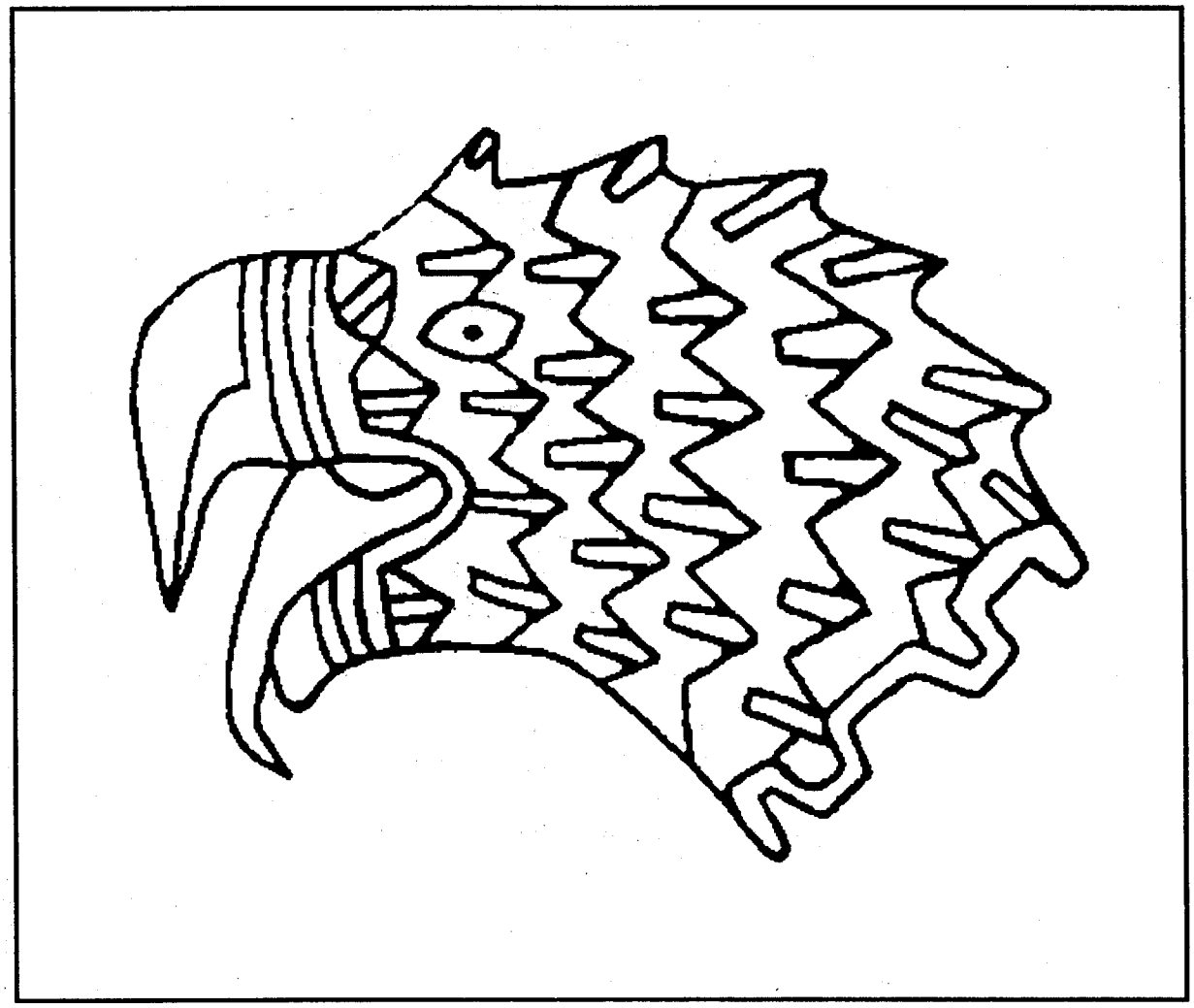
CADDOAN ARCHEOLOGY NEWSLETTER



Volume IV, Number 2 July, 1993

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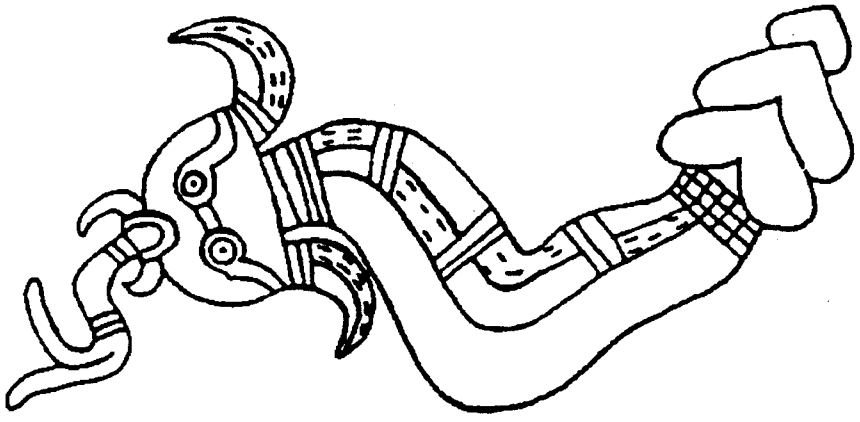


FROM THE EDITOR'S WEB

The Oklahoma Archeological Survey has finally completed the move into new quarters -- one-story, cinder block construction with central air on OU's south campus area. Archeologists for the Oklahoma Conservation Commission (Charles Wallis, Jr.) and the Oklahoma Department of Transportation (Robert Bartlett) moved with us into the new building. Although we're not completely settled in yet, it's good to be in our new permanent home after several weeks of moving preparation, moving, and unpacking.

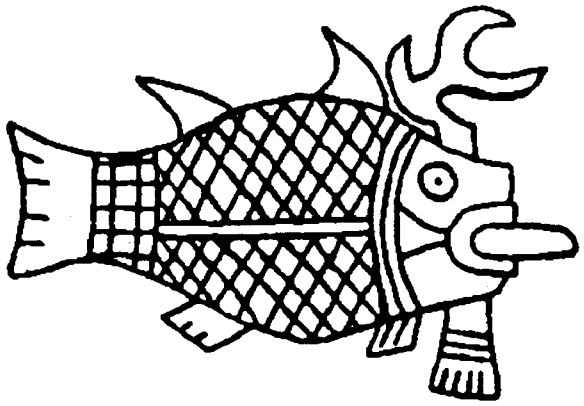
During this time, Martha and I have been working on getting this issue of the newsletter ready for publication. Martha has also been working on the Survey's newsletter, so we're a little late in getting this completed. Well, maybe we'll have better luck on putting out the next issue closer to the first half of October.

Thanks to everyone who sent me information for the regional news section. I'll be contacting people regularly for news to put in this feature. This is one way that everyone can keep current with the activities going on in the area. Archeologists, both professional and avocational, working in the Caddoan area form a relatively small group, so you will know, or know of, most of the featured "players". If you have news about projects, people, exhibits, legislation, etc., send it to me.

A contest for a permanent logo for the newsletter will be officially announced, along with contest rules and a PRIZE!!!, in the next issue. Start thinking about appropriate designs which you can submit. I'll recruit some relatively unbiased judges from the university and surrounding area.

BACK ISSUES FOR VOLUME I

The Caddoan Archeology Newsletter, Volume I, issues 1 - 4, have now been reprinted. They are available for $10.00 to those who did not subscribe to this volume. If you were a subscriber to Volume I and did not receive all of your issues, please contact me (Lois Albert) and let me know which issues you are missing.



NOTE: The cover illustration and other line drawings used in this issue were adapted from Phillip Phillips and James A. Brown (1978). *Pre-Columbian Shell Engravings from Spiro*. Peabody Museum Press.

REGIONAL NEWS

LOUISIANA

Pete Gregory
Northwestern Louisiana State University

A tornado hit the Los Adaes State Commemorative Area in Natchitoches Parish. The winds leveled 82 trees and cleanup operations inadvertently uncovered a large area of in situ midden. The Field School from Northwestern State University, under the direction of Pete Gregory, mapped and rebuilt three exposed features and did controlled surface collections from the midden areas. Under the supervision of Dr. Kass Byrd, the Office of State Parks modified its cleanup plans so that logs, limbs, and other debris were removed with minimal site impact.

The Northwestern Field School shifted strategies to teach field techniques on an artificially constructed site on the NSU campus at Natchitoches. Constructed by Jared Jones, a senior in Anthropology at NSU, the site had "aged" for a year. Stratigraphic and recovery problems were planned and built in. Thus, student recovery and mapping skills could be graded with little impact on the region's archeological resources resulting from training sessions. The three week school will likely be a precursor to a regular six-week field session in future summers.

Jeffrey Girard of Northwestern State University continues analysis of site collections from the Willow Chute area in Bossier Parish. He is also attemping to correlate site data with channel movements of the Red River. This work, aided in the field by Louis Baker, a local avocational archeologist, will continue next fall.

President Robert Alost of Northwestern State University has contacted the Caddo Tribe. The chairperson of the tribe's cultural affairs branch, Ms. Mary Cecile Carter, has begun plans for the reburial of the historic remains from the Lawton Gin and Southern Compress sites in Natchitoches Parish. Northwestern has agreed to provide the Caddo Tribe with a protected reburial site on the university campus because the original sites are no longer available. Salvaged by Clarence H. Webb in the late 1930's, the fragmentary skeletal remains were returned to Northwestern by Mrs. Dorothy Dodd Webb with the request that they be reburied. It is hoped that plans for the reburial will be finalized by late summer. Caddoan representatives will pick the area and do the reburials. The reburial will be closed to the general public.

The U.S. Forest Service, Kisatchie National Forest, has entered into an agreement with Northwestern State University to provide for two interns from the Department of Social Science's History Masters program option in cultural resource management. The students will work with Dr. Allen Dorian of the Kisatchie District and participate in all phases of work in the Forest. èRick Seale and Alicia Trissler have been chosen as the first interns. This program is anticipated to be an ongoing program for the university.

Planning continues for the new National Center for Historic Preservation Technology at Northwestern State University. The university was visited by Secretary of the Interior Babbitt and the site of the center was dedicated. Plans call for building renovation on a National Register property on the NSU campus and for the Center to be operative within the next fiscal year. Funded by the Department of the Interior, the Center will be administered by the National Park Service.

The Caddo-Adaes have been granted state recognition as an Indian tribe by the Louisiana State Legislature. Along with state recognition was the recommendation for Federal agencies to also recognize the group. This adds the Caddo-Adaes to the ranks of the Choctaw-Apache, Jena Choctaw, Clifton Choctaw, and Houma groups recognized as representing Indian communities in the state. Aside from these groups there are some Federally recognized tribes in the state: Koasati (or Coushatta), Chitimacha, and Tunica-Biloxi. Petitions for recognition have been officially filed for all the other groups except for this newest group. There are no state benefits for state recognized tribes except for eligibility as minority groups.

The avocational archeologist, Claude McCrocklin, has begun working in the Terre Blance Bayou area of Natchitoches Parish along with representatives of the Caddo-Adaes tribal group. They have excavated at one twentieth-century house site. This area is north of Los Adaes and is, in local oral tradition, the former territory of the Adaes. Called Tar Branch today, the Bayou Terre Blanche figures prominently in local history.

Dr. Terry Jones, of Northeastern Louisiana State's History Department, and Pete Gregory have renewed their field surveys in the Dugdemona-Little River area of central Louisiana. Caddoan material culture seems to

have a strong, though sporadic, distribution that far east and south.

David Kelley of Coastal Environments, Inc., reports that the draft report is finished for the McLleland and Joe Clark sites in Bossier Parish, north of Loggy Bayou. A late Caddoan hamlet, the site represents one of the few Caddoan farmsteads excavated in northwestern Louisiana. Coastal Environments has also finished surveying the high site probability areas (Pleistocene terrace and other natural high areas) of the Grand Bayou Reservoir in Red River Parish. Some 60 sites were located and recommendations for mitigation are pending with the Louisiana Department of Transportation.

TEXAS

The first volume of ***Notes on Northeast Texas Archaeology*** has been published under the editorship of Timothy K. Perttula, Bo Nelson, Tom Middlebrook, and Bob D. Skiles. The 62 page publication contains a variety of contributions of interest to Caddologists, including (a) five papers from a panel discussion on "Diminishing Caddoan Resources in East Texas" by Jay C. Blaine, James E. Corbin, Daniel E. McGregor, and Timothy K. Perttula, (b) "Possible Archaeological Sites Within the City Limits of Jefferson, Texas" by Thomas E. Speir, (c) "The West Island Site" (41MX65)" by Kevin King and Mike Turner, and (d) "The Carlisle Site (41WD46), a Middle Caddoan Occupation on the Sabine River, Wood County, Texas" by Timothy K. Perttula, Bob D. Skiles, and Bonnie C. Yates.

