C. (Oklahoma Archeological Survey) Plaza Excavations at Spiro

The plaza area of the Spiro Mounds was the focus of research and excavation during the 1981 season. Very little is known about the plaza area and these excavations served to increase our knowledge as to what part this area played in the history of the Spiro Mounds.

During March of 1981, the University of Nebraska conducted a magnetic survey of the area designated as the plaza at the Spiro Mounds. The results of this survey guided the excavations performed during October and November of 1981. The magnetic survey indicated the presence of three soil anomalies which were interpreted as mounds. The excavations

were focused upon these three mounds.

These mounds could possibly be house mounds. House debris, such as baked clay, daub, and silica froth were recovered, although no post molds or house floors were discovered. Other materials recovered included projectile points, flakes, pottery, and groundstone fragments.

Due to monetary and time considerations, only a small area of the plaza was excavated. Even then, bad weather was a constant companion. Hopefully, additional excavations will be conducted to further our knowledge of the plaza.

Moore-Jansen, Peer H. (University of Arkansas) and Mary Lucas Powell (Northwestern University) Diet and Dentition in Caddo Bioarchaeology: An Examination of Dental Caries, Attrition and Abrasion in a Proposed Dietary Model

Manifestations of modification and degeneration of dental tissues of the enamel crown observed in prehistoric populations are suggestive of a proportionate relationship of general categories of foodstuffs in the diet. Molar teeth from skeletal collections from Arkansas, Oklahoma, and Mississippi, representing Early to Late Woodland and Mississippian cultural adaptations, are examined for rates of caries, attrition and abrasion. Differences and similarities in patterns of caries and wear among the groups are analyzed to elicit the nature of the relationships between macroscopic and

microscopic observations of dental enamel surfaces. The observed relationship between caries and wear is presented in a dietary reconstruction model to illustrate relative differences in proportions of general food types between Caddo and other prehistoric groups in this region.

Published and unpublished data summarizing caries rates for the groups under study are used here. Attrition is determined using the scanning electron microscopes.

Peterson, Dennis (Oklahoma Archeological Survey) Preliminary Results of Regression Analysis on Harlan Phase Burial Goods

The Spiro site has yielded a large amount of archeological material which indicates trade relationships with many areas of the United States. External trade in burial goods has been the major concern of many papers dealing with the Spiro site, and the presence of exotic goods in other Arkansas River drainage sites have also been analyzed with an emphasis on each center's external trading relationships.

However, regression analysis was conducted on several Harlan phase (A.D. 850 - 1200) sites and the exotic goods in their high status burials in an attempt to understand the internal or domestic trading relationships between community centers. The least-squares linear regression analysis plotted amounts to certain high status burial materials at sites against the distance of those sites from a central point. The burial status materials selected were

conch shell, copper items, galena, and earspools. The central points were Spiro and the Harlan site (34CK6). The Harlan site was considered a central point because of its importance in the Harlan phase and excellent goodness of fit when compared with the distribution of copper, galena, and earspools. The Spiro site material showed a good fit in the conch shell regression. This seems to show the importance of the Harlan site in domestic trade while maintaining the Spiro site as the center of very high status items and external trade control.

Powell, Mary Lucas (Northwestern University) and **Ann Marie Mires** (University of Arkansas) *Caddoan A d a p t i v e Efficiency: A Paleoepidemiological Model*

The recent emphasis in American archaeology upon development of explanatory models which incorporate both cultural and ecological variables has stimulated interpretations of prehistoric lifeways which exceed in anthropological sophistication earlier interpretations which focused upon a narrow range of material remains. In similar fashion, paleoepidemiological models predicated upon dynamic interactions between hosts and pathogens in their mutual environment, permit a deeper understanding of the effects of disease processes and systemic stress in human populations that was possible utilizing a strictly clinical approach to lesion diagnosis.

In the present paper, a model is developed

for analysis of infectious, traumatic and stress-induced developmental lesion in the prehistoric Caddoan populations of Arkansas, Oklahoma, Louisiana and Texas. The Caddo represented a western manifestation of the basic Mississippian cultural adaptation, combining horticulture with harvesting of wild foods. They shared numerous features with their eastern contemporaries which influenced their patterns of disease and health: predominant sedentism (which promoted accumulation of waste and parasites), substantial reliance upon starchy cultigens (which posed potential nutritional risks, particularly to subadults), inter-group contacts through trade, warfare and ceremonial interactions (which increased opportunities for pathogen exchange), emphasis on warfare as an important avenue for male socio-political achievement (which resulted in traumatic injury to warriors and noncombatants alike), and occupation of habitats of rich ecological diversity (which harbored numerous endo- and ecto-parasites and pathogens infecting both animal prey and their human predators).

