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EDITOR'S PAGE

Although it doesn’t seem possible, we begin another volume of Caddoan Archeology. With the help of several people, especially Tim Perttula, articles and news were gathered together and translated into four issues.

The Caddo Conference has come and gone for another year. We had good attendance, although the conference was not as large as the previous one held in Norman. My animals (all five) have apparently recovered from being banished from the house for the duration of the reception and its preparations.

Without the help and cooperation of the Caddo Tribe, the conference would not have been a success. I especially thank Stacey Halfmoon, the tribe’s Cultural Resource Coordinator, and the Caddo Culture Club, led by Pat Edmonds and Donna Spaulding. The ladies fed everyone a tasty meal, which was preceded and followed by traditional Caddo dances. The singers were headed by Lowell (Wimpy) Edmonds.

The Caddo Conference mailing list has been updated and passed on to the Arkansas Archeological Survey, so that it can be used for next year’s conference in Fayetteville. Good luck, Hester and Tom!

Now the Oklahoma people can rest until 2001! Wow, the first Caddo Conference of the new millennium will be in Norman! We’ll have to plan something special for that one. Is everyone ready? Let’s just hope that Mother Nature doesn’t plan another weather surprise like the one in 1989.

Once again, we need manuscripts for Caddoan Archeology. Some manuscripts which were promised have not come in. So come on, everyone, send in those reports on small research projects for lead articles, and let us know what’s going on in your area for the regional news reports, so that we can keep this journal going. Also, send me notice of events in your states. Right now, it’s mostly Oklahoma because I don’t know about things happening in the other states.

A subscription renewal form can be found at the back of this issue. Please take the time to send in your renewal now. I will allow a few weeks (but not too many, because this issue is late) before I send out renewal notices to all of you who haven’t sent in your money. On the next page is a list of those who have already renewed, to refresh your memory. Thanks to those of you who have already taken care of this matter.
Renewed Subscriptions for Volume 8

Thanks to those of you who have already sent in your subscription renewals for Volume 8. If you have paid, your name is listed below. If you have renewed and your name is not listed below, please let me know so that we can correct the list. This issue is being sent to all of those who subscribed to Volume 7. If you have not renewed, please send in your check/money order ASAP.

Lois E. Albert
George Avery
R. W. Bellamy
Roy V. Bynum
Caddo Tribe
Brett Cruse
E. Mott Davis
Sharon McCormick Derrick
Richard Drass
Robert C. Dunnell
Eileen Goldborer
Thomas J. Green
L. H. Head
Velicia Hubbard
Timothy C. Klinger
Charles E. Linck Jr.
William R. Lollis
J. R. Morehead
Larry Neal

Bo Nelson
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Francie Sisson
State Historical Society of Wisconsin
Office of State Archeologist, Texas Historical Commission
Dee Ann Story
Jesse Todd
Tozzer Library, Harvard University
Mike Turner
Robert C. Vogel
Mark Walters
UPCOMING MEETINGS AND EVENTS

June
14 Flag Day at the Fort. Fort Gibson Historic Site, Fort Gibson, Oklahoma. Special event about flags, flag history, and flag etiquette. 9 a.m.-5 p.m. For information call (918) 478-4088.

20-21 Summer Solstice Walks, Spiro Mounds Archeological Center, Spiro, Oklahoma. Each walk lasts one hour, 9 a.m. to 1 p.m. each day; special walks 5 a.m. to 7 a.m. and 7 p.m. to 9 p.m. Fee $2; for more information call (918) 962-2062.

21 Grand Opening with Traders and Trappers Living History, Chouteau Memorial Museum, Salina, Oklahoma. 9 a.m. to 5 p.m. Free.

28 Chisholm Trail Time Capsule - part of 130th Anniversary Celebration of Chisholm Trail; cowboy songs, poems, and history of cowboys and roping. Chisholm Trail Museum, Kingfisher, Oklahoma. 9 a.m. to 5 p.m. Free. For more information, call (405) 375-5176.

June 28 - August 2
Pawnee Bill's Wild West Show. Each Saturday at 7 p.m. Fee $8 at gate or $7 in advance; groups $6 per person; children 12 and under free. Barbecue dinner at 5 p.m., fee $6; children 12 and under $3. For more information call (918) 762-2513.

September
2-4 Symposium on the application of all aspects of science within archaeology. Department of Archaeology, University of Durham, Durham, England. This is a biennial conference hosted by this department for the last ten years. The conference will include papers on: human evolution, chronometry, ecosystems, technology and trade, prospection methods, data processing, geoarchaeology, and biochemical analysis. The conference will be held in the Department of Archaeology, with accommodation and meals in nearby Grey College. For details, contact: Archaeological Sciences '97, Department of Archaeology, University of Durham, South Road, Durham, DH1 3LE, England. Telephone: 0191 374 3625, FAX: 0191 374 3619; e-mail: A.R.Millard@Durham.ac.uk.

November
5-8 58th Annual Meeting, Southeastern Archaeological Conference. Radisson Hotel, Baton Rouge, Louisiana. For more information, contact: David Kelley, Coastal Environments, Inc., 1260 Main Street, Baton Rouge LA 70802. E-mail: cei@premier.net.
ANNOUNCEMENTS

From the *Newsletter of the Northeast Texas Archeological Society*:

NETAS now has a web site which was created by Bob Skiles. It can be found by going to http://www.skiles.net/netas/ or to http://www.skiles.net/fneta/ (Friends of Northeast Texas Archeology web site).

The following special publications are now available from NETAS: **No. 1** (1995), *Collected papers on Caddoan Archaeology in the Upper Sabine River Basin, Northeastern Texas*, by Timothy K. Perttula, with contributions by James E. Bruseth, Bob D. Skiles, and Bonnie C. Yates ($20); **No. 2** (1995), *Archaeological Investigations of the Caddo Lake Scholars Program at Caddo Lake State Park, Harrison County, Texas, 1993-1995*, by Bob D. Skiles, Timothy K. Perttula, Bo Nelson, and Mike Turner ($6); **No. 3** (1996), *Historic Lifeways in the Cedar Creek Community, Delta County, Texas, Cooper Lake Area*, by Cindy Parrish and Timothy K. Perttula ($9). They can be ordered from Bo Nelson, Rt. 4, Box 259B-1, Pittsburg TX 75686. Shipping and handling is $1.00 for the first book and $0.50 for each additional book.