This volume of Notes, and future volumes (two volume per year), is available by subscription at $10 a year (or $7.50 per issue) from Bo Nelson, Rt 4, Box 259 B-1, Pittsburg TX 75686. Please make checks out to NNTA. (Submitted by Tim Perttula)

THE CADDO LAKE SCHOLARS PROGRAM SEMINAR AND WHAT IT MEANS FOR THE PROTECTION OF CADDOAN ARCHEOLOGICAL RESOURCES

Timothy K. Perttula
Texas Historical Commission

Introduction

Efforts are underway to protect and preserve the unique natural and cultural resources of the Caddo Lake wetland system. This past year, a number of individuals, colleges, and private organizations, as well as state and federal agencies have come together to devise effective measures to protect these fragile resources. Their endeavor was spurred on because of a proposed shipping canal (the Daingerfield Reach) that, as part of the Red River Navigation Project, would have run from the Red River at Shreveport through Caddo Lake and Lake O' the Pines, threatening the Caddo Lake ecosystem.

Caddo Lake Scholars Program

A prime mover in these protection efforts has been Don Henley, musician of national and international acclaim, who has established the Caddo Lake Scholars Program and the Caddo Lake Institute with funding from Henley's Isis Fund. Dwight K. Shellman, Jr., is Don Henley's Isis Fund Program Director for the Caddo Lake Scholars Program. According to Shellman (1993:71-72), the "overall purpose of [the Caddo Lake Scholars Program] is to acquire new learning ... to preserve the biological and cultural integrity of Caddo Lake and its bioregion, primarily its basin". Participating local universities in the program include Wiley College, East Texas Baptist University, Stephen F. Austin State University, Panola College, Texas State Technical College, and Centenary College. The first round of Isis Fund grants to scholars were presented at the May 28, 1993 seminar program in Marshall, Texas. A Caddo Lake Journal, containing the results of Scholar Program research and technical briefings by biologists, ecologists, archeologists, and historians will be published in the fall of 1993.

Other active participants in the program include the U.S. Fish and Wildlife Service (Ecological Services Field Office), the Wetlands Research Center of the USFWS, Texas Committee on Natural Resources, the Texas Parks and Wildlife Department, the Texas Historical Commission's Department of Antiquities Protection, the Northeast Texas Archaeological Society, the Cherokee Tejas Tribe, and the Audubon Society.

Planning Efforts

In October, 1992, with the assistance of the Texas Nature Conservancy and a $1.3 million matching grant from the North American Wetlands Conservation Council, the Texas Parks and Wildlife Department (TPWD) purchased 6445 acres of Caddo Lake; about 7000 acres at Caddo Lake are now under their control. Then in December 1992, U.S. Congressman Jim Chapman concluded that the Daingerfield Reach Project was "neither economically nor environmentally feasible".

Out of this has come efforts of the TPWD to develop a plan to encourage ecotourism at Caddo Lake, and to create a sustainable economic development in the region. That is, economic development at a rate that allows effective natural resource and cultural resource conservation while sustaining the quality of the environment and community life. Another TPWD initiative is to develop a management plan for the 7000 acre Caddo Lake State Park and Wildlife Management Area. Both of these initiatives are under the direction of Jim Neal, executive assistant to the TPWD's Executive Director.

Other planning recommendations put forward by the Caddo Lake Scholars Program include the establishment of a Caddo Lake Bio-Regional Bio-Diversity Center. Such a center, in addition toits biological research, teaching, outreach, and management operations, would also focus on similar cultural, historical, and archeological research, teaching, and outreach activities.

Archeological Efforts

Although archeological efforts in the Caddo Lake bioregion have been sporadic, over 100 archeological sites have been identified along its shores and on its islands. Many of these certainly contain important research and historical information on the Native American inhabitants of the region (the Caddo), as well as on the Immigrant Indian (Coushatta and Alabama) and nineteenth century Anglo-American settlers, such as Robert Potter, of Caddo Lake (Kenmotsu and Perttula 1993). Caddo Lake, with its renowned biological diversity and beauty, was the home of the Caddo for many years. The Caddo Origin Myth states that the Caddo lived a long time on the lake, with their principal village being called Sha'chidi'ni, "Timber Hill".

Through the Caddo Lake Scholars Program Seminar and the management efforts of the TPWD, the importance of preserving and protecting the irreplaceable and threatened cultural resources of Caddo Lake has been repeatedly emphasized to Congressional representatives and local community leaders. Plans are now being devised by the Scholars Program and TPWD, with the assistance and support of the Texas Historical Commission's Department of Antiquities Protection, and the Northeast Texas Archeological Society, to: 1) identify, assess, and designate archeological, historical, and cultural resources of the bioregion, 2) synthesize in an accessible format the archeology and history of Caddo Lake, and 3) formulate strategies for protecting the bioregion's significant cultural resources.

For more information on the Caddo Lake Scholars Program, please contact Dwight K. Shellman, Jr., Shellman & Ornitz, P.C., PO Box 2710, Aspen CO 81612-2710. Information on the initiatives of the Texas Parks and Wildlife Department may be obtained from Andrew Sansom, Executive Director, or Jim Neal, at TPWD, 4200 Smith School Road, Austin TX 78744. The July 1993 issue of Texas Parks & Wildlife has two articles by Elaine Acker Albright on the current situation at Caddo Lake.

REFERENCES CITED

Kenmotsu, Nancy A., and Timothy K. Perttula (editors)
1993 Archeology in the Eastern Planning Region, Texas: A Planning Document. ***Cultural Resource Management Report 3***. Texas Historical Commission, Department of Antiquities Protection. Austin. In press.

Shellman, Dwight K., Jr.
1993 Overview of Unifying Themes. In ***The Caddo Lake Scholars Seminar and Awards Presentation Briefing Booklet,*** pp. 70-74. Isis Fund, Caddo Lake Institute, East Texas Baptist University, Wiley College, Stephen F. Austin State University, and Uncertain Audubon Society of Texas and Louisiana.

EAST TEXAS ARCHEOLOGICAL SOCIETY FIELD SCHOOL

A field school is being held from July 10-18 at the Tyson site in western Shelby County between Nacogdoches and Center, Texas. Sponsors for the field school are the East Texas Archeological Society, Northeast Texas Archeological Society, and (possibly) the United States Forest Service. The site is a wonderful Middle Caddoan habitation located on an easily accessible and well maintained farm. Previous testing at the site indicated the presence of abundant ceramics, daub, stone tools, and cultural features (houses, hearths, pits, etc.). Bob Skiles of the USFS is the Project Archeologist, with consultants Jim Corbin (Stephen F. Austin State University), Jim Bruseth, and Tim Perttula (Texas Historical Commission) attending for parts of the session. Because of the heat, the dig schedule is field work in the mornings (7 AM - 12 N), with lab work in the afternoon. (Extracted from a flyer sent by the East Texas Archeological Society .. ed.)

ARKANSAS

THE 1993 ARKANSAS ARCHEOLOGICAL SURVEY/SOCIETY TRAINING PROGRAM AT SHADY LAKE

Charles Ewen
Arkansas Archeological Survey

The Ouachita National Forest, the Arkansas Archeological Survey, and the Arkansas Archeological Society have entered into a Challenge Cost-Share to accomplish the mutually beneficial goal of mitigating any adverse impacts to cultural resources at the Shady Lake Recreational Area. As part of this agreement, the Annual Training Program in Archeology for the Arkansas Archeological Society will be conducted at and around the Shady Lake Recreation Area. Participants in this program are given the opportunity to learn archeology from trained professionals and the Ouachita National Forest acquires assessments for areas it plans to develop. These assessments will help them better manage the cultural resources.

The results of the initial assessment testing at Shady Lake were encouraging in ways that complement the dual goals of the project. Some areas did not contain significant resources and so no further investigations were recommended for those areas. The remaining areas had resources worthy of further investigation, but these were of a magnitude that should be within the scope of the Arkansas Archeological Society's summer training program.

GOALS OF THE 1993 TRAINING PROGRAM

Very few extensive excavations have been conducted in this part of the Ouachita Mountains. Many assumptions have been made concerning the inhabitants and their quarrying of novaculite outcrops and, indeed, there is some doubt as to what information mere lithic scatters can provide. The two basic goals of this season are: 1) to put these assumptions to the test and to gather good, baseline empirical data on these "lithic scatters"; 2) to provide these data to the U.S. Forest Service so that they can properly manage these resources. Specifically, it is planned to: a) conduct extensive, block excavations at the lithic scatters at Shady Lake in an effort to define activity areas and locate features if they are present. These data will then be used to establish the chronological position and function of the sites. b) excavate the possible "Caddo House" at the Winding Stair site in the Albert Pike Recreational Area. These excavations will test the identification of this feature and identify some of the activities (e.g., subsistence) of the site's occupants.

c) conduct excavations at a historic site at Shady Lake to identify its function and chronological placement.

The complete analysis of the artifacts collected during this fieldwork will be recounted in the final report of all work at Shady Lake and Winding Stair. Drs. Ann Early and Charles Ewen will serve as co-Principal Investigators for this project with the assistance of Jack Stewart. Following the completion of this work, the Ouachita National Forest should be in compliance with the appropriate federal legislation governing the consideration of cultural resources on their property. The successful completion of this innovative project will demonstrate the utility of the Challenge Cost-Share program and the New Perspectives program in encouraging cooperation between federal and state agencies to accomplish a mutually desired goal.

FLASH!!!!! WE'RE BACK FROM SHADY LAKE!!!!

Hester A. Davis
Arkansas Archeological Survey

The Training Program is just over, we are dried out, and the Survey, Society, and Forest Service declare the whole thing a great success.

Shady Lake is in the west-central area of Arkansas' Ouachita Mountains. It is a developed recreation area in the National Forest; a small dam built by the CCC in the mid-30s created a beautiful little lake in a tiny little valley on the upper reaches of the Saline River. A tornado whipped through this area a couple of years ago, uprooting trees and rrevealing the ubiquitous "lithic scatters".

Four areas in the recreation area itself which were tested this summer were identified by the Survey as having potential for more information. While only a few features (possible postholes) were uncovered, stone tools indicated occupation from Dalton (at least two found) to late prehistoric (several small arrowpoints and scraps of plain pottery). One site seems to have been a single component Middle Archaic site, and one of the features occurred there -- possibly a large post hole. Novaculite debitage is everywhere, and the analysis should provide good data on use of flakes. Three of the small sites seem to have considerable deflation, particularly one in a heavily used playground area.

The historic site near Shady Lake turned out to be a turn-of-the-century homestead, with the remains of a mud-cat chimney, possibly a small cellar, and lots of domestic artifacts and refuse. It should provide the Forest Service with good data with which to evaluate the many similar sites found in the Forest.

Two sites outside the Shady Lake area have potential for providing LOTS more interesting data in the future. Ann Early and the Forest Archeologist had identified a large novaculite quarry, essentially undisturbed, last spring. In the heavy growth all that was possible in four days of work was to lay in some base points for a map and put in two 1 x 1 m test units -- saving EVERYTHING. Ann has several hundred pounds of rock in her lab to look through this winter to see at first hand what the debris from quarrying looks like. Two beautiful hammerstones were found sitting on a little ledge right where they were left perhaps 500? .... 1000? .... 5000? years ago! Lots more work to do here.

Finally, the Winding Stair site mentioned above was a bonus for the Forest Service (it is in another Ranger District and was not officially part of the cost-share agreement), and a bonus for the Society folks who were assigned to work there under Ann Early's direction. They definitely identified a structure, square or rectangular. LOTS of heavily baked daub, over burned logs. Three postholes had upright stubs burned in place; an archeomagnetic sample was taken from a small highly fired area; and among the charred logs were remains of thatch, cane, and ... TA! TA! ... corn cobs.

Here in this tiny little valley, on a terrace above the Little Missouri River where there doesn't seem to be enough flat land for "farming", this houseold was growing corn.

There were a very few pieces of pottery found between the daub and the "floor" -- plain, of course. One piece was thin and grog-tempered, perhaps early Caddo; another was thick Woodward Plain-like. Essentially no stone tools or flakes at all.

We will go back to this one in the future. Come to the Caddo Conference and hear Ann's report!