Certain distinctively Caddoan modifications of this lifeway, however, altered to some degree their prospects for successful biocultural adaptation. Among these were exploitation of food resources (e.g., bison) not widely available to more eastern Mississippians, and a more dispersed settlement pattern. The paper concludes with a brief discussion of selected skeletal and dental pathologies proposed for utilization in assessment of Caddoan adaptive efficiency, and a set of generalized predictions for their relative

prevalence and severity in Caddoan populations.

Raab, L. Mark (Southern Methodist University) The Effective Environment of Caddo Settlement of the Prairie Margin: New Soils and Pollen Data from the Richland Creek Project, North-Central Texas

A continental-scale ecotone, extending from southern Illinois to central Texas, is formed by the North American Great Plains and the Eastern Deciduous Forest. It is well recognized that the composition and geographic distribution of these great biotic provinces has been particularly dynamic in this ecotone during the Holocene, affecting prehistoric settlementsubsistence systems. The advance and retreat of prairie and forest environments in the southern subarea of the ecotone would have had major influences on Caddo settlement-subsistence patterns. Paleoenvironmental records in Richland Creek Project, dating to the last millennium, suggest drastic changes in effective moisture and consequent alteration of floras and faunas on the prairie margin. These data are shown to be similar to other environmental data from Oklahoma, suggesting prehistoric environmental changes of regional scope.

Raab, L. Mark (Southern Methodist University) New Discoveries Concerning the Wylie Focus Pits of North Texas

In the early 1950s, Robert Stevenson of the River Basin Survey announced discovery of prehistoric, man-made pits as much as 100 feet in diameter and 15 feet deep at the center. Containing many human burials and Caddoan ceramics, these features are thought by some to be in some way inspired by contact with Caddoan peoples. Virtual absence of modern studies in these sites has greatly restricted our knowledge of them. Recent test excavations in two pits has revealed substantial new information about the possible origins and functions of these pits.

Reid, Kenneth C. (University of Tulsa) and Joe Alan Artz (University of Kansas) Climatic Change and the Origins of Arkansas Basin Caddoans: A Cross Timbers Perspective

Although a number of studies have linked regional climatic change to major organizational changes in Arkansas Basin Caddoan culture between A.D. 1200 -1400, few detailed studies exist that link locally derived paleoenvironmental evidence to the appearance of this cultural pattern in northeastern Oklahoma. Recent studies conducted by the University of Tulsa in the western Verdigris basin of the Cross Timbers have produced a local environmental sequence with regional implications relevant to the problems of Arkansas Basin Caddoan origins. Independent, radiocarbon-dated pollen, land snail, molluscan, and soilgeomorphic sequences indicate that after A.D. 600 precipitation became more variable and the frequency of short-term droughts increased. It is suggested that the transformation of resident Woodland ("Fourche Maline") hunter-gatherers into early Caddoan hunter-horticulturalists between A.D. 650 - 950 reflects efforts to sustain high regional population densities in the face of a decreasingly predictable Small aceramic resource base. assemblages dominated by small cornernotched arrowpoints in the Cross Timbers are interpreted as the seasonal hunting camps of early Caddoans operating out of increasingly game-depleted horticultural core areas to the southeast. The fit between environmental and cultural data is examined at one such camp, Drumming Sauna (34WN29), in the Little Caney basin.

Rogers, J. Daniel (Oklahoma Archeological Survey) Social Ranking in the Harlan and Spiro Phases

By the end of the 17th century A.D. some major changes had taken place in the lifeways of people living in the Arkansas Basin of eastern Oklahoma and the adjacent Ozark Uplift region of western Arkansas. These changes involved the introduction of horticulture, a widespread religious tradition, and a more complex social organization. By A.D. 850, these factors were part of a well established cultural tradition. The focal point of this study is the changes in social organization that took place after A.D. 850 and involved the Harlan phase (A.D. 850 -1250) and the Spiro phase (A.D. 1250 -1450). By examining 880 burials from throughout the region using cluster analysis, it was determined that a social hierarchy existed in the form of a ranked society. The characteristics of a ranked society were delineated by comparison with the ethnographic literature from Polynesia and the Southeastern United States. It was also determined that Harlan phase community centers functioned as relatively independent integrative cultural units while those of the Spiro phase were dominated economically and politically by leaders from the Spiro site area. The changes that took place between the two phases are attributed to increasingly centralized authority and the process of redistribution mobilization.