Back issues of the NETAS Journal are also available: **No. 1** (1993), Panel Discussion: Diminishing Caddoan Resources in East Texas, Alley’s Mills: A 19th Century Mill Town; Possible Archaeological Sites within the City Limits of Jefferson, Texas; The West Island Site (41MX65); The Carlisle Site (41WD46), a Middle Caddoan Occupation on the Sabine River, Wood County, Texas **No. 2** (1993), A Summary of the History of the Caddo People; Chipped Glass, Ceramics, and Axe Handles; Archaeological Investigations at the Robert Potter and Harriet Ames Cabin (41MR51) on Potter’s Point, Caddo Lake; Four Clovis Points from San Augustine County, Texas; The Z.V. Davis-McPeek Site, an Early Caddoan Mound Site in the Little Cypress Creek Valley, Upshur County, Texas; A Two-Phase Caddo Mound at the Camp Joy Site (41UR144); Data Recovery Efforts at the Millville Mill Site (41RK223), Rusk County, Texas **No. 3** (1994), An Update of Archaeological Investigations at the Tyson Site (41SY92); Human Skeletal Remains from the Tyson Site (41SY92). **No. 4** (1994), Archaeological Research at the Rowland Clark Site (41RR77), Red River County, Texas; Analysis of Rowland Clark Site Corn; Rowland Clark and Dan Holdeman Site Human Skeletal Remains. **No. 5** (1995), Archaeology, the Caddo Indian Tribe, and the Native American Graves Protection and Repatriation Act; Evidence of Resource Procurement and
Manufacturing Techniques in Caddoan Ceramic Assemblages from the Sabine, Cypress, and Sulphur River Drainage Basins, Rusk and Titus Counties, Texas, Dental Pathologies in the Sanders Site (41LR2) Population from Lamar County, Texas; Abstracts from the 3rd East Texas Archeological Conference. No. 6 (1995), The Dan Holdeman Site (41RR11), Red River County, Texas, A Reconsideration of the Chronological and Cultural Placement of the mortuary Remains and Grave Goods from the Dan Holdeman Site. No. 7 (1996), Early European-Indian Ceremonies on the Red River; First Report on the Lake Sam Rayburn Archeological Sites Inventory and Monitoring Project; Civil War Era Sites in East Texas; An Initial Inventory and Site Models; Symposium on “Two Worlds Meet: The Caddoan People and Missions”, Spanish-Caddoan Interaction in Eastern Texas; Eighteenth Century Spanish, French, and Caddoan Interaction as Seen from Los Ades; the Panel Discussion; Abstracts from the 4th East Texas Archeological Conference. No. 8 (1996), Archaeological Investigations at the Marshall Powder Mill (41HS17), Confederate States of America 1863-1865, Harrison County, Texas: 1994 Season; Caddo Ceramics on the Red River in North Central Texas. Cost, $8.50/issue. See ordering information above. Subscriptions are $15.00 per year (2 issues).

From the Gilcrease Museum, Tulsa, Oklahoma:

Gilcrease Museum has recently issued a Preliminary Map Guide to Archaeological Materials in the Collections of the Gilcrease Museum. This booklet is intended to serve as an easy to use guide for ascertaining the scope and distribution of archaeological materials curated in the museum's Department of Anthropology. It locates Gilcrease holdings by site, county, and state. Future editions will provide bibliographic information, dates, and collections background. Use of the guide by professionals is encouraged and recommendations for improvements in later editions will be welcome. To obtain a copy, please contact Jason Baird Jackson, Research Associate, Gilcrease Museum, 1400 Gilcrease Museum Road, Tulsa OK 74127-2100; telephone (918) 596-2700; fax (918) 596-2770.

From the Crow Canyon Archaeological Center, 1997 Adult Research Program

The Crow Canyon Archaeological Center near Cortez, Colorado, offers an opportunity to take an intensive, hand-on course in Southwestern archaeology. All excavation sites are located within a half hour of travel time by van from the campus. During the 1997 season, they will be a new excavation at Shields Pueblo, near Goodman Point in the Sand Canyon Locality. The site is surrounded by breath-
taking, panoramic views of several mountain ranges reaching 14,000 feet. Excavations will also continue at Yellow Jacket Pueblo, the largest known village in the region. Several evening programs are offered on topics such as Crow Canyon's research, rock art, dendrochronology (tree-ring dating), or the ethical dilemmas in site preservation. Participants stay for a week (arrive on Sunday, leave on Saturday), with sessions beginning May 25, June 1, June 8, June 15, June 22, July 6, July 27, August 3, August 17, August 24, August 31, September 7, September 14, and September 21.

Participants stay in shared accommodations in log cabins on the 70-acre campus. Meals cooked by a chef are included in the $775 cost ($750 for seniors 55 and over; $595 for high school and college students). Private rooms are not available, but they try to house couples together whenever possible. Membership in the Crow Canyon Center is required for participation in the Excavation Program; it costs $40 for an individual membership. For more information (a catalog is available) or to reserve a place, call Crow Canyon at 800-422-8975, extension 142. Check out their web site at http://www.crowcanyon.org.
Corrections to Perttula et al.
Timothy K. Perttula, Mike Turner, and Bo Nelson

We would like to take this opportunity to correct three editorial errors that crept into our paper on radiocarbon and oxidizable carbon ratio dates from the Camp Joy Mound in Northeast Texas (Perttula et al. 1997).