There were 152 registrants for the 17 day program (a preliminary count) and about 24 staff, which included both Forest Archeologists and Survey archeologists. Cecile Carter, the chair of the Caddo Tribe Cultural Committee, was able to join us for four days.

REPORT ON THE HARDMAN SITE

Ann Early, Arkansas Archeological Survey, is doing the final editing of the report on the excavations at this late Caddo (Mid-Ouachita phase) site on the Ouachita River just south of Arkadelphia. The site is a small hamlet, with the principal activity being salt extraction from Saline Bayou nearby. The rpeort will be published by the Survey by the end of the calendar year. (Submitted by Hester Davis)

OKLAHOMA

Lois E. Albert
Oklahoma Archeological Survey

During early September, Daniel Rogers (Smithsonian Institution) and a team of archeologists from Japan, led by Yasushi Nishimura (Nara Institute) will be conducting a remote sensing project at the Spiro site. Research will concentrate on House Mound 6, the only substantial mound at Spiro that has not received any excavation. The research will employ a newly developed variation on the widely used magnetometer, along with other approaches. (Submitted by Dan Rogers)

A full scale exhibit of Spiro materials will begin sometime this fall at the Oklahoma Museum of Natural History on the Univeristy of Oklahoma campus. The dates for this exhibit will be announced in a later issue of this newsletter. Additional information can be obtained by calling OMNH at (405) 325-4711.

Dr. Tim Pauketat and students from the Department of Anthropology, The University of Oklahoma, began working at the Cahokia site in Illinois in June and will continue into July.

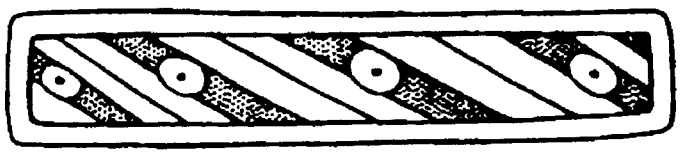
Kent Buehler and Lee Bement are teaching the University of Oklahoma Field School in archeology at this Certain site in western Oklahoma. This field school was announced in the last issue of this newsletter. Ten students are enrolled in the class, a good number for working on the site's bone bed.

Francie Gettys was married this spring to Dan Sisson of Chickasha. She has resigned from her position with the Community Action Program, Oklahoma Archeological Survey. She and her daughters moved to a farm near Chickasha after the end of school. The Survey is in the process of filling her vacant position from a pool of applicants.

Joe Watkins, Oklahoma Archeological Survey/Oklahoma Department of Highways, has accepted a position with the BIA in Anadarko. His last day at the Survey was July 9. He will commute to work from Norman. Joe's position has by filled by Robert Bartlett.

The staff of the Oklahoma Archeological Survey was greatly saddened by the death of our friend Preston George in April. Preston was a long-time member of the Oklahoma Anthropological Society and a staunch supporter of Oklahoma archeology. He was the author of a report on Kaw Lake archeology published by the Survey.

The Survey is now at home in new quarters although we are not yet completely unpacked. Our home is now much more fire resistant, we don't have skunks under the floor or birds in the attic, and there aren't any termite or bee swarms. However, I don't think we'll miss the wildlife. Our new address is: Oklahoma Archeological Survey, 111 E. Chesapeake, The University of Oklahoma, Norman OK 73019-0575. Our telephone number remains the same: (405) 325-7211.



UPCOMING EVENTS

MEETINGS

September

8-11 Annual Meeting of the American Association for State and Local History. Columbus OH. Contact: AASLH, tel: (615) 255-2971.

18-21 Annual Meeting, Assocation for Environmental Archaeology. Theme: Taphonomy and Interpretation. Durham, United Kingdom. Contact: Sue Stallibrass, Department of Anthropology, University of Durham, Science Laboratories, South Road, Durham DH1 3LE, UK. Telephone: 091-374-3643/2; fax 091-374-3741; email JANET Sue-Stallibrass@UK.ac.durham.

27-30 8th Meeting of Working Group I on Bone Modification. Hot Springs SD. Contact: L. Adrien Hannus, Archeology Laboratory, 2031 S. Grange Ave., Sioux Falls SD 57105.

October

1-3 Arkansas Archeological Society Annual Meeting. Russellville AR. Contact: Michael Pfeiffer, Ozark National Forest, PO Box 1008, Russellville AR 71801.

9 Oklahoma Anthropological Society Fall Meeting. Tulsa OK. For further information, contact Dr. George Odell, Department of Anthropology, 600 S. College, University of Tulsa, Tulsa OK 74104.

13-16 51st Annual Plains Anthropological Conference. Delta Bessborough Hotel, Saskatoon, Saskatchewan, Canada. Contact: Plains Conference Secretariat, #5-816 First Avenue North, Saskatoon, Saskatchewan, S7K 1Y3, Canada. Telephone: (306) 664-4124.

29-31 Texas Archeological Society Annual Meeting. Lubbock TX. Contact: TAS, Center for Archaeological Research, The University of Texas at San Antonio, 6900 N. Loop 1604 West, San Antonio TX 78249-0658. Telephone: (210) 691-4393 (Tuesday and Thursday mornings only).

November

3-6 Southeastern Archeological Conference. Radisson Plaza Hotel, Raleigh, North Carolina. Registration fee: $35 (before 10/1; $40 after 10/1). Keynote speaker: Dr. Charles L. Redman, Arizona State University, "Power in the Past" (on Hohokam platform mounds; Friday evening, November 5). Abstract deadline: August 1, 1993. Contact: Program Chair, Vincas Steponaitis, Research Laboratories of Anthropology, University of North Carolina, Chapel Hill, North Carolina 27599-3115. Telephone: (919) 962-1243.

4-7 American Society for Ethnohistory, Annual Conference. Indiana University Memorial Union, Bloomington, IN. Deadline for abstracts, July 15, 1993. Preregistration fee: $30 ($15 students). Contact: Program Chair, Raymond J. DeMallie, American Indian Studies Research Institute, Indiana University, 422 N. Indiana Ave., Bloomington IN 47405. Telephone: (812)855-4086.

17-21 American Anthropological Association Annual Meeting. Washington DC. Contact: AAA, 1703 New Hampshire Ave NW, Washington DC 20009. Telephone: (202) 232-8800.

February, 1994

18-23 American Assocation for the Advancement of Science, Annual Meeting. San Francisco CA. Contact: AAAS, 1333 H Street NW, Washington DC 20005. Telephone: (202) 326-6400.

March, 1994

36th Caddo Conference. Holiday Inn, Fort Smith, AR. Watch this column in future issues for further details, including specific dates, or contact Arkansas Archeological Survey.

April, 1994

18-24 59th Annual Meeting, Society for American Archaeology. Anaheim CA. Contact: SAA, 1511 K Street NW, Washington DC 20006. Telephone: (202) 223-9774.

May, 1994

17-21 International Tree-Ring Conference: Tree Rings, Environment, and Humanity--Relationships and Processes. Hotel Park Tucson, Tucson AZ. Contact: International Tree-Ring Conference, Laboratory of Tree-Ring Research, Building 58, University of Arizona, Tucson AZ 85721. Telephone: (602) 621-2191; Fax: (602) 621-8229.

EXHIBITS AND OTHER EVENTS

July 3 - August 1

Museum of the Great Plains, Lawton OK. Exhibit "Seeds of Change", by The American Library Association and the Smithsonian Institution. Focuses on the exchanges of corn, diseases, the horse, potatoes, and sugar, and how they shaped the world we know today. Contact: MGP, PO Box 68, Lawton OK 73502. Telephone: (405) 581-3460.

Until September 16

Oklahoma Museum of Natural History, The University of Oklahoma. Exhibit "Cross Timbers: Oklahoma Landmark". Hours: M-F, 10AM-5PM; Sat-Sun, 2-5 PM. Contact: OMNH, 1325 S. Asp Avenue, Norman OK 73019. Telephone: (405) 325-7211 (for recorded announcements of current exhibits, directions, etc.) or 325-7212 (to speak to a person).

Current Oklahoma State Museum of History.

Exhibit on hunting and fishing in Oklahoma from prehistoric time to the present. Contact: State Museum of History, 2100 Lincoln Blvd, Oklahoma City, OK 73105. Telephone: (405) 521-2491.

September 17 - December 5.

National Cowboy Hall of Fame, Oklahoma City. Exhibit "Thundering Hooves: Five Centuries of Horse Power in the American West". This is a major Quincentenary exhibit organized by the Witte Museum in San Antonio TX, and traces 500 years of the horse in the American Southwest, focusing on the growth of the four major cultures of the region that centered around the horse -- the Conquistadores, the Vaqueros, the Indians of the Southern Plains, and the North American cowboys. The exhibition also examines the phenomenon of the popular cowboy culture of the 20th century. Contact: National Cowboy Hall of Fame, 1700 NE 63rd St, Oklahoma City OK 73111. Telephone: (405) 478-2250.

AVOCATIONAL TRAINING PROGRAMS, SEMINARS, AND DIGS

Missouri Archeological Society

Contact: Melody Galen, Missouri Archeological Society, PO Box 958, Columbia MO 65202. Telephone: (314) 882-3544.

Arkansas Archeological Society

Contact: Russell G. Scheibel or Hester A. Davis. Arkansas Archeological Society, PO Box 1222, Fayetteville AR 72702-1222, telephone (501) 575-3556.

Oklahoma Anthropological Society

OAS Certification Program. Cost: $10 plus OAS membership. Seminars scheduled throughout the year as well as at digs. Contact: Lois E. Albert, Chair, Certification Council, Oklahoma Archeological Survey, 111 E. Chesapeake, The University of Oklahoma, Norman OK 73019-0575.

CADDOAN REBURIAL

by Thomas E. Speir
Northeast Texas Archeological Society

Abstract

On February 7, 1993 in eastern Texas, the remains of a prehistoric Caddoan Indian were reburied in the original grave. A small ceremony was held to mark the occasion. Representatives of the Caddo Tribe from Oklahoma and Louisiana were in attendance, as were members of the Northeast Texas Archeological Society (NETAS). This report deals with one case of recently excavated human remains.

Background

The burial was one of two discovered during NETAS's 1992 Field School excavations at 41HS524, a predominantly Caddoan I and II farm site. The site was located in Harrison County, within the Sabine River drainage basin of Texas. The archeologist in charge of the field school, Dr. John Keller, directed the removal of one burial's cranial area within a block of soil matrix during the field school. The removed cranial matrix block was carefully transferred in special packing to a lab area where it was cleaned.

The burial was estimated to be approximately 1000 years old. The few existing remains revealed little more than the height of the individual, between 5' 2" and 5' 4". After cleaning, all that remained of the cranial area were some teeth and a few bone fragments. These were transferred to Harrison County Coroner, Dr. Robert Palmer, for a pathology analysis. His study showed that the individual was under 20 years of age at death. Both Dr. Keller and NETAS felt that prompt reburial of the remains was the most appropriate course.

Discussion

There is no single policy that deals with every reburial case. Human remains from prehistoric burials are frequently brought to the attention of the archeological community, some unearthed by accident and others by intent. Disposition of these remains is a problem that is increasingly being addressed by various organizations (Texas Archeological Society Board of Directors 1993).

There are occasions when reburial of human remains, after appropriate scientific study has confirmed that such remains have no further legitimate use for scientific or educational purposes, is a responsible course of action. Further, reburials do seem to promote better relations with concerned Native Americans and other cultural and religious groups. Reburials provide these groups with the evidence that discussions with the archeological community on the subject of reburials do not end with "another white man's treaty", as a television news commentator said.

In some instances, burials must be exhumed to prevent their destruction from new construction. Stewards for the Office of the State Archeologist are advised to become involved in the excavation of human remains only when a burial is in imminent danger of destruction (Cloud 1993:12).

Each case must be evaluated on an individual basis. Although reburial is primarily a legal and political issue, on those occasions when reburial of remains can be considered a scientifically responsible act, consideration should be given this course of action. This can be justified by the benefit such an act could represent to the archeological community, not only in better relations with Native Americans, but through closing ranks with them against looters (Mallouf 1993:1).

Reassuring concerned parties that proper care and respect are always shown for human remains when they are in the hands of qualified professionals does not always eliminate their objections to scrutiny of the remains. Reburials, when feasible, provide support for the argument that proper care and respect by professionals for human remains extends beyond the laboratory. This position may go a long way toward eliminating citicism by Native American groups.

In this particular case, full examination of the remains by qualified professionals, including the principal investigator and a pathologist, yielded all information possible. Retaining the few teeth and bone fragments in a repository would have taken up much needed storage space. By offering to sponsor the reburial, NETAS displayed the willingness of people in the archeological community to work with Native Americans in honoring their goals and interests whenever possible.