Rohrbaugh, Charles L. (University of Wisconsin) Changing Social Organization in the Arkansas Valley: Spiro and Fort Coffee Phases

The organization of burials in two late Caddoan cemeteries at the Moore site. 34LF31, show considerable differences which are interpreted as the result of culture change from Spiro to Fort Coffee phases. The Spiro phase Edgar Moore Cemetery shows considerably more complex organization and exhibits evidence of social stratification. The Fort Coffee phase Lymon Moore cemetery is organized exclusively in terms of the age and sex of the individuals interred and shows no evidence of stratification. This paper explores the differences in the two cemeteries and identifies this trend of social simplification from Spiro to Fort Coffee phase in the Arkansas River Valley.

Rohrbaugh, Charles L. (University of Wisconsin) Late Chronology of the Spiro Locality: Spiro and Fort Coffee Phases

Fifteen new radiocarbon dates from nine two center post rectangular house in the Spiro Locality demonstrate that this house form is primarily associated with Spiro phase, from A.D. 1250 to A.D. 1450. The form is also associated with Fort Coffee phase, from A.D. 1450 to perhaps as late as A.D. 1600, however. A single date from one of the pits of the habitation area at the Moore site confirms the suspected Fort Coffee phase association of the material in these pits. Nineteen new dates on human bone from the Moore site cemeteries show that the interments of the Edgar Moore field are the result of activities during Spiro phase and that the burials of the Lymon Moore field are the result of activities during Fort Coffee phase. A suite of 38 radiocarbon dates, and previously available, demonstrates that most of the material K.G. Orr assigned to Fort Coffee focus was the result of activities during Spiro phase, that there is a distinctive late Fort Coffee phase component, but that is much more ephemeral than the earlier Spiro phase component.

Rose, Jerome C. (University of Arkansas)

Agriculture and the Fourche Maline Caddo Transition

The most prominent theme of recent bioarcheological research is the evaluation of the biological consequences produced by the transition from a hunting-collecting economy to an agricultural one in prehistoric North America. Cook and Buikstra (1979) suggest that the transition between the two subsistence patterns is marked by increased childhood stress,

infections, and mortality. Specifically, they demonstrate that within the lower Illinois Valley this transition occurs during the terminal Late Woodland. hypothesis is testing within the Caddo area using the published bioarcheological data for the Fourche Maline, Caddo II, and Caddo IV periods. Composite life tables show that the sub-adult probability of dying is similar for both the Fourche Maline and Caddo IV skeletal series, while the Caddo II series has a significantly higher probability of dying. Similarly, the adult infection rates nearly double between the Fourche Maline (11.4%) and Caddo II (26.2%) and then decline almost to the Fourche Maline level during Caddo IV (17.6%). If the original hypothesis is accepted, then the major changes in the economic-subsistence systems occurred during the early Caddo time periods.

Sabo, George III (Arkansas Archeological Survey) Structural Features in Mound A at the Huntsville Site (3MA22), Madison County, Arkansas

Excavations in Mound A at the Huntsville site (3MA22) sponsored in 1981 by the University of Arkansas Museum, Arkansas Archeological Survey, and Department of Anthropology, revealed a series of structural features on the upper surfaces of this three-stage platform mound. Of particular interest are two intersecting wall outlines on the third (uppermost) mound surface, representing an initial square structure and a subsequent oval structure. This paper discusses the implications of these data

concerning the culture historical placement of the site, relationships between the Ozarks and the Arkansas River Valley during prehistoric Caddoan times, and Caddoan cultural development in the Ozarks.

Schambach, Frank F. (Arkansas Archeological Survey) and John E. Miller (Arkansas Archeological Survey) The Ceramic Assemblage from the Cedar Grove Site: A Component of the Caddo V Period Chakanina Phase in the Great Bend Region

A description and discussion of the large sherd sample and the 65 pottery vessels obtained during the 1980 mitigation work at Cedar Grove, sponsored by the U.S. Army Corps of Engineers, New Orleans District.

Shafer, Harry J. (Texas A&M University) Source Areas for Exotic Lithics at the George C. Davis Site

Source areas for exotic lithic artifacts recovered from previous investigations at the George C. Davis site are suggested. These source areas include southeast Texas (Manning fused glass, Catahoula sandstone), central Texas (chert), eastern Oklahoma (chert, Ouachita sandstone), Red River bend area of Texas and Arkansas (chert), western Arkansas (igneous rocks for celts, quartz crystals). Some suggestions are advanced regarding the nature of the craft production and exchange systems which were operative about A.D. 800 - 1200 in the Caddoan area.