First, based on the overlapping of the four dates from the Camp Joy Mound, we have estimated that the second platform at Camp Joy was burned and then capped with soils between ca. A.D. 1500-1650, not A.D. 11550-1560 (Perttula et al. 1997:11). Second, the printed version of Table 1 in Perttula et al. (1997:12-13) gives the impression that there are seven Whelan phase radiocarbon dates from Northeast Texas and 15 others that possibly date to the Whelan phase. Actually, the correct version of Table 1 (reproduced herein) indicates that currently, there are only two radiocarbon dates from possible Whelan phase contexts (both from 41CP8), and 13 dates from known Titus phase contexts, including the two dates from the Camp Joy Mound (Table 1). Finally, the first footnote to Table 1 should read: “Age not calibrated; delta 13C values in parenthesis. Assays on nutshell and wood charcoal lacking delta [words omitted from the original MS] 13C values use the value estimates for fractionation correction suggested by Stuiver and Reimer (1993a:Table 1), namely -25.0 o/oo. These particular assays have standard deviations that include an error in the estimated delta 13C.”

REFERENCES CITED

<table>
<thead>
<tr>
<th>Site</th>
<th>Provenience</th>
<th>Lab #</th>
<th>(^{14}C) Age (B.P.)</th>
<th>Corrected Age (B.P.)*</th>
<th>Calibrated Age (B.P.)**</th>
<th>Reference</th>
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</thead>
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<td><strong>WHELAN PHASE (after Thurmond 1990)</strong></td>
<td></td>
<td></td>
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<td>UR10</td>
<td>House 4 under Mound D</td>
<td>Tx-84</td>
<td>490 ± 100</td>
<td>490 ± 108</td>
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<td>Jelks and Tunnell 1959; Tamers et al. 1964</td>
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<td></td>
<td>Mound B fill</td>
<td>Tx-238</td>
<td>265 ± 65</td>
<td>265 ± 76</td>
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<td>Jelks and Tunnell 1959; Pearson et al. 1966</td>
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<td>Mound C fill</td>
<td>Tx-239</td>
<td>330 ± 110</td>
<td>330 ± 117</td>
<td></td>
<td>Jelks and Tunnell 1959; Pearson et al. 1966</td>
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<tr>
<td></td>
<td>Mound C fill</td>
<td>Tx-240</td>
<td>555 ± 70</td>
<td>555 ± 81</td>
<td></td>
<td>Jelks and Tunnell 1959; Pearson et al. 1966</td>
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<td></td>
<td>House 4, beam above floor, Md. D</td>
<td>Tx-241</td>
<td>345 ± 75</td>
<td>345 ± 85</td>
<td></td>
<td>Jelks and Tunnell 1959; Pearson et al. 1966</td>
</tr>
<tr>
<td>UR11</td>
<td>latest of 2 structures under mound [House B]</td>
<td>Tx-83</td>
<td>480 ± 110</td>
<td>480 ± 117</td>
<td></td>
<td>Davis and Gipson 1966; Tamers et al. 1964</td>
</tr>
<tr>
<td>UR133</td>
<td>N184-E402, lev. 4 terrace area midden</td>
<td>Tx-7989</td>
<td>578 ± 118</td>
<td>554 ± 118 (-26.5 o/oo)</td>
<td></td>
<td>Nichols et al. 1995</td>
</tr>
</tbody>
</table>

**possibly WHELAN PHASE (after Thurmond 1990)**

| CP8      | submound structure, charred pole in md. fill | Tx-199 | 320 ± 60              | 320 ± 72               |                          | Tunnell 1959; Pearson et al. 1965 |
|          | submound structure, charred pole in md. fill | Tx-202 | 240 ± 90              | 240 ± 99               |                          | Tunnell 1959; Pearson et al. 1965 |

**TITUS PHASE**

| CP5      | Burial 10 fill | Tx-666 | 360 ± 70              | 360 ± 81               |                          | Tatum 1978                      |
| TT182    | Feature C1     | Beta-44786 | 220 ± 80              | 220 ± 80               |                          | Kotter et al. 1991             |
|          | Feature C5     | Beta-44787 | 290 ± 120             | 290 ± 120              |                          | Kotter et al. 1991             |
|          | Zone 2 (humates) | Beta-44789 | 320 ± 70              | 320 ± 70               |                          | Kotter et al. 1991             |
Table 1 (continued). Late Caddoan Radiocarbon Dates from the Northeast Texas Pineywoods and Post Oak Savanna.

<table>
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<tr>
<th>Site</th>
<th>Provenience</th>
<th>Lab #</th>
<th>^14C Age (B.P.)</th>
<th>Corrected Age (B.P.)*</th>
<th>Calibrated Age (1-sigma)**</th>
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<tr>
<td>TT392</td>
<td>N501E476, lv. 3</td>
<td>Beta-64977</td>
<td>320 ± 80</td>
<td>300 ± 80</td>
<td>AD 1483-1666 (1.00)</td>
<td>Nash et al. 1995</td>
</tr>
<tr>
<td>TT672</td>
<td>Feature 1</td>
<td>Beta-80432</td>
<td>430 ± 50</td>
<td>430 ± 50</td>
<td>AD 1431-1510 (0.90)</td>
<td>Dixon et al. 1995</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>AD 1602-1615 (0.10)</td>
<td></td>
</tr>
<tr>
<td>UR 118</td>
<td>BHT 46, organics on sherd</td>
<td>Beta-72372</td>
<td>300 ± 60</td>
<td>300 ± 60</td>
<td>AD 1624-1679 (0.40)</td>
<td>Nichols et al. 1995</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>AD 1518-1591 (0.32)</td>
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<tr>
<td></td>
<td>N123/E143, N118/E131</td>
<td>Beta-90532</td>
<td>440 ± 40</td>
<td>440 ± 40</td>
<td>AD 1430-1483 (1.00)</td>
<td>Unpublished</td>
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<tr>
<td>UR 129</td>
<td>N198-E211 (humes)</td>
<td>Tx-7990</td>
<td>403 ± 41</td>
<td>458 ± 41</td>
<td>AD 1425-1470 (1.00)</td>
<td>Nichols et al. 1995</td>
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<td>UR 133</td>
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<td>AD 1480-1523 (0.39)</td>
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<td>UR 144</td>
<td>Feature 1, burned lens at contact between md. fills</td>
<td>Beta-84435</td>
<td>390 ± 60</td>
<td>340 ± 60</td>
<td>AD 1495-1605 (0.83)</td>
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<td>Feature 1, burned lens</td>
<td>Beta-84436</td>
<td>310 ± 60</td>
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<td>AD 1515-1592 (0.42)</td>
<td>Perttula et al. 1996</td>
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<td>AD 1621-1675 (0.39)</td>
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<td>WD529</td>
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<td>Tx-3473</td>
<td>480 ± 80</td>
<td>480 ± 90</td>
<td>AD 1393-1515 (0.82)</td>
<td>Bruseth and Perttula 1981</td>
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Key to Table 1 (Note: All site numbers are preceded by "41").