The burial ceremony was conducted by Mr. Lymon Kiomute of Lookeba, Oklahoma. Mr. Kiomute was assisted by Rufus "Chief" Davis from Houston, Texas, of the Louisiana Caddo Addais. Several other members

of the Caddo Addais attended the ceremony, including Ms. Pat Wray of Kilgore, Texas. The date of the reburial was set in conjunction with the East Texas Archeological Conference which was held in Tyler on February 6th. Mr. Clark and Mr. Kiomute got the opportunity to hear first-hand some of the current projects being pursued by archeologists in East Texas in their efforts to learn more about prehistoric Caddoan culture. To help offset travel expenses for the Oklahoma Caddo representatives, NETAS "passed the hat" to finance the trip. Clark and Kiomute stayed at the home of NETAS founder Thomas Speir at his horse farm north of Marshall.

Goodwill and hopes for more occasions to work together toward the rediscovery of prehistoric Caddoan cultures were expressed by all parties. Although NETAS concurs that indiscriminate reburials are not scientifically responsible or culturally beneficial, this view does not eliminate reburial when the benfits reaped outweight loss of potential information.

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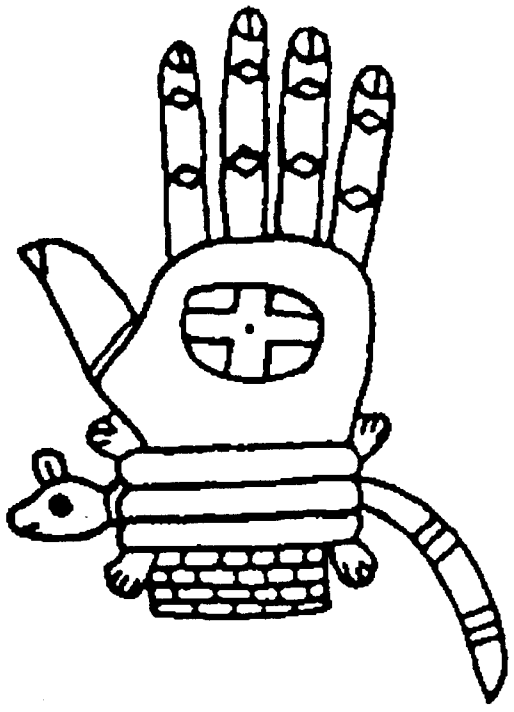

SPIROAN ENTREPOTS AT AND BEYOND THE WESTERN BORDER OF THE TRANS-MISSISSIPPI SOUTH

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Although this paper[1] is primarily a reinterpretation of the Sanders site in the Red River Valley in northeastern Texas, that reinterpretation will make no sense unless I first outline, very quickly, the new paradigm for the archeology of the Arkansas Valley in eastern Oklahoma and western Arkansas upon which it is based.

For the last five years, as I am sure most of you know, I have been challenging the standard interpretation of the archeology of the Arkansas Valley in eastern Oklahoma and western Arkansas--the Northern Caddoan Area paradigm. I have done this on the grounds that there is no documentary evidence and no archeological evidence for a Caddoan connection of any sort other than trade[2] (Schambach 1988, 1990a, 1990b). In my view the basic biological and cultural ties of this tradition, which I call the Arkansas Valley tradition, were, as Bell (1984:239) has speculated, to the east with peoples of the Central and Lower Mississippi Valley, not to the south with the Caddoan area or to the west with the Wichita. I suspect, as I have said before, that this tradition was a part, at least, of the long lost ancestral Tunican tradition.

A year or so ago I decided that sniping at the old paradigm from the sidelines didn't seem to be having much effect. This was partly because I was operating mainly on intuition and didn't always know as much as I should have about what I was talking about. I decided that the thing to do was read all the literature carefully and try to produce a complete reinterpretation of Arkansas Valley archeology, starting from the premise that it was culturally distinct from the Caddoan area. The result is a long paper which has been circulating in manuscript form since last October. It is now in press, and will be out in April[3]. What I have learned while doing that paper is that the old paradigm, which was never really thought through by anyone--it "just growed"--has been crumbling for more than 20 years. And if you pull together the substantial amount of new thinking and new data that has appeared in the last 20 years and reorganize it according to the premise that the Arkansas Valley was a distinct region[4], a more plausible culture history emerges--one that lacks the inconsistencies that have been needed to prop up the old one[5]. The highlights of this new culture history can be summarized as follows.

The Mississippi period culture of the Arkansas Valley tradition of eastern Oklahoma--which I call Spiroan culture, following Phillips and Brown (1978:9-10) and Rohrbaugh (1984:272)--has some of the basic characteristics of a Middle Mississippian culture. These include platform mounds, burial mounds, rectangular wattle and daub houses, charnel houses, a small village settlement pattern, shell-tempered pottery, red slipped pottery, storage pits and hoe horticulture. However, there are also certain local variations on these common Mississippian patterns and certain basic traits derived from the Southwest, the Lower Mississippi Valley and the Ozarks that set it off as a distinct regional tradion[6]. Only traded pots and perhaps a few other traded items, I think, derive from the Caddoan area.

To begin with, I note the recent determination by Barnes and Rose (1990:12) that--contrary to expectations generated by the Northern Caddoan area paradigm--the Mississippi period population of the Arkansas Valley was genetically distinct from the Caddoan population of the Ouachita Mountains and the Red River Valley.

Secondly, in recent reviews and compilations of all bioarcheological data from the Trans-Mississippi South and adjacent parts of the Middle and Lower Mississippi Valley, Burnett, Rose and Harmon have assembled clear osteological and dental evidence for different dietary patterns, different food preparation techniques, and different rates and types of infections in the Arkansas Valley as compared to the Caddoan area (Burnett 1988; Harmon and Rose 1989; Burnett 1990).

Surprisingly, and in marked contrast to Caddoan populations in the Ouachitas and farther south, and to Middle Mississippian populations to the east of them in the Mississippi Valley, the Arkansas Valley population never became "maize dependent", not even the population at Spiro (Burnett 1988:220). The botanical and cultural evidence indicates that the Arkansas Valley tradition had a significantly more diverse subsistence system than the Middle Mississippian tradition or even the Caddoan tradition. This system featured hoe horticulture (unknown in the Caddoan area) of most of the plants of the old Woodland period "Cultivated Starchy Seed Complex" of the Ozark highlands plus some corn. There were three Southwestern cultigens: *Amaranthus hypochondriacus*, *Cucurbita mixta* and a "non-eastern complex corn" (Fritz 1989:80-86; 1990:9-11). Unlike the Caddoans, the Spiroans processed these foods with stone grinding equipment which caused heavy to severe tooth wear (Burnett 1988a; Schambach 1982:178). The use of bison for food--which would explain the low corn consumption--and for hides and bone tools such as scapula hoes was an important part of the economy by no later than A.D. 1100. This is indicated by the bison bones, bison bone tools, and bison hide processing tools such as diamond shaped beveled knives and uniface end scrapers that appear in significant quantities at Spiro phase and Harlan phase sites such as School Land I and

II, Norman, Wybark, Sheffield, Tyler-Rose, Cookson and Moore (Schambach 1993:196-199).

In contrast to the Caddoan area, where rates of serious infections were remarkably low during the Mississippi period the Arkansas Valley in eastern Oklahoma was a hotbed of infections, one of which was probably endemic syphilis or some other form of treponemal disease (Harmon and Rose 1989:347-349; Burnett 1988:215-216; Brown 1984:259). The osteitis and osteomyelitis whose incidences indicate serious infections of severe to epidemic proportions in the Spiro phase Horton and Morris site populations, and are more moderately represented in the Spiro site population (Burnett 1988:211-214). These are not reported south of the Arkansas Valley, with one exception--which we will come to presently.

The fortified village sites common in the Central Mississippi Valley have not been found. The flat topped mounds of Spiroan culture were not used as foundations for temples or other special purpose structures in the Middle Mississippian (and Middle and Late Caddoan) manner. The sophisticated square to rectangular wattle and daub houses with two or four center posts and extended, wall-trenched entrances that are characteristic of this tradition have not been found in comparably early contexts farther east, and do not occur, except for several exceedingly rare examples in southeastern Oklahoma, in the Caddoan area. This house type probably originated in the Southwest, as Webb (1959:63-64) argued more than thirty years ago, and as Bell suggested in 1971 (in Davis, Wyckoff and Holmes, eds. 1971:82).

Preserved specimens from Spiro and numerous Ozark bluff shelters attest to a coiled basketry tradition that probably came from the Southwest, as Griffin suggested in 1952 (Brown 1976:10-12; Scholtz 1975:30-44; Griffin 1952:102). Coiled basketry impressions on countless bases of flat bottomed, grog-tempered and shell-tempered jars indicate that it was lengthy and widespread within the Arkansas Valley tradition. Presumably it did not extend to the Caddoan area, where basketry impressed bases are not found.

Perhaps because coiled baskets that could serve in lieu of pots were available, the ceramic tradition was drastically weaker, in terms of the quantities of pottery in use, than that of either the Central Mississippi Valley or the Caddoan area. Compared to these areas the Arkansas Valley tradition was practically aceramic. The only site that has produced a respectably large ceramic collection by Caddo area standards is Spiro itself. However the WPA collection of 191 pots and 17,552 sherds from Spiro is exceeded by Webb's collection of 195 pots and 19,300 sherds from the Belcher site, a minor Caddo ceremonial

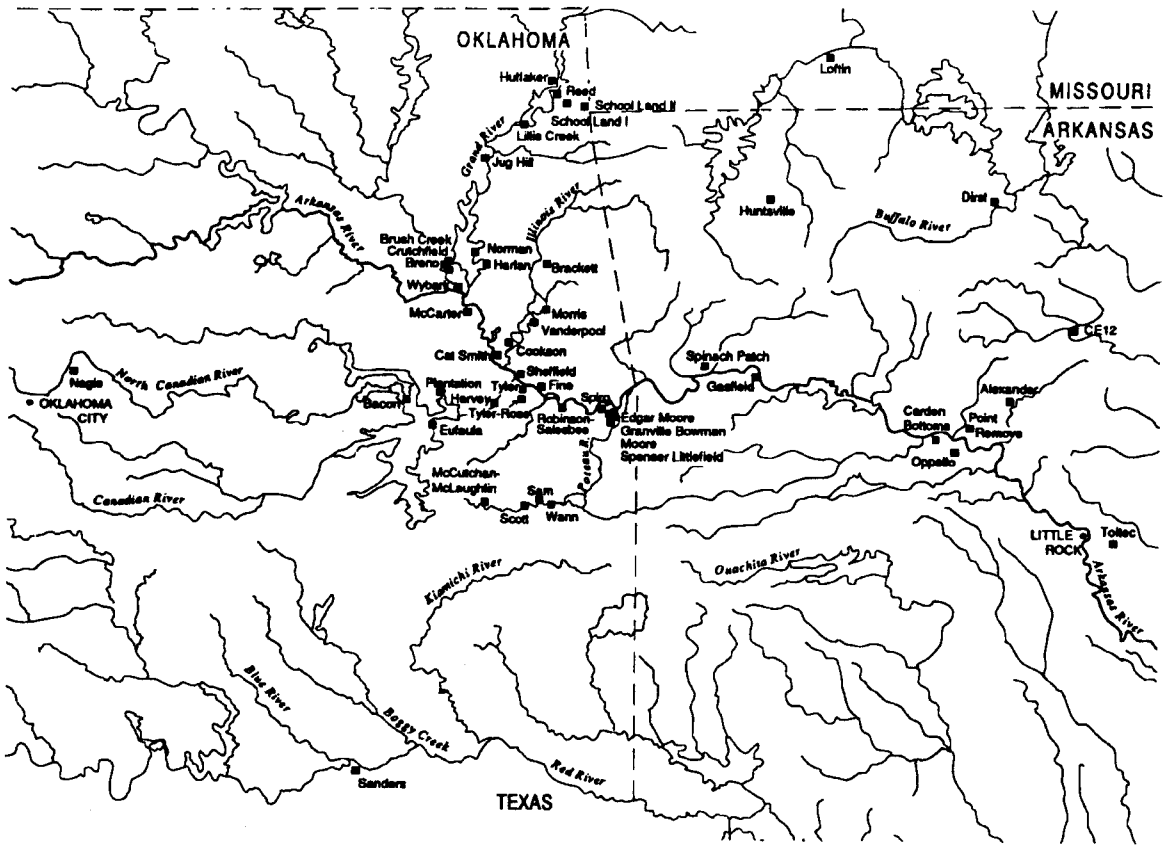

Figure 1. Locations of some of the sites discussed in this paper.

center on the southern fringe of the Great Bend region in the Red River Valley (Brown 1971:1; Webb 1959:118). According to Wyckoff's tabulations (1980: Tables 106,108,110 and 112) there were, as of 1980, only about 24,000 additional sherds on record for all excavated sites in eastern Oklahoma, a total easily matched or exceeded at many Caddo sites such as the Davis site where the WPA excavations produced 96,000 sherds. According to my tabulations and estimates there are, apart from the 191 pots from Spiro, only 341 additional whole pots on record for all excavated sites in the Arkansas Valley in Oklahoma. Compare that, if you will, to the 246 pots that C.B. Moore (1912) found in one small mound at the Foster site, or to the 223 that M. R. Harrington (1920:62-63) found in a single small mound at the Washington site.