Stahle, David W. (University of Arkansas) Tree-Ring Chronology Development in the Southcentral United States and the Potential for Archeological Tree-Ring Dating in the Caddoan Area

Dendrochronology is a potentially valuable, but underdeveloped, dating method in the central and eastern United States. Tree-ring analysis may be applied to absolutely or relatively date prehistoric wood and charcoal and to determine the seasonality of tree cutting. A relatively few archeological tree-ring dates should help calibrate other dating methods such as archeomagnetism which have wide application in the eastern United States, to substantially improve the accuracy of the dates obtained.

We are currently developing a network of modern tree-ring chronologies from relatively undisturbed old growth forests in the southcentral United States primarily for the reconstruction of past climate. The development of modern tree-ring chronologies is being actively pursued by several institutions and promises to produce a reasonably dense and well distributed chronology network for most of North America.

Long tree-ring chronologies should be possible in many areas with certain long-lived species such as baldcypress and red cedar, and through the recovery of progressively older wood from historic, archeological, and subfossil contexts. Since some existing baldcypress chronologies in the Mississippi Valley exceed 500 years in length, the tree-ring

dating of certain late prehistoric and early historic archeological sites is already feasible. Well preserved wood and charcoal remains of adequate size recovered from Caddoan sites should be stabilized and assessed for dendrochronology.

Taylor, Anna J. (Texas A&M University) and **Jean M. Christiansen** (Texas A&M University) Functional Analysis of Caddoan Ceramics: Procedure and Potential

Traditionally, analyses of Caddoan ceramics have concentrated upon typology and neglected functional analysis and the application of ceramic data toward testing of problems of behavioral patterns. To make possible functional studies involving use-wear, residue and form/function relationships, methods of processing and recording the context of ceramics must be planned to preserve such data. Studies elsewhere have shown the potential of ceramic function and analysis for providing information about family size, differential usage of vessels, and dietary habits. Though there are problems concerning ceramic preservation, preservation of related materials and context within the Caddoan area, the potential of functional ceramic analysis is great and deserves investigation.

Trubowitz, Neal (Arkansas Archeological Survey) Late Caddo Settlement and Society at the Cedar Grove Site

The Caddo V occupants of the Cedar Grove site (3LA97) inhabited a point bar

ridge away from the main channel of the Red River in Lester Bend. Circular houses were probably located along the length of the highest elevations of the ridges, safe from most flooding. Details of the site's settlement pattern are compared against a model derived from the historic Teran map (18th century) and the nineteenth century photographs of a Caddo homestead by Soule; this model has been designated as the Teran-Soule model. The aboriginal graves found at the site provided data on possible inheritance of social status and patrilocal residence. A general view of a farmstead of the Chakanina phase is presented.

Vehik, Rain (University of Oklahoma) Synopsis of the Prehistory of Jackfork Valley: Southeast Oklahoma

During 1978 and 1979, the Archaeological Research and Management Center, University of Oklahoma, excavated 11 prehistoric sites in the Clayton Lake area which will inundate parts of Latimer, Pittsburg, and Pushmataha counties, Oklahoma. These investigations were part of a mitigation program funded by the U.S. Army Corps of Engineers, Tulsa District. Information obtained from this work indicate that Jackfork Valley was intensively occupied during the Late Archaic through early Caddoan periods. Several sites have yielded evidence for

Late Archaic occupations dating between 1727 ± 70 B.C. and 298 ± 60 B.C. These are assigned to the Wister phase. Radiometric determinations between A.D. 234 + 54 and A.D. 683 ± 65 and overall artifact inventories at several sites suggest that subsequent occupations be assigned to the Fourche Maline phase. Even though undated late prehistoric manifestations are present at some sites, the last major prehistoric occupation of the Jackfork Valley is during the early Caddoan period which falls in a calendrical range of A.D. 1013 ± 90 to A.D. 1221 ± 34 . A brief discussion of the nature of these occupations will be presented.

Vogele, Louis E., Jr. (University of Arkansas) *Preliminary Analysis of the Turner Cave Site (3MA20)*

Preliminary analysis of the Turner Cave site (3MA20) in Northwest Arkansas is presented. Excavation and recording techniques employed by the Northwest Arkansas Archeological Society during its 1971-73 excavations are described. The cultural remains recovered are discussed and a preliminary culture sequence is proposed. A possible Caddoan occupation layer is described and hypotheses concerning its possible ties to the Huntsville Mounds site (3MA22) are presented.

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