*Age not calibrated; delta ^13C values in parentheses. Assays on nutshell and wood charcoal lacking delta ^13C values use the value estimates for fractionation correction suggested by Stuiver and Reimer (1993a:Table 1), namely -25.0 o/oo. These particular assays have standard deviations that include an error in the estimated delta ^13C.

**Calibrations use bidecadal record of Stuiver and Reimer (1993a, 1993b), using CALIB 3.03c, Test 10; probability distributions are in parentheses.

Corrections to Schambahc, Table 1

The gremlins also struck when I transferred this table for printing. Here is the corrected table. Corrections are highlighted in italics and underlining. — editor
Table 1.

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Abstracts From the 39th Caddo Conference

Ballenger, Jesse A.M. (Oklahoma Museum of Natural History), The McKellips Site: Dalton Occupation and Mobility in Eastern Oklahoma.

Situated along Lake Eufaula in eastern Oklahoma, the McKellips site has produced one of the largest collections of Dalton points in the state. This paper reviews the history of the site and presents the collection in relation to other Dalton assemblages in Oklahoma. Special attention is given to tool use-life and its application to questions about mobility.

Basmajian, Susan, Kris Shorey, and K.C. Kraft (Oklahoma Museum of Natural History), The Museum, the WPA, and the Fourche Maline.

With Spiro in the forefront, the WPA began focusing on eastern Oklahoma in an attempt to understand the cultural relations between Spiro and outlying areas. Many of these sites have been curated by the Oklahoma Museum of Natural History for the last 50 years. Recently, under the direction of Dr. Don Wyckoff, these sites have been sorted and catalogued. During this process we have come to believe that there is a wealth of information available that would help resolve questions concerning the Fourche Maline. In this paper, we offer some preliminary observations of the types of information available in these sites.

Chafe, Wallace (University of California, Santa Barbara), The Beauty of the Caddo Language.

I will present a short folktale in the Caddo language, "How the Turtle Got Its Squares", recorded by Mrs. Sadie Bedoka Weller in 1959. I will play a tape of the story, and provide a transcription. I will point out various features of the language, taking examples from the story. I will discuss ways in which Caddo sounds differ from English sounds, emphasizing the variety of consonants and the use of tones. I will then describe the complex morphology of words taken from the story. Finally, I will mention ways in which the story illustrates typical patterns of Caddo storytelling.

Cojeen, Chris (Cojeen Archaeological Services), and Jesse Ballenger (Oklahoma Museum of Natural History), Testing and Preliminary Analysis of the Yourman Site.

Situated along Gaines Creek in Latimer County, Oklahoma, the Yourman site (34Lt-287) is a black midden mound with evidence of Wister and Fourche Maline period occupations. Erosion and looting have destroyed a significant portion of the site. Thanks to a cooperative, voluntary effort made by professional archaeologists, various state agencies, and several students, testing was performed at the Yourman site to evaluate its significance. An overview of the fieldwork and a cursory examination of the recovery are presented here.
Davidson, Rebecca, (Caddo Tribe of Oklahoma), *Preserving Our Cultural and Natural Heritage for the Twenty-first Century.*

The mission of the Caddo Environmental Office is to conserve and protect our natural resources. Incorporated within this mission statement is the preservation of the cultural heritage associated with these natural resources. Our environmental office will incorporate these values into our program, thereby preserving some of our cultural and natural heritage for future generations.

One of these issues being addressed by our environmental office is a digitization of our of our land base through the GIS system. We are striving toward the goal of locating all family grave sites, marked and unmarked, to establish a complete tribal record of these sites. A survey form is available through the environmental office.

Pollution of the earth continues at an alarming rate. Our environmental office would like to know of any problems that you consider important. We are the original people and the original environmentalists. Help us to preserve our cultural and natural heritage for the twenty-first century.

Etchieson, Meeks (USDA Forest Service, Ouachita National Forest), *Forest Service - Weyerhaeuser Company Land Exchange and Archaeology.*

The Ouachita National Forest and Weyerhaeuser Company recently completed a large land exchange project affecting lands both in Oklahoma and Arkansas. The Ouachita National Forest traded to Weyerhaeuser approximately 48,000 acres of timber land; in return, the government received from Weyerhaeuser approximately 180,000 acres. The Ouachita National Forest worked with Weyerhaeuser, the Oklahoma State Archeologist, the Oklahoma and Arkansas SHPOs, the Arkansas Archeological Survey, the Caddo Tribe, the Choctaw Nation, and the Advisory Council to develop a Programmatic Agreement that outlines the process for dealing with those archeological resources that have been traded out of federal ownership. This paper summarizes that agreement and the work that is currently being conducted.

Girard, Jeffrey S. (Northwestern State University - Louisiana), *Prehistoric Caddoan Settlement Organization in the Red River Floodplain, Northwest Louisiana.*

Results of recent surveys and test excavations along Willow Chute Bayou, an abandoned channel of the Red River, provide a new perspective on Caddoan settlement systems in northwest Louisiana. In this paper, I argue that a Caddoan community developed along Willow Chute sometime after AD 1000, perhaps as a result of population expansion or migration from the Mounds Plantation area. The community consisted of numerous small residential sites and at least three communal zones dispersed along the stream for a distance of 10 to 12 km. The area was abandoned sometime in the fifteenth century, probably due to an increased propensity for flooding.