This was a plain pottery tradition. Decorated sherds and pots are relatively and absolutely scarce. Most assemblages have none. On the other hand, assemblages from the ceremonial centers indicate that there was an unusually high level of interareal trade in decorated pots with the Red River Valley and Ouachita Mountain Caddo, and with Middle Mississippians in the Central Mississippi Valley, that paralleled the more obvious trade, for which Spiro is famous, in items of shell, copper and other exotic materials. It was, more than anything else, the traffic in Caddo pots out of the Red River Valley that fooled us into thinking that the Spiroans themselves were Caddoans. I doubt that anyone would have called Spiro a Caddoan site if it hadn't been for the Caddoan pots[7].

In any case, in my new paradigm for the Arkansas Valley, I cast the Spiroans as traders and I view the unparalleled deposits of prestige goods at Spiro as hoards of wealth that represent the profits from an equally unparalleled commerce in bison hides and other bison products that was well established by A.D. 1100. From this time on, the Spiroans' main business (literally) was obtaining bison products[8] from the Southern Plains tribes to the west of them, processing the hides at all those village sites in the Arkansas Valley between the forks of the Arkansas and Spiro itself where hide processing tools are so plentiful, and moving them down river to the fiber, fat and protein poor peoples of the Central Mississippi Valley[9] (Schambach 1993:198-199). They did this in exchange for the Mississippian prestige goods that ultimately found their way into the deposits at Spiro that are so commonly, and so aptly, described as hoards[10].

At some point, evidently fairly early, the Spiroans broadened the scope of their trade to all kinds of things besides bison products, and they increased their range to the point where they were in contact, at least indirectly, with the Southwest. By A.D. 1300 they had established one entrepot for this long distance trade in the Red River Valley in eastern Texas, and another near present Oklahoma City in the North Canadian River Valley. These western posts, which were certainly not the only ones, were probably complemented by a major Arkansas Valley entrepot somewhere between Fort Smith and Little Rock. My guess is that it was at the Point Remove site, near Morrilton, Arkansas, which is either the easternmost Arkansas Valley tradition mound group in the Arkansas Valley, or the westernmost Middle Mississippian group.

The Red River Valley entrepot was the Sanders site[11], located about 150 miles southwest of Spiro in Lamar County, Texas (Figure 1; Krieger 1946:171-182; Wyckoff 1971:85-96; Phillips and Brown 1978:166-167). This puts it--not by accident, I am sure--right on the boundary between the Eastern Woodlands and the Plains (Krieger 1946:172). Sanders was also at the terminus of the most logical route from Spiro to the Red River Valley: up the Poteau Valley from Spiro, then down the Kiamichi Valley to the Red River Valley[12].

Since some kind of Spiroan connection with Sanders has long been evident because of the engraved and unengraved shell cups and the Craig style engraved gorgets from the graves there, and since Brown (1984:262) has recognized the Sanders phase as a "regional variant" of the Spiro phase, there is no need for me to argue for a strong Spiro connection. What is at issue is the nature of that connection and the status of Krieger's Sanders "focus".

The key fact here is that the Sanders focus was one of the many fictions born of Krieger's concept of the "Gibson-Fulton transition" and his supporting dictum that shell-tempered pottery in the Caddoan area had to be late prehistoric or historic. Now that concept has crumbled in the face of radiometric evidence, it has become apparent that Krieger was unjustified in making the mortuary assemblage from Sanders the basis of his Gibson aspect Sanders focus, thus creating a cultural unit with a trait list that, he was forced to admit, "... may seem quite ethereal" (Krieger 1946:203). It is now clear that the midden assemblage which he relegated to a much later Fulton aspect occupation because of what he considered late "Plains" traits such as plain shell-tempered pottery, bison scapula hoes, end scrapers, and diamond shaped beveled knives could easily have been, and probably was, mostly occupation debris laid down by the same Spiro phase people responsible for the graves. In fact, the complete assemblage[13] from Sanders can plausibly be viewed as a site unit intrusion of Spiroans from the Arkansas Valley. There is nothing in the general run of artifacts in the Sanders assemblage that cannot be found on Harlan and Spiro phases sites in eastern Oklahoma. Conversely, there is much that cannot be found downriver from Sanders a hundred miles or so in the Caddo country: things like bison bone hoes, stone hoes, stone seed grinding equipment, end scrapers, diamond shaped beveled knives, bone beamers, bone fish hooks, shell-tempered Woodward Plain pottery and Sanders Plain pottery.

Once we rid ourselves of the notion that Sanders Plain pottery, the marker type for the so-called Sanders focus, is a Caddo type because it is so listed in **The Handbook of Texas Archeology** there is no reason to think of Sanders as anything but an intrusion. Sanders Plain is not a Caddoan type or an eastern Texas type. It is an Arkansas Valley variety of the Middle Mississippian type

Old Town Red, the basic mortuary and ceremonial type of the Parkin and Quapaw phases of eastern Arkansas (Brown 1971:164-169; Phillips 1970:145). Krieger's (1946:186-190) perfunctory and overly loose definition of this type is based on no more than 21 Old Town Red bowls found in the graves of peripatetic Spiroan traders who brought them down from Spiro along with other more obvious imports such as negative painted pottery, Mississippi Valley "bean pots," and limestone-tempered Monks Mound Red pottery (Krieger 1946:176-183). All of this mortuary pottery got to Sanders just the way the four conch shell cups, the twenty-one shell gorgets, including "Craig School" specimens that "must have come from the Arkansas Valley" (Brown 1983:150) and the 5,500 conch shell beads got there: on the backs[14] of traders walking up the Poteau Valley and down the Kiamichi Valley.

This interpretation of Sanders as a site unit intrusion is supported by two recent bianthropological studies in which the Sanders site skeletal population unexpectedly emerged as "markedly different" in several ways from Caddoan skeletal populations in the Red River Valley (Burnett 1990:393-399). These studies indicate that the people themselves were Spiroan immigrants from the Arkansas Valley. In an M.A. thesis project that involved comparing the ostensibly Caddoan Sanders site skeletons with the Texarkana phase Caddoan skeletons from the Hatchel-Mitchell site 120 miles down the Red River, Dow (1987) discovered that the two populations were genetically different. Having, of course, no inkling that this might be due to the Sanders people being Spiroans from the Arkansas Valley, she attributed this to the possibility that they were interbreeding with Plains people (Dow 1987:111).

Another study by Barbara Jackson (unpublished; raw data summarized in Burnett: 1990:393-398) uncovered two additional peculiarities of the Sanders population which Burnett (1990) finds impossible to explain within the conceptual framework we archeologists have provided. First, the infection rate of the adult population at Sanders (33.3%) is "dramatically" high compared to other populations in the Red River Valley. In the case of two of the six adults examined, the lesions in evidence are those of osteitis and osteomyelitis, neither of which has been identified in early Caddoan populations in the Red River Valley or elsewhere in the Caddoan area. Therefore they seem to point straight to the Spiro phase skeletal populations from the Spiro, Morris and Horton sites in Arkansas Valley. There, as we have seen, the incidence of osteitis and osteomyelitis is unusually high, and the osteitis is thought to indicate a high incidence of endemic syphilis or some other treponemal infection (Brown 1984:259; Burnett 1988: 212-214).

Secondly, the infections indicated by these lesions had an abnormal distribution within the population. While the adult infection rate was comparatively high, the nine children studied were infection free. Burnett (1990:397), notes that this is a "confusing picture"... "that deserves further testing." The hypothesis to be tested here, I suggest, is that the adults, who were immigrant traders, acquired their lesions as children (endemic syphilis being a contagious disease of childhood; Hackett 1963:10) in their infection ridden Arkansas Valley homeland. Their children, however, were born at the Red River Valley trading post, far from the Spiroan population center that harbored the pathogens responsible for osteitis and osteomyelitis.

What were Spiroan traders doing at the Sanders site[15]? There is good circumstantial and distributional evidence that from this location they were in contact with Southern Plains bison hunters, with the ancestral Kadohadacho and other eastern Caddoan groups in the Red River Valley, with the ancestral Hasinai and other western Caddoans in eastern Texas, and (probably indirectly through a Pueblo-Southern Plains trade network; Creel: 1991) with Puebloans in eastern New Mexico.

A trading post at this location would have given the Spiroans access to whatever bison products and Puebloan goods the Pueblo-Southern Plains trade network might have been moving down the Washita River and the Red River to the Caddo area. Their suppliers would have been people of the Washita River phase, probably the ancestral Wichita, who occupied the Washita and the Canadian River drainages of west central Oklahoma from at least A.D. 1150 through A.D. 1400 (Bell 1984b:323). The Washita River phase artifact inventory includes numerous hide processing tools: bone beamers, bone "hide grainers", diamond shaped beveled knives, and end scrapers (Bell 1980:65; 1984b: Figures 14.3-14.5). The latter two are considered diagnostic of participation in the Southern Plains hide trade (Creel 1991). It also includes various items indicative of contact with Southeasterners: a conch shell ornament, a fragment of a decorated stone ear spool, and occasional specimens of Southeastern pottery in the form of sherds and whole vessels. The most notable of the latter is a human effigy generally considered an import from the Tennessee-Cumberland area (Bell 1984:322)[16]. Furthermore, this inventory is such that evidence that Washita River people frequented the Sanders site could easily reside in the still unstudied collections from the middens (which Krieger did, after all, attribute to an occupation by Plains people. He may have been partly right about the attribution but wrong about the time). The best evidence that something of this nature did go on at Sanders is a single smudged black Puebloan sherd that probably came from southeastern New Mexico (Krieger 1946:197,208).

The evidence for trade downriver to the Caddo country is stronger, although I suspect that the trade upriver was more important. A Haley Engraved bottle (Krieger 1946: Fig. 15) shows the Spiroans were in touch directly or indirectly with Haley phase people about 150 miles away in the Great Bend region of southwestern Arkansas (Schambach 1982b). Hones of white Catahoula sandstone came from farther south in northwestern Louisiana (Krieger 1946:203). Some 150 sherds of shell-tempered Nash Neck Banded jars suggest contacts with Caddoan salt producers in the Little River region of southwestern Arkansas and hint that one of the commodities moving upriver was salt (Krieger 1946:197).

The rare Mississippi Valley prestige goods found at Caddoan sites in the Red River Valley such as the Spiro-related conch shell cups and gorgets (Phillips and Brown 1978:165-168) found at the Rhoden site in McCurtain County, Oklahoma, the Bowman site in Little River County, Arkansas, and the Belcher site in Caddo Parish, Louisiana, and the plain shell cups found at the Foster and Friday sites (Moore 1912: Figs. 76,77,86) probably passed through the Sanders site entrepot on their way down from Spiro. So did the painted bottle from the Haley site which Moore (1912:550; Plate XXXVIII) considered "an import from Southeastern Missouri". The previously inexplicable population of Central Mississippi Valley bird effigy bowls, many of them of the "tail rider" variety, that centers in Lafayette and Miller counties in extreme southwestern Arkansas and in Cherokee, Harrison, Titus and Red River counties in northeastern Texas (Suhm and Jelks 1962:47-49; Plate 24) certainly owes its existence to the Sanders entrepot. These vessels occur in a tight cluster, the northwestern edge of which is located precisely south of the confluence of the Kiamichi River with the Red River. Distributional evidence doesn't come much better than that.

Fifteen sherds "definitely of Titus Focus types" point to contacts with northeastern Texas Caddoans in the Sulphur River drainage (Krieger 1946:197). To Krieger's surprise, there were also "at least 15 sherds of Frankston Focus types"; these indicate contacts with ancestral Hasinai Caddo people living 100 to 150 miles south of Sanders in the Neches, Angelina and upper Sabine valleys (Krieger 1946:197).