Gregory, Pete (Northwestern State University of Louisiana), *Native American Refugia on the Red River.*

In the late eighteenth and early nineteenth centuries, the established frontier
economies developed between the French, Spanish, Caddo, and the Immigrant Tribes was confronted by the Anglo-American plantation economy and the American political system. This caused a series of cultural realignments and conflicts throughout the region.

Native Americans were forced to take refuge in the marginal raft lake areas along the Red River valley, a strategy that had begun at least as early as the 1790s when the Kadohadacho moved south to the lakes near Shreveport. Later historic site archaeology has begun to reflect these changes and ethnological studies suggest these areas have remained refugia for a whole series of cultural groups and that the isolation offered a place for cultural maintenance and even modern revitalization movements.

Halfmoon, Stacey (Caddo Tribe of Oklahoma), *The Caddo Tribe of Oklahoma’s Cultural and Historic Preservation Activities*.

Since receiving a NAGPRA grant in 1994, the Caddo Tribe of Oklahoma has had the opportunity to take a much more active role in making decisions regarding how our history will be interpreted. Tribal members are just now beginning to understand the impact that archeological activities had and continue to have on ancestral Caddo sites. The tribe is also diligently working to maintain historic preservation efforts by conducting consultations and maintaining an open dialogue with various federal, state, and private agencies. The establishment of a Caddo Tribal Resource Center will insure preservation of valuable cultural material.

All of these NAGPRA, historic preservation and cultural preservation activities overlap and combine to provide a service. The service benefits the Caddo Tribe by protecting our legal rights as mandated by several federal laws and by working to help us understand more about our history. This service also benefits the agencies with whom we work by providing them with valuable guidance and consultation which, in turn, opens the door to the possibility of cooperative, long-term working relationships.

**Horner, David** (Bossier Parish Community College), *Gilliam Mound: A Destroyed Mound Site in Caddo Parish, Louisiana*.

Gilliam Mound is a Caddoan site that has been completely destroyed for agricultural use. For five years, a systematic surface collection has yielded thousands of broken artifacts. Through the analysis of these materials, information about settlement pattern and period of occupation has been recorded for one of many destroyed prehistoric sites in Louisiana. The artifacts assemblage represents a height of occupation from AD 1200 - 1500. Located on a tributary of the Red River, Gilliam Mound appears to have been part of a small village mound complex.

**Hunter, Vernon** (Honorable Chairman, Caddo Tribe of Oklahoma), *Discussion of Several Topics Concerning Caddos and Archeology*.

Chairman Hunter will discuss a variety of topics including, but not limited to: 1) appreciation of archeologist work; 2) Caddo tradition of passing down history orally; 3) Caddo Tribe’s effort to reestablish themselves both politically and culturally; 4) Caddo World View vs. Western World View; 5)our ties to prehistoric Caddo, following ancient tradition;
and 6) French and Spanish contact with the Caddo.

Jobson, Robert W., Jr. (Planning Division, US Army COE, Tulsa District), *Tribal Ethics and Scientific Interest.*

This is a short essay examining the relationship between social and tribal ethics and scientific interests. Scientific interests are defined here by activities practiced by archeologists, physical anthropologists, and related disciplines. This essay argues that science must be practiced with a “Social Contract” between society and the scientific community where “curiosity-driven” science is made distinct from “strategic, purposeful, utilizable” science and that “informed outsiders” have a voice in what scientific interests are and what scientists do. Native Americans must have a loud and strong voice in determining what archeologists do.


This presentation will discuss the artifacts recovered from minimal shovel testing of the Harkey Mound site (34Mc-206), McCurtain County, Oklahoma. Four activity areas were identified. Trends in resource utilization will be noted. These results and data from other sites in the vicinity will be utilized to outline a local sphere of sociopolitical interaction.

Meinar, Lynette (University of Chicago), *Number, Distributive, and Collective in the Caddo Verb.*

In this paper, I identify and describe the morphological and semantic properties of the distributive, collective, and number categories of the Caddo verb.

The Caddo number system includes categories for dual, plural, singular ablutive and non-singular ablutive. The dual and plural forms optionally mark any third person argument; they are obligatory in first person non-singular constructions. The ablutive number category marks third person absolutes in lexically specified verbs.

Distribution and collectivity are option-ally marked for third person ablutive arguments. Caddo formally distinguishes among three distributive subcategories: distribution over locations, distribution of events over time, and distribution of entities over types.

Neal, Larry (Oklahoma Archeological Survey), *Something Weird in the River Bed: A Fish Weir in the Kiamichi, Pushmataha County, Oklahoma.*

In September of 1994, the owner of 34Pu331 reported a “weird rock wall” eroding from the bottom of a 10 meter deep terrace of the Kiamichi River. The upper one meter of this terrace contains the remains of an early Fourche Maine phase occupation radiocarbon dated to about 2400 years ago. The manmade rock alignment is lying on bedrock and a gravel bed, and is overlain by illuvial bands of blue and tan silt. A second wall of large rocks was exposed and found to join the first, with a flume or funnel at the juncture of the two walls. The open end faces generally upstream under the modern stream flow. In 1989-1009, partial trunks and roots of cypress trees, not recorded for the Kiamichi basin in historic times, were exposed about 20 m
north of the feature. These were rooted in gravel and covered in similar layers of silt. A sample from one of these was dated to about 3000 years BP. A piece of pine from the basin of the weir and a piece of oak from beneath stones forming the intact wall have also been radiocarbon dated to about 3000 years ago. Thus, it appears that the weir and the cypress may have been essentially contemporary, and associated with the Late Archaic period in Southeastern Oklahoma.

Watkins, Joe (Bureau of Indian Affairs - Anadarko Agency), Putting the "NAG" in "NAGPRA" while Removing the "Con" from "Consultation".

The establishment of the Historic Preservation Working Group of the Seven Tribes of the Anadarko Agency in June 1995 started a new method for keeping cultural preservation and NAGPRA issues at the forefront of tribal concerns. This paper briefly outlines the "working group" concept and highlights some issues which have developed from the consultation technique, but at the same time offers caveats about working with intertribal groups from the standpoint of a federal employee.