What kinds of goods were being accumulated at Sanders for portage up the Kiamichi and Poteau Valleys to the Arkansas Valley? Judging from traded specimens found at or near Spiro, (Brown 1976; 1983; 1984:245-262; Rohrbaugh 1982:538) these probably included cotton cloth[17], woven bison hair skirts and bags, baskets, artifacts of Alibates flint and Red River jasper, and long stemmed Caddoan tobacco pipes of the Red River type.

Furthermore, Brown (1983:144, Table 4) recognizes that pots of the Red River Valley types Haley Engraved, Handy Engraved, and Avery Engraved are probably trade items at Spiro, so they can be added to this list. So should every vessel of the early Caddoan types Crockett Curvilinear Incised, Pennington Punctated Incised, Holly Fine Engraved, Hickory Engraved, and (the misnamed) Spiro Engraved whose presence--in extremely small numbers at an equally small number of Arkansas Valley sites--has done so much to cloud our thinking about the nature of the Arkansas Valley tradition. There are, after all, only 18 vessels and 74 sherds of Crockett Curvilinear Incised in the Spiro collections that Brown studied, and only 22 vessels and 108 sherds of Spiro Engraved (Brown 1971:82,109). The next largest collection of these types is from the Harlan site where Bell (1972:243-247) found seven Crockett Curvilinear Incised vessels, five Pennington Punctated Incised, five Spiro Engraved, four Hickory Fine Engraved, one Holly Fine Engraved and almost no sherds. Outside of these two collections, vessels of these types are scarcer than hen's teeth. On the basis of what I have learned in the past year about the real nature of the Arkansas Valley ceramic tradition, I would bet that the total number of vessels of these five types (including vessels represented by accurately identified sherds) that could be confirmed from all Arkansas Valley tradition collections would be in the neighborhood of 100 to 150. That is not too many for a few decades of overland trade out of the Red River Valley. Not for traders who could move 3,000 to 4,000 conch shell cups (Brown 1975:151) up the Arkansas River to Spiro, presumably from an entrepot about 150 upriver miles away at Point Remove.

Finally there is some tantalizing circumstantial evidence that when Spiroan traders began acting as intermediaries between the large population centers of the Mississippi Valley and the Southwest they may have bought themselves and everyone else the kind of epidemiological trouble that often arises when large populations that have been well separated geographically and culturally are suddenly linked by traders or explorers.

In this case infectious diseases, as well as goods, may have moved, with serious if not disastrous results, from the Southwest to the Arkansas Valley, and then to the Mississippi Valley. As I understand the bioanthropological literature, which is not as clear as it might be on this point, the childhood osteitis and osteomyelitis that account for the epidemic level infection rates (67 to 85%) in the Spiroan populations from the Morris and Horton sites in eastern Oklahoma (Burnett 1988:212-214) are rare to absent in populations of all periods east of Spiro prior to the late Mississippi period, at which time they appeared (as part of a "dramatic rise" in infection rates to 90%, from 35.3% in the Middle Mississippi period) as adult level infections in northeastern Arkansas (Burnett 1988:150-151; Rose et.al. 1984: 418). This Late Mississippi period increase in infection rates is presently attributed to population growth and the appearance of large towns and "widespread trade" (Burnett 1988: 150-151; Rose et. al. 1984:418) This is probably quite true, except the trade in question may have been considerably more widespread than we have thought.

The reason for the absence of osteitis in subadult populations in the Southeast may be that it is diagnostic of endemic syphilis, a treponemal disease of childhood that is so strongly associated with arid regions that Hackett (1963: 8) has remarked that it should be called "treponaridosis". My biomedically untutored evaluation of the situation in eastern Oklahoma (where endemic syphilis has been diagnosed; see Brown 1984:259) is that area was much too humid for endemic syphilis to have developed locally, and that the high frequency and severity of the disease as it is manifested in the skeletons from the Morris and Horton sites bespeak a recent introduction from the Southwest. The vector would have been children who were brought from there, probably for adoption or for use as slaves, neither practice being unheard of in North America in the post Colombian era[18].

It would appear that in the course of the resulting epidemic among the children in the Spiro area this disease and whatever disease was responsible for the osteomyelitis spread, in the classic manner, to the immunologically unprotected adult population, probably producing what Burnett (1988:151) describes as "chronic and extremely debilitating infections."

The broader epidemiological question, should there be any truth in the foregoing, is: were these and perhaps other diseases of Southwestern origin involved in the collapse of Spiro and other major Mississippian centers about A.D. 1450, and in the Mississippian population collapse that most bioanthropologists believe was underway before the De Soto entrada? Did Spiroan traders bring down Mississippian culture by introducing diseases from the Southwest?

If the Spiroans were the traders I make them out to be, there should be other Spiroan entrepots along the Canadian and Arkansas Rivers in the plains country of central Oklahoma[19]. But if they are like the Sanders site they will be hard to identify from surface debris or midden excavations alone. The evidence that brought the Sanders site to our attention was all in the graves. Had they not been found, the Sanders site would today be passing unnoticed as a Plains village component. So any Plains Village site in the Arkansas and Canadian drainages could suddenly emerge as another Spiroan entrepot.

One possibility is the Nagle site, on the North Canadian River near Oklahoma City (Shaeffer 1957). There, in an accidentally discovered cemetery, four graves that were professionally excavated after machinery destroyed 12 others. All contained--shades of Sanders--locally exotic artifacts, probably out of the Spiro phase of the Arkansas Valley tradition (Shaeffer 1957:93-97). There were two Woodward Plain jars, one "marine conch shell" bead "identical in shape with necklace beads from Spiro Mound", and five triangular, side notched arrowpoints that Griffin (1961:30) calls "similar to the Cahokia side-notched forms". Two copper covered, sandstone ear spools were found by a visitor in a trenched area between the four graves that were salvaged. According to Shaeffer (1957) and Griffin (1961), both are Baerreis's type A, one of the types he considered diagnostic of the Spiro "focus" (Baerreis 1957:34), now the Spiro phase.

Like the Sanders site population, the Nagle site skeletal population exhibits bone lesions suggesting "a totally different series of health problems" than those exhibited by skeletal populations from nearby Central Plains sites (Owsley and Jantz 1989:140). The 20 skeletons from Nagle exhibited "a severe mortality profile, associated with pronounced evidence of bone disease" indicative of "dietary deficiencies, possibly scurvy and a syphilis-like bone disease" (Owsley 1989:131; Brues 1957)[20].

Brues (1959:66) linked this population to the Morris and Horton site populations of eastern Oklahoma on the basis of similar paleopathology, particularly the evidence of a syphilis-like bone disease and on the basis of the frontal-occipital cranial deformation exhibited by skulls from all three sites.

The latter is also in evidence at the Sanders site, as Brues pointed out in her Nagle site report, and--unknown to her in 1957-59--at Spiro itself (Brues 1957:104; Brown 1984:159). The cranial deformation reported at Nagle, like the osteological evidence of pathology, is not reported for other Central Oklahoma sites. In fact, Bell (1984:309) states: "There is no suggestion of any skull deformation" in the skeletons, also studied by Brues, of the Washita River "focus" who frequented the Oklahoma city area between A.D. 1000 and A.D. 1450. Thus the artifacts and the skeletal evidence from Nagle, like those from Sanders, indicate an occupation by Spiroan intruders from the Arkansas Valley who were, I suggest, operating a wide ranging trading enterprise[21], probably at great epidemiological cost to themselves and everyone they contacted.

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END NOTES

(1) Except for a few minor editorial changes, the text of this paper is exactly as I read it at the 35th Caddo Conference in Norman, Oklahoma. In the notes that follow I add some new information and I respond to some of the comments, particularly those of James Brown and Robert Brooks, that I received on the paper during and after the conference.

(2) Furthermore, as Helen Tanner reminded me in a conversation we had at the conference, there are no Caddoan traditions pertaining to an occupation of the Arkansas Valley or to Spiro. Considering that both Crenshaw and the Battle Mound are alluded to in versions of the Caddo origin myth (Swanton 1943:26-29) as the place where the Caddo people emerged from the underground world (one version puts "Chacanenah" at Hervey, Arkansas--the location of Crenshaw--but Chickaninny Prairie, the location of the Battle Mound, and Chacanenah are probably one and the same; see Hemmings 1982:61), it is reasonable to ask why a place as important as Spiro would have faded entirely from tribal memory. In a more generalized version of the myth presented by Mooney (1896:1093-1094) the Caddo appeared near the mouth of the Red River and moved up it to the west. There is no mention anywhere of another river to the north, or of a move to the south.

(3) It is now in print. See the bibliography for Schambach 1993.

(4) At the conference Brown seemed to be arguing that my claim that the Arkansas Valley tradition was not Caddoan is based upon an arbitrarily derived list of diagnostic Caddoan traits that I have concocted and that I use to remove from the Caddo area any region in which they do not appear. I do have a pretty good idea of what is and is not Caddoan, after 28 years in the field in the historically and ethnohistorically documented Caddo area in southwestern Arkansas, northwestern Louisiana, eastern Texas and southeastern Oklahoma. But that is not the approach I am using because I know as well as Brown does that it leads in a circle. All I have done is unravel the historically and ethnographically undocumented Arkansas Valley tradition from the tradition that exists in the documented Caddoan area to the south, and then I have compared the two, taking into consideration population biology, epidemiology, diet, food preparation techniques, subsistence techniques, ceramic assemblages, tool assemblages, house types, mortuary patterns, mound construction techniques and culture history. The differences that have become apparent are, in my judgment, so numerous and so profound that, contrary to the conventional wisdom, and no matter what one calls them, two distinct populations and cultures must have been involved.

Anyone who thinks the Arkansas Valley should be called Caddoan despite these differences should explain why the whole Southeast shouldn't be called Caddoan.

(5) For example, Brown, Bell and Wyckoff (1978:194-195) conclude their influential paper on "Caddoan" settlement patterns in the Arkansas Valley with two paragraphs wherein they recognize so many similarities between the Arkansas Valley tradition and the Middle Mississippian tradition that only a bit of obfuscation keeps these paragraphs from looking like the repudiation of the Northern Caddoan area paradigm that they actually are. They write: "As common and conventional as it is to consider the Caddoan cultural traditions separately from the Mississippian to the east, **the one aspect** [emphasis mine] in which it is more advantageous not to do so is in terms of subsistence-settlement patterns. The similar organization of communities around civic-ceremonial centers with platform mounds, combined with a basic agricultural technology based on hoe cultivation of maize, attests to the fundamental unity of the two areas.... Their essential continuity can be traced to a

common economic base on the one hand and to the dominating influence of Mississippian ideology on the forms of Caddoan social integration on the other." In the next paragraph they go on to say "But at a more detailed level it is obvious that differences exist, which under closer scrutiny, can be shown to be the result of an advanced Mississippian subsistence-settlement system responding to a marginal environment for that system.

The significance of these paragraphs is obscured by the strikingly vague phrase: "the one aspect." An alert editor would have called for clarification by asking the authors the question they should have asked themselves: "the one aspect of what?" The answer is: "the one aspect of culture." Once they realized that, they would have been forced to revise their paragraphs, if not their entire paper, because the common elements they mention (subsistence base, horticultural techniques, economic base, settlement pattern, use of platform mounds, and ideology) add up to considerably more than one aspect of culture. They encompass, in one way or another, nearly the whole range of culture--which is why I keep insisting that the Arkansas Valley was not Caddoan.

(6) As Prewitt (1974:83-85) notes, the Arkansas Valley differs significantly from the Caddo area in climate, particularly rainfall and native vegetation. There is less rain in the Arkansas Valley in eastern Oklahoma and it is less predictable so corn horticulture would have been more difficult there than in the Red River Valley.