Winchell, Frank (Planning Division, US Army COE, Tulsa District), Who Were Those Guys at Spiro Anyway?

The issue concerning the origins of the inhabitants of the Spiro area (i.e., the Arkansas Valley Caddoan Tradition) vs. outside influences/movements from the Lower Mississippi Valley will be briefly discussed in light of recent and re-examined data from the Poteau and Arkansas River valleys.

Wyckoff, Don G. (Oklahoma Museum of Natural History), and Walter W. Dalquest(Department of Biology, Midwestern State University, Wichita Falls, TX), Late Pleistocene-Early Holocene Fossils and Artifacts from near the Canadian River's Confluence with the Arkansas River, Eastern Oklahoma.

Aided by a group of dedicated avocational archeologists, we have been able to compile a record of intriguing late Pleistocene - early Holocene fossils and artifacts for easternmost Oklahoma. These finds come from the gravel bars in the Canadian River along its course below Eufaula Dam. To date, despite inspection of riverbank profiles, no archeological sites containing such materials have been found. The finds exhibit varying degrees of abrasion and polish, clues that are taken to indicate diverse taphonomic histories for individual specimens. Among the Pleistocene fauna, teeth of mastodons outnumber those of mammoth; there are also elements of musk ox, tapir, extinct horse, and bison. Occasional Clovis spearpoints occur and are of local as well as exotic cherts. Only two Folsom points are known to have been found, but we have details on just one of these. Most numerous are Dalton points, occasional Dalton adzes, and lanceolate points resembling Plainview. Good examples of Agate Basin, Cody, Graham Cave side-notched, and Jakie Stemmed occur and attest to at least the sporadic presence of these early Holocene people. Lithic sourcing of materials and studies of degree of reduction are enabling delineation of first approximations for mobility of Paleoindian and early Archaic groups in this locality. A monograph describing these fossils and artifacts is in preparation.
EXTRACTIVE STRATEGIES AT PEORIA QUARRY, OTTOWA COUNTY, OKLAHOMA

by Don Dickson

Introduction

The Peoria Quarry complex was first recognized as representing prehistoric activities by geologist Walter P. Jenny in 1891. Jenny, who was studying the zinc and lead mines in southwestern Missouri and adjacent areas, made collections from the Peoria extractive area and submitted these specimens along with an introductory letter to Mr. G. K. Gilbert of the United States Geological Survey. The latter contacted William H. Holmes, who visited the location in late October of that year (Holmes 1894:7-8). Prior to the evaluation of Jenny, the site was referred to as "old Spanish mines" because the local populace could not attribute such extensive digging to prehistoric peoples. Some early accounts of the Peoria Quarry area greatly exaggerated the vertical and horizontal extent of excavations. For example, Nieberding (1972:146) mentions that John P. McNaughton visited these "mines" in 1877 and concluded that at least 500 to 1000 men must have been engaged in digging pits over an extended period of time in a 40 acre area. According to McNaughton, some of the shafts were 250 to 300 feet in depth, and it amazed him that the pits apparently had been excavated using stone tools. He did not mention the great quantities of lithic debitage which surrounded each pit. Holmes (1894:9), while admitting that digging at the site had been extensive, estimated that chert had been extracted from an area of no more than four or five acres and stated that the greatest depth of pits in 1891 was about five feet. He did mention that a few trenches of 100 feet or more in length could be found along the margins of the site, but stated that most evidence of digging consisted of round pits up to 40 feet in diameter. His sketch map (Holmes 1894:Plate 1) depicts the approximate extent of quarry pits and associated workshop areas. Figure 1 reproduces this sketch as well as indicates the positions of a modern county road and buried water line.

Apparently Holmes conducted test excavations in some of the pits, but the extent of such excavations is not clear from his published accounts (1894, 1919). His "cross sections" of pits indicate bedrock just below the surface (Holmes 1894:10); however, recent backhoe trenches dug to bury a water line across the site suggest that the chert deposits are of a residual nature in a reddish clay and that solid rock strata are not involved. Apparently the
Figure 1. Sketch map of the quarry site, about 100 feet to an inch. The pitting is indicated by shaded areas and the shops are dotted (from Holmes 1894).
carbonates associated with the chert have disintegrated, leaving the chert masses surrounded by clay. Holmes did illustrate (1894 Figure 1) an antler tine found in one of the pits, which he interpreted as a pick; however, he mentions the finding of portions of a deer skeleton in another.

During the early 1960s, the writer visited the Peoria Quarry site on several occasions, collecting samples of chert, preforms and other tools and taking photographs of the extractive area. At this time many pits were still visible and several were at least one meter deep. Most of the area was wooded. Debitage ringed each of the pits and covered spaces between these prehistoric excavations to an unknown depth. Very little grass grew on the surface, apparently due to a scarcity of soil between the chert flakes. At this time many preforms littered the surface, hammerstones of tripolized and harder chert were commonly found, and a search of the surface yielded several probable quarrying tools and two culturally diagnostic artifacts. These will be described in this brief paper.

Apparently, during the 1980s, the landowner decided to develop the quarry area. He had the trees removed, leveled the land with a bulldozer, and placed several structures on the site. Only a narrow strip of the quarry north of the county road remained fairly intact. Unfortunately, a county water line was buried in a portion of the remaining quarry area. A wonderful opportunity to study extractive strategies was missed, because this area was "surveyed" by an archeologist who apparently did not recognize the presence of this important site. By January of 1997, over 98% of the Peoria Quarry area had been eliminated or seriously disturbed. One objective of this paper is to bring together what is known about one of Oklahoma's largest prehistoric quarry sites and the extractive strategies used to obtain knappable chert.

GEOLOGICAL CONTEXT

Holmes (1919:202) concluded that the chert-producing deposits at Peoria Quarry were upper subcarboniferous (Mississippian in modern terminology) in age. Skinner (1957:39-43) agreed that the deposits were upper Mississippian and attributed them to the Boone formation, a very thick amalgamation of chert and limestone layers. Reed et al. (1955: Plate 1) depict the area of the Peoria quarry as expressing the Boone formation. Since the 1950s, both Oklahoma and Missouri have subdivided the old Boone formation, giving formational status to such subdivisions as Bachelor, Compton, Northview, Pierson, Reeds Spring, Keokuk (or Keokuk-Burlington), Elsey, and Warsaw. Only in Arkansas is the Boone still formally recognized; however, at this time the St. Joe, with members Bachelor, Compton, Northview and Pierson, has been removed from the Boone and the
remainder has informally been divided into "lower" (Reeds Spring equivalent) and "upper" (Keokuk or Keokuk-Burlington equivalent, Manger et al. 1988:226).

Banks (1990:27-28) suggested that the Peoria chert deposits represent an outlier of the Tahlequah member of the "Moorefield" formation. While this is certainly possible, the Peoria chert does not closely resemble chert from the Tahlequah member at the type station near Tahlequah, Oklahoma. On the other hand it is much denser and of a different texture than most of the Keokuk cherts recognized in northeastern Oklahoma. Neither does it closely resemble cherts from either the Elsey or Warsaw formations in nearby Missouri. Slocum (1955) does not indicate the presence of post-Keokuk deposits in the Peoria area in his *Post Boone Outliers in Northeastern Oklahoma*. Only an outlier of the Hindsville formation is shown in the Ward area, well south of Peoria. The geological map of Ottawa County published by Reed et al. (1955) depicts small outliers of both Hindsville limestone and Batesville sandstone within five miles of the extractive area but shows no outliers of post-Keokuk age near the quarry. A search for parent carbonates by the writer has not been successful. Keokuk and Tahlequah carbonates can be distinguished by physical characteristics and by conodont and other fossil inclusions. It seems apparent that such deposits have been completely dissolved and the chert inclusions have been left as residuum. In fact, the surrounding clay is also probably residual also. To further complicate matters, the chert is not fossiliferous as are most Burlington and Keokuk cherts. In all directions from the slightly elevated hilltop upon which the Peoria quarry area is situated, one finds typical Keokuk chert on the surface. However, one must remember that differences in elevation may not be easy to decipher. Formations are commonly found draped over ridges and valleys produced by ancient erosion and are often quite irregular. Therefore vertical positioning cannot be used as a determining factor unless one knows what is beneath the elevated area. In this case, we cannot prove that a Tahlequah or other post-Keokuk outlier is involved. The characteristics of a particular chert reflect such depositional factors as depth of water and carbonate compensation limits. In other words, the penecontemporaneous (deposited with the carbonates) Reeds Spring cherts were deposited during a time of maximum transgression of Mississippian seas in a mud-dominated interval. The later Keokuk-Burlington diagenetic cherts (formed by replacement of carbonates) were formed during a regressive sequence when water was much shallower (Manger et al. 1988:228-229). The Peoria chert clearly is diagenetic and therefore represents either an upper Keokuk-Burlington expression or a post-Keokuk-Burlington manifestation. Until further study reveals evidence of age via fossil inclusions or by other means, the Peoria chert may best be considered as reflecting an unknown upper Mississippian component.
EXTRACTIVE STRATEGIES SUGGESTED BY QUARRYING TOOLS

Although none of the quarry pits have been studied properly by a modern archaeologist, several conclusions can be drawn from recent waterline excavations and from apparent quarrying tools found by Holmes and by the writer. First of all, the waterline trench obviously did not encounter solid bedrock, although solid strata could exist at a greater depth. The writer was not present during the placement of this line, and was unable to view the open trench; however, the spoil clay and rock scattered about the surface indicated that large chunks of chert were surrounded by a red clay. The chunks and fragments of chert were not consolidated as one finds south of Joplin, Missouri in the Grand Falls amalgamation of cherts from several formations (Robertson 1967). The homogeneous nature of the chert suggests it is from one stratigraphic source. As Holmes recognized years ago, the white to yellowish-gray chert possesses exceptional massiveness and homogeneity, but has only moderate fracturing qualities (Holmes 1919:207). It is very difficult to produce other than thick preforms from raw Peoria chert; however, when heat treated, the chert flakes excellently. The fact that it could be obtained in large pieces made it attractive prehistorically.

In all probability the first Native American groups to exploit the Peoria extractive area simply picked up chert exposed on the surface. Later peoples were forced to dig into the soil to obtain loose chunks of residuum. Holmes (1894:9) believed that none of the pits were over 10 or 12 feet deep, but it is impossible to do more than speculate without excavating one or more of the pits. The quantity of usable chert exposed while digging the waterline suggests that digging much over a meter deep would have been unnecessary. Anyhow, the quarrying tools can be divided into two broad categories. First, were those tools used to remove soil and undesirable residuum? As Holmes suggested, antler tines may have been used as picks. Also, a few chert picks were employed (Figure 2). The most common digging tool at Peoria apparently was a chert hoe-like tool with a constricted midsection and a thinned upper margin. The opposite end often features evidence of battering, presumably from contact with other rocks in the soil. Apparently an “L-shaped” haft was used, with the short portion being split and attached by binding about the constriction. Holmes found one of these tools, although he considered it to be a reject or possibly a preform for an ax (Holmes 1894:Plate VIII). During the early 1960s, the writer found three similar examples on the surface (Figure 3). My interpretation is that these tools were used in digging the pits much as one might use a hoe. The four illustrated examples, including the specimen found by Holmes, are depicted at one half scale, and Table 1 gives dimensions of illustrated examples. It is suggested here that hoe-like tools and antler or chert picks were used to loosen the soil and undesirable residuum. Then it seems probable that baskets or some other containers were
used to carry the loose material outside of the pit area. Hammerstones were then used to break or spall the large pieces of chert residuum which could not be removed intact. The backhoe or trenching machine used to bury the water line brought to the surface chunks of chert up to 50 cm in length. Smaller hammerstones were employed to test chert quality and to rough out preforms which would be heat treated and further reduced elsewhere.