(7) When we come right down to it, the evidence--such as it is---upon which the Northern Caddoan Area paradigm rests consists of Caddoan pots in the Arkansas Valley and Middle Mississippian prestige goods in the Caddo area, both actually the work of Spiroan traders. As Story (1978:56-57) has observed, the boundaries of the Caddo area, as it was defined in the early years of Caddoan archeology, were based "in actual practice, primarily" on the distribution of Caddoan pots. In 1949 Krieger made it quite clear that this was the case, stating that the five geographical "foci" of his newly created early Caddoan "Gibson Aspect" (Spiro, Sanders, Alto, Haley and Gahagan) were "Primarily...bound together by a closely interrelated ceramic tradition..."(Newell and Krieger 1949:194; Fig 19, Fig. 62 and Map 1). He went on to say, citing his Cultural Complexes and Chronology in Northern Texas (1946:214-215): "...but important non-ceramic and burial traits also tie them together in diverse ways." Those who follow up his reference to see what traits he had in mind will discover that, except for a few traits like celts and small arrow points that are too widespread in the Southeast to carry much weight in comparisons of this kind, his list of artifacts or artifact types that co-occur in the Arkansas Valley and the Caddoan area amounts to what I would call a bill of lading for trade goods that were passing through the Sanders entrepot on their way to or from Spiro. "Some of the most important traits of this aspect," Krieger wrote (1946:215), "with the foci in which they occur most regularly are: effigy pipes of human and animal forms, made of beautifully polished stone and pottery (Spiro, Gahagan, Haley); long-stemmed pottery pipes with tiny, thin-walled bowl [sic] (all foci); large stone T-shaped pipes (Spiro, Gahagan); stone elbow pipes (Sanders, Spiro); stone ear spools (all foci); shell and wooden ear spools (Spiro, Haley, Sanders); ring shaped ear spools of pottery (Alto, Haley); use of copper on ear spools (all but Alto); copper covering on wooden beads (Spiro, Haley, Gahagan); plain conch-shell dippers (Spiro, Haley, Sanders); engraved conch-shell gorgets and "dippers"(Spiro, Sanders); repousse copper plaques (Spiro); copper masks with long noses, and hand effigies (Gahagan); pearl beads (Gahagan, Haley, Sanders) [The pearl beads found in the Red River Valley are imports. There are virtually no mussels in the Red River--certainly not enough to sustain a pearl fishery--due to its high salt and silt content]; Olivella beads (Sanders, Spiro); Marginella beads (Sanders); spatulate celts (all but Alto); flint blades with recurved edges and straight to concave base, of form known as "Copena Point" in Southeast (common in Spiro, Alto, and Gahagan; possibly occur in Haley); chipped and ground adzes or celts with flat sides and sharp polished bits (all foci): abrading stones of white Catahoula sandstone (all foci); small arrow points with serrated edges, slim, needlelike tip, flaring barbs, and bulb-shaped stem widest in the middle (all foci); side-notched triangular arrow points (Gahagan). [At the 8th Caddo Conference Webb and Griffin agreed that these specimens from Gahagan--there were three, of a "white material"--are imports from Cahokia. Brown contributed the information that similar specimens were found in the Craig Mound at Spiro. See Davis, Wyckoff and Holmes 1971:56].

When it came to basic domestic and ceremonial traits, as opposed to small, transportable artifacts, Krieger could not point to any specific similarities between the Arkansas Valley and the Caddo area. What he actually notes, mostly, are differences between Spiro and Sanders, on the one hand, and the Red River Valley Caddoan sites on the other: "Sanders and Spiro burials were crowded into small graves, whereas those of Haley and Gahagan were placed parallel in rows in very large pits, usually with one or more skeletons laid at right angles to the main row and, and the grave offerings placed in piles against the pit walls" (1946:214). "Alto and Haley houses were circular and very large.... In no case has an entrance way other than one or more spaces between wall posts been discovered [that is no longer true, of course; see, for example, Webb 1959] nor has any definite arrangement of interior posts.... Spiro houses were square to rectangular, large and sturdily built with walls oriented along cardinal directions; they had two or four large central support posts, plastered floors, covered entranceway(sic) extending from one of the long sides,... Entranceway posts were set either individually or in trenches." (1946:214-215). Krieger listed burial mounds and temple mounds as common elements, which they are, broadly speaking, but we now know for a fact that the burial mounds and platform mounds of the Arkansas Valley are significantly different from those of the Caddo area (See above, this paper. See also, Bell 1972:259-260;1984:239 and Bell in Davis, Wyckoff and Holmes 1971:58-62).

In a paper published since the conference, Kidder (1993; see also Perttula 1992:164) has finally removed from the Caddo area that other major spuriously Caddoan regional-temporal construct, the Glendora "focus." There too, James A. Ford's mistaken identification of the Keno and Glendora sites, and the whole Lower Ouachita Valley, as Caddoan was based on traded Caddoan pottery (Kidder 1993;233-234). Evidently the "thriving trade" in traditional ceramics for which the Natchitoches and other Red River Caddo groups were well known in the eighteenth century (Perttula 1992:168) had roots deep in the past.

The old Glendora material of the Ouachita Valley is now considered Tunican and/or Koroan (Perttula 1992:164). This is interesting considering that in 1952 Orr (1952:252) wrote: "Fort Coffee [which we now know to be the domestic side of the Spiro and, I would say, Harlan phases] has ceramic similarities with Glendora, including swollen neck bottles and negative elements surrounded by hatchuring."

(8) Perhaps this commerce wasn't unparalleled. In a paper that appeared shortly after the Caddo conference, O'Brien (1993) has proposed that the Steed-Kisker phase people of the Kansas City area were acting as middlemen in a similar commerce between people of the Central Plains and Cahokia. In that paper she discusses the "universal" problem of documenting "invisible trade in foodstuffs and other perishable commodities" which is, I presume, the problem Brown was referring to when he criticized my interpretation of the Spiro phenomenon for relying too much on what he called "negative evidence." As O'Brien (1993:73) puts it: "Although we may lack concrete [archeological] evidence of trade in food and clothing ethnohistoric evidence documents their existence in the Southeast."

(9) Brown attacked my argument that the Spiroan phenomenon was based on the trading of fiber, fat and protein by stating that-- according to my notes and memory--: "If one reads the ethnographic literature, one finds that most people in North America were able to provision themselves." But were they? As Spielmann (1991b:1-2) points out, that has been the conventional wisdom. But during the last ten years it has been demonstrated that even the nonhierarchical societies of North America and elsewhere were "rarely self-sufficient with regard to subsistence and other basic material resources. In fact, such societies often engage in a wide variety of exchange relations in order to gain access to various material items." Among the North American peoples who were periodically or regularly exchanging "dietary supplements" or "dietary staples" (Spielmann 1986:Table 3) are the Netsilik/Inglulik, the Haida/Tlingit, the Chilkat Tlingit/Athabascans, the Nunamiut/Thremiut, the Southern Plateau tribes and the tribes of the Northern Plateau, Great Basin and Northwest Coast, the Yavapai/Yumans, the Huron/Algonkians, the various Plains horticulturalists and Plains hunter/gatherers and --most pertinent to the Spiro case-- the Southern Plains hunter/gatherers and the Pueblo peoples. (For the latter see Creel 1991; Spielmann 1991a,b; Speth 1991; Baugh 1991.)

Furthermore, as Maynard Cliff pointed out to me after reading my latest paper on Spiro (Schambach 1993), Flannery (1968) has constructed a model, based in part on the Chilkat Tlingit\ Athabascan trading relationship noted above (see McClellan 1953), that in many ways matches and, I think, supports the one I proposed for the Spiroan phenomenon. As he puts it:

> "...data from several parts of the world suggest that a special relationship exists between consumers of exotic raw materials and their suppliers, especially when the suppliers belong to a society which is only slightly less stratified than that of the consumers. First, it seems that the upper echelon of each society often provides the entrepreneurs who facilitate the exchange. Second, the exchange is not "trade" in the sense that we use the term, but rather is set up through mechanisms of ritual visits, exchange of wives, "adoption" of members of one group by the other, and so on. Third, there may be an attempt on the part of the elite of the less sophisticated society to adopt the behavior, status trappings, religion, symbolism, or even language of the more sophisticated group--in short to absorb some of their charisma. Fourth, although the exchange system does not alter the basic subsistence pattern of either group, it may not be totally unrelated to subsistence. It may, for example, be a way of establishing reciprocal obligations between a group with an insecure food supply and one with a perennial surplus"(1968:105).

(10) Robert Brooks commented that by posing trade in bison products as the basis for the Spiro phenomenon, I am overemphasizing the importance of bison in the Arkansas Valley tradition. That does not surprise me because the idea that bison were unimportant until after the collapse of Spiro and the beginning of the Fort Coffee "focus" is one of the mainstays of the Northern Caddoan area paradigm (Schambach 1993:196-198). Arkansas Valley specialists must defend it or abandon the paradigm. All I need to say in response is that the evidence I present for bison usage during the Harlan and Spiro phases is the same evidence that they have traditionally accepted in support of idea that the people of the Fort Coffee "focus" were bison hunters par excellence. The only change is that it has now become apparent, due mainly to a radiocarbon dating project carried out by Rohrbaugh (1982,1984), that the Fort Coffee "focus" was a spurious construct consisting mostly, if not entirely, of all the habitation sites of the Harlan and Spiro phases. For decades Arkansas Valley specialists have been systematically misclassifying these sites on the basis of the rule of thumb that all assemblages with bison bones, bison bone tools, bison processing tools and shell-tempered pottery were Fort Coffee "focus." In so doing they failed to notice, or wonder why, they were

not finding Harlan and Spiro phase habitation sites (except Robert Bell; see below, the end of this note). Indeed they excluded from discussion--on the scientifically unacceptable grounds that they were anomalous-- the School Land I and School Land II sites, where abundant bison bones and shell-tempered pottery occur in apparent association with Harlan phase houses (which have Harlan phase radiocarbon dates) in small villages. These two sites produced osteological evidence that 26 to 47% of the meat consumed by Harlan phase people was bison (Duffield 1969: Tables I and V).

At this point, I doubt that it would be possible to overemphasize the importance of bison in Spiroan culture. I predict that good data from properly excavated sites will show that imported bison products were the mainstay of the Spiroan domestic economy and the Spiroan trade network from at least A.D. 1000 on.

To return to my point about Arkansas Valley specialists failing to notice or wonder about the absence of Harlan and Spiro phase habitation sites, Bell did notice and did wonder, but he went no farther. During a discussion session on the topic "Mounds, Architecture and Burials" at the Seventh Caddo Conference he said: "One other thing is bothering me a little bit. In the Spiro area or in the area around many of these ceremonial centers, where were all these people living that were contributing to and supporting these centers? If you look at the sites around the centers, they tend to be Fulton sites very often. For example, around Spiro, is it not a little peculiar that we get so many Ft. Coffee [sites]? When you find a village around Spiro it is very likely to be Fulton." A little later, during the same discussion he said, in reference to the Harlan site: "You had the feeling that no one stayed there except a few priests that were kind of keeping things going. The people, presumably, must have lived up and down the river valley, and here and there you get the suggestion of a Gibson site. But I've been real puzzled about where some of these Gibson people were staying. I've been wondering if some of the material we're calling Fulton may not be representative of this." (In Davis, Wyckoff, and Holmes 1971:55-56).

(11) Dee Ann Story (1991:17) notes that "the oft-cited analysis of the Sanders site (Krieger 1946:172-218) is preliminary and does not separate all components now identifiable in the artifact collection at TARL. Furthermore, the excavations at Sanders left much of the site unsampled."

(12) The trade route would have been essentially the same as the old railroad route from Spiro, Oklahoma to Paris, Texas, i.e., the route of the Kansas City-Southern line from Spiro to Poteau, Oklahoma and then the route of the St. Louis-San Francisco line from Poteau (via what appears on topographic maps to be a natural gorge through Winding Stair Mountain) southwest to Antlers, Oklahoma and then south to Paris, Texas. The route from Spiro to Antlers is so constricted by various river valleys and mountain passes, and so obviously the easiest and most logical route that it should be possible to find some of the way-stations the Spiroan porteurs must have used.

(13) As James Brown pointed out at the conference, there may be a Woodland component at Sanders. What I should have said here is "the complete Mississippi period assemblage."

(14) Judging from the paper Diane Wilson presented just before mine at the conference ["Incidence of Degenerative Joint Disease Among the Sanders Site (41LR2) Population"] I should probably change this to "backs and heads." As I recall, she reported that one of the peculiarities of the Sanders site skeletal population was it looked as if those people had spent a lot of time carrying loads on their heads. That observation did not surprise me.