While some evidence of heat treatment can be observed on some flakes, this actually may be the result of historic and prehistoric forest fires. Since it is hypothesized that chunks of usable chert residuum were surrounded by residual clay, it may well be that antler wedges such as were used to remove pieces of Threemile chert at 14PO57 in Kansas (Banks 1990:102) were not needed or used at the Peoria quarry.
Figure 3. Chert digging tools found during the 1960s by the author.
Table 1. Quarrying tools shown at one half scale.

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<td>19.2 x 7.2 x 3.8</td>
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<td>hammerstone</td>
<td>9.0 x 8.4 x 8.4</td>
<td>tripolized Peoria</td>
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The second category of extractive tool is the hammerstone. While smaller examples of such implements probably were used more in knapping chert extracted from the pits, the large specimens certainly would have been effective in breaking spalls from chert chunks too large to remove in one piece. Figure 4 illustrates two medium sized chert hammerstones at one half scale. Both larger and smaller hammerstones were noticed in the 1960s visits, but these were not collected at the time. That some very large hammerstones were used in quarrying activities is indicated by one syenite hammerstone found by the writer at Spanish Mountain near Magnet Cove, Arkansas, which was almost 25 cm in diameter and weighed 44 pounds (19,958 g). All of the hammerstones noted at Peoria were of either tripolized or solid chert.

Holmes (1894:15) reported finding preforms as much as 45 cm long, 28 cm wide and 15 cm thick. He collected 30 boxes of preforms, mostly between 12 cm and 20 cm in length, and no doubt others have made collections at the site. However, in the 1960s many preforms were still obtainable from the surface, most of which were elliptical or roughly triangular in shape and between 10 cm and 20 cm in length. No attempt will be made to illustrate these preforms in this report; however, Holmes depicts many in two publications (1894, 1919).
Holmes (1894:16) stated that no finished implements had been collected from the quarry, although he depicts in Figure 7 a fairly thin leaf shaped biface which probably had been completed. In three visits to the site in the 1960s the writer found one damaged hafted biface (Figure 5a) and one complete scraper (Figure 5b). Both are depicted full scale. The hafted biface seems to be of a Late Archaic type. Although the stem is damaged and the tip is missing, the biface featured an expanding stem formed by corner notching. As found, the artifact measures 7.5 cm x 3.5 cm x 1.2 cm. It resembles such Late Archaic types as Stone Corner Notched and Big Creek. The chert is local Keokuk, not Peoria, chert.

A second culturally diagnostic specimen collected by the writer during his 1960s visits to the site is a large end scraper (Figure 5b). This specimen most closely resembles scrapers from the Deer Creek site (34KA3), a protohistoric site in Kay County, Oklahoma (Sudbury 1976 Figures 30,31) and scrapers from the Little Deer site (34CU10), another protohistoric site in Custer County, Oklahoma (Brooks 1996: 73-92). The specimen, made from a curved flake of Peoria chert, measures 6.8
Figure 5. Completed stone tools collected by the author.

Figure 6. Example of polyhedral core illustrated by Holmes (1894:Figure 87).

cm x 4.3 cm x 1.7 cm. A protohistoric use of this quarry is supported by the statement of Holmes (1894:12) that some of the workshop areas seemed undisturbed and the associated chert had not changed color very much.

A third possibly diagnostic specimen category was illustrated by Holmes (1894: Plate X). Two examples of polyhedral cores, from which many blades had been removed, were depicted in this plate. One of these cores is shown in Figure 6. These specimens suggest a Middle Woodland affiliation. Thus, one may tentatively say that the Peoria Quarry was used by prehistoric peoples at least during Late Archaic and Woodland times and by protohistoric groups in the area. Future work at the site may extend this provisional chronology.
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Robertson, Charles E.

Skinner, Hubert C.

Slocum, R. C.
Book Review

"Don’t Know Much About Caddo Archeology, Don’t Know Much .... “

In an otherwise interesting and recently published book by Judith Nies (1996) entitled Native American History, there is an extremely wide-of-the-mark discussion of the Spiro site which I would like to share with the readers of Caddoan Archeology. The inaccuracy of the presentation conveys all too well, unfortunately, how little is still known about Caddoan archeology, and about the Caddo peoples, among the general public and the general reader.

According to Nies (1996:37), the Spiro site “on the Red River” was settled in A.D. 600. How the site ended up on the Red River, instead of in eastern Oklahoma along the Arkansas River, is a mystery! Of course, if the Spiro site was on the Red River, that would clear up a current controversy or two, wouldn’t it?

Nies (1996:37) goes on to state that “among the still-existing ruins [at Spiro] are a two-mile-long, 200-foot-high ridge; a central ceremonial structure almost 600 feet long and 30 feet high (called Battle Place by recent archaeologists) with two raised platforms; as well as eight peripheral mounds.” Now we find that Spiro actually contains the large Battle site earthen mound, on Chicaninna Prairie in south-western Arkansas the last time I checked, as well as a massive ridge of astounding proportions. This ridge — of natural construction — in actuality is the pine and oak-covered Boyd Hill not far from the Battle site.

The only other mention of the Caddo in Nies’ book concerns the devastating effects of guns, epidemics, and slavery introduced by the Europeans following the De Soto entrada (Nies 1996:76). She suggests that the Caddo culture was wiped out, preserved only in “oral traditions, in recovered artwork, and in place names [at least those that are used accurately, I guess] and archaeological remains that insist on telling their story” [brackets added]. Anyone who has been to the Caddo Tribe’s center in Binger, Oklahoma, talked and danced with Caddo peoples at a Caddo Conference, or read Cecile Carter’s (1994) wonderful book on the Caddo, for instance, can attest to the utter fallacy of Nies’ suggestion. Come visit the Caddo people in Oklahoma (yes, Judith, that is Oklahoma, not Arkansas!), and learn some things about the strengths and traditions preserved in Caddo culture.

Timothy K. Peritula
REFERENCES CITED

Carter, Cecile Elkins

Nies, Judith
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