(15) Since I read this paper at the conference, I have learned that according to various authorities the native distribution of Osage orange, or bois d'arc (*Maclura pomifera*), probably comprised a phenomenally small area in extreme southeastern Oklahoma, extreme southwestern Arkansas, and eastern Texas (Sargent 1955:33; Smith and Perino 1981:Figure 2; Harrar and Harrar 1962:257-259; Preston 1989:232-233; and Petrides 1972:191-192). It has since been planted widely as hedgerow by Europeans. The most conservative versions of the Osage orange distribution map (Preston 1989:232; Smith and Perino 1981:Figure 2,b) depict a native range with its northern limit in the Red River Valley between Fulton in southwest Arkansas and Durant, Oklahoma and Bonham, Texas. From there it trails off to the southwest in a ninety to one hundred mile wide band that ends in the vicinity of San Antonio. Thus it is possible, if not probable, that Osage orange did not grow north of the Red River Valley, or outside of the territory of the Red River Valley and east Texas Caddos. This would have given them a monopoly on the best and most desired bow wood in North America other than the Pacific yew. Whatever its source, we know that in early historic times it was traded as far north as the Blackfoot country in Montana, possibly as far northeast as headwaters of the Mississippi, as far west as the Pueblos, as far southwest as Sonora, Mexico (Pope 1962:14-15), and at least as far east as the mouth of the Arkansas (Mason 1972:10; Peattie 1953:480; Hamm 1989:21-22; Hamm 1989:17; Robbins, Harrington and Freire-Marreco 1916:68; Swanton 1942:37,192, 238; Swanton 1942:192). It was used extensively in the central and southern Plains (Hamm 1989:17-22). The Sanders site is located in the middle of the northern end of this (putative) limited range, suggesting to me that the main items carried up the Kiamichi to Spiro and from there to points east and west were Osage orange bows or bow staves of Caddoan manufacture.

Even if Osage orange happened to grow a significant distance north of the Red River Valley as some distribution maps indicate, such trees might not have been suitable for bow making (Smith and Perino 1981:Figures 2a, c, d). Although the tree is very adaptable, it prefers deep, rich river bottom soils (Smith and Perino 1981:29).

Trees grown in such soils are straight grained compared to trees grown in the uplands which tend to have twisted grain patterns. Modern bowyers claim that only straight grained trees grown in river bottom soils are suitable for bows (Waldorf 1985: 5).

The trade in Osage orange bows that Swanton postulated for the Hasinai in the sixteenth century, and for which the Kadohadacho were famous in the seventeenth century probably had roots deep in the prehistoric past (Swanton 1942:192-193) . We know from prehistoric specimens from burials at the Mounds Plantation site in northwestern Louisiana and the Bowman site in southwestern Arkansas the Caddo were using Osage orange bows by A.D. 1050 (Webb 1984:18). There are fragments of Osage orange bows in the Chance and Spencer collections from this site .

(16) This effigy is from the McLemore site in central Oklahoma (Pillaert 1963: Plate XVI). As Dan Morse informed me, it is typical of the specimens that Phillips, Ford and Griffin (1951:167; Table 4:196) referred to as "man-bowls" or "Chacmool" effigies. These are most common in the Cumberland area but they also occur in northeastern Arkansas and southeastern Missouri and there are specimens from Moundville and from southwestern Indiana.

The bowl was not the only import at the site. Pillaert (1963:42) lists as additional evidence that "the people of the McLemore site were in contact with alien populations with whom they traded and borrowed ideas"... "flint from native quarries in Texas and north central Oklahoma, marine conch-shells from the Gulf of Mexico and steatite whose most likely source would have been Cherokee County, South Carolina." There was also an Olivella shell that could have come from the Gulf Coast or the Pacific Coast.

(17) Jenna Kuttruff's article (1993) on "Caddoan"--the Northern Caddoan area paradigm continues to obfuscate--textiles from Spiro and the Ozarks appeared after I read this paper. Kathy Cande noticed and pointed out to me Kuttruff's observations about red cloth at Spiro, which are as follows: "Unlike the colors of yellow and brown, the number of possible sources of red dye is limited in North America...and its use may have been restricted to individuals of higher status. Madder (most likely a species of *Galium* or bedstraw) and cochineal (*Dactylopius coccus*) are the principal sources of red dye in this area. Madder, which has been identified in at least one example of Spiro textiles..., would have been available in the southeastern United States, but cochineal would probably have required importation from the American Southwest or from Mexico" (Kuttruff 1993:140). This certainly doesn't mean that Spiroan traders were importing cochineal or cochineal dyed cloth from the Southwest, but it is an interesting possibility. And what about the madder dyed cloth? Given the apparent scarcity of red cloth in archeological contexts from eastern North America, would it be more reasonable to assume that it was made locally, or that it was imported?

(18) In a recent paper in which she interprets the Steed-Kisker phase in much the same way I am interpreting Spiro, i.e., as middlemen in a vast trade network that involved Mississippian villagers to the east of them and Plains buffalo hunters to the west of them, O'Brien (1993: 74,78) notes the trade of a "slave girl" on the Plains in the historic period and makes the interesting suggestion that "Given the levels of human sacrifice practiced at Cahokia, slaves may also have moved through this network...". See also her map (Fig. 11) showing a trail system that linked Spiro with Cahokia.

(19) I did not read this part of the paper at the conference, due to lack of time. I include it here, as it was written, because the Nagle site figured prominently in the discussion that followed my paper.

(20) Brooks stated that physical anthropologist Douglas Owlsley's reexamination of the Nagle site skeletal population indicated the people buried at Nagle were "starving to death" (his exact words, according to my notes), a condition that he (Brooks) did not believe to be consistent with my hypothesis that they were traders from Spiro occupying what would presumably have been a well established Plains entrepot. I doubt that the forthcoming report by Owlsley that Brooks referred to will contain that diagnosis because death by starvation is not something that can be determined from skeletons. It happens too quickly to register in the bones. Owlsley may have found that under X ray examination the bones show "Harris lines," which are indicators of periods of dietary stress during childhood. These are quite common in American Indian skeletons. They reflect seasonal shortages, generally during the Spring, when stored foods were running out and new supplies were not yet available. People generally survived these lean times but they were registered in the bones of growing children (who need more protein than adults) as periods of interrupted growth.

In the paper from which this one was drawn (Schambach 1993:207), I cite some of Owlsley's recently published observations on the Nagle site skeletons. They represent (he writes, in Owlsley and Jantz 1989:140 and Owlsley 1989:131) a population with "a totally different set of health problems" than those exhibited by populations from other Central Plains sites, namely "a severe mortality profile, associated with pronounced evidence of bone disease." These conditions, he notes, are indicative of dietary deficiencies, possibly scurvy, and a syphilis-like bone disease. As Alice Brues (1957) pointed out in her original report on these skeletons, the scurvy was probably due, not to starvation, but to certain small deviations from the normal Plains Villager diet such as eating liver cooked rather than raw, or failing to include enough squash in a diet based on vitamin C deficient foods such as corn, bison meat and tallow. These small but, for some, serious and perhaps sometimes fatal, errors strike me as exactly the kinds of mistakes a group of Spiroan traders from eastern Oklahoma might have made while trying to maintain a trading post in an unfamiliar environment with unfamiliar foods.

(21) Brooks said he thinks the Nagle site people were not traders but "refugees" from eastern Oklahoma, although he didn't say what event or situation they were fleeing in eastern Oklahoma at the time (A.D. 1300 - 1390) he mentioned. I think it would be difficult to construct an archeologically and ethnographically plausible scenario based on that idea, particularly if one works within the parameters of the Northern Caddoan Area paradigm. The difficulty would lie in getting around one of its major premises: that there was no contact between Spiroan people and Plains people until the middle of the fifteenth century. Assuming that some acceptable reason could be adduced for the exodus that Brooks proposes (was it a mass movement or was it just the group represented by the sixteen skeletons at Nagle?), why would Fourteenth Century Spiroans (there seems to be no doubt that they were Spiroans) have decided to flee west into unknown territory? Since they were supposedly Caddoans, why didn't they move south to take refuge with other Caddoans?

There are lots of things in archeology that can't be explained but the Nagle site isn't one of them. All that is needed is the right paradigm. While the Nagle site makes no sense as a place where Spiroan refugees, fleeing blindly into the wilderness for no discernible reason, finally went to ground, it would have been a good base for Spiroan traders interested in dealing with the Washita River phase people of central Oklahoma. This would account for the "true trade ware" (Brooks 1987:97-98) pots of Spiro Engraved or Hickory Engraved, and perhaps Sanders Plain, that reached central Oklahoma Washita River phase sites like the Arthur site about the time the Nagle site burials were emplaced. It would also explain the cut shell beads (I doubt that these were made locally; I think they came from a Central Mississippi Valley bead factory) and the Mississippian human effigy bowl, the latter from the Tennessee-Cumberland area (Pillaert 1963: Plate XVI; Bell 1984:322) from the McLemore site. How would the "refugee hypothesis" account for the occurrence of these Caddoan and Mississippian specimens so far from home in west central Oklahoma?

BOOK REVIEW

Ethnohistory and Archaeology: Approaches to Postcontact Change in the Americas. Edited by J. Daniel Rogers and Samuel M. Wilson. Plenum Press, Interdisciplinary Contributions to Archaeology, New York 1993. 237 pp., figures, tables, references cited, index.

Demographic and cultural changes resulting from European contact with native peoples of the Americas have been the focus of archaeological and historical research marking the 500 year anniversary of Columbus' voyages. Archaeologists attempting to study and understand the contact period must integrate historical and ethnographic information with the archaeological record. A 1988 symposium for the Society of American Archaeology was organized to bring together American archaeologists using documentary data in their research. This book is the result of that symposium.

The volume is divided into five parts with brief introductions outlining the papers in parts II through IV. A preface succinctly states the goals of the book. These goals were "to explore the potential of approaches using both ethnohistorical and archaeological information, to study culture contact within the broader framework of culture change, to study strategies used by Native Americans to cope with drastic change, and finally, to consider the significance of Native American actions in structuring the consequences of culture contact".

Part I is the Introduction and contains only one chapter by the editors. This chapter provides an overview of the rest of the papers. Wilson and Rogers also discuss themes that unite the various chapters in the book. Emphasis is on the ways native cultures adapted to changing conditions of the contact period and how political and economic integration influenced the strategies employed by various native groups. Culture change during the contact period is viewed as a process of "rapid transformation of individual cultures", not the replacement of native cultures. The authors outline how combining the methodologies of historical research and archaeology provides greater insights into the processes of change and the consequences of contact between the varied European and Indian groups in the Americas.

Part II, Theoretical Orientations on Culture Contact, consists of two chapters discussing theoretical and methodological aspects of studying culture change during the contact period. In Chapter 2, Samuel Wilson provides an interesting discussion on the problems of integrating the methodological and theoretical frameworks of cultural anthropology, archaeology, history, and ethnohistory into a single multidisciplinary approach to the study of culture change. The benefits of combining archaeological studies of the macroprocesses of culture change with ethnohistorical research involving the microprocesses are demonstrated with an example from Wilson's work on the development of chiefdoms in the Caribbean. In Chapter 3, Leonard takes a different approach. This chapter is primarily a critique of the current state of American archaeology and an argument for a move toward a scientific approach to contact studies based on Darwinian evolution and a selectionist model. Although an interesting summary of the selectionist approach, the paper would have benefited from a discussion of specific lines of research for contact studies or an example of the approach in contact research.

Parts III and IV include studies of the differential impacts of European contact on native groups, the strategies employed by Native Americans and Europeans for economic and political success, and the processes of change over time. Part III includes six chapters dealing with contact examples from North America and Part IV contains three chapters on European contact in Mesoamerica. Trade appears to be a central element structuring European and Native American interactions and many of the papers deal with native strategies for economic success and the impact of changing world economies on native groups. Examining patterns of change or continuity in material remains and tying those to social changes evident in the ethnohistorical data is also important in many of the studies.

Part III begins with a chapter by Douglas Bamforth on technological change involving the use of metal tools at a Mission period Chumash village, Helo, in California. Bamforth examines the availability of metal tools and demonstrates that the people of Helo made choices on what tools to adopt and the uses to which they were put. The adoption and use of metal tools is not a simple reflection of the effectiveness or superiority of these tools. Continued use of stone tools is suggested to reflect adherence to a traditional way of life. Chapter 5, by Daniel Rogers, examines the selective acceptance of European trade goods among the Arikara of the northern Plains based on varied sociocultural and economic criteria. This paper first discusses general issues on native strategies for coping with interaction with Europeans and how these strategies are interpreted based on archaeological data. Rogers then describes the specific case of the Arikara in the 19th century. He is able to document a period of high social disruption in the archaeological assemblage and suggests that this relates to gaps in the ideological system when the Arikara were less able to maintain a "traditional" social system.

In Chapter 6, Timothy Perttula uses documentary records and archaeological data to review the impact of European contact on the Caddoan societies in Texas, Louisiana, Arkansas and Oklahoma, and to identify cultural changes that took place between 1540 and 1859. Perttula provides a good summary of the varied interactions of Caddoan peoples and Europeans with an emphasis on trade and its impact on native settlement and

political organization. The following chapter by Charles Cleland also focuses on trade and economic strategies of a native group, the Chippewa of the Lake Superior region. Unlike most of the other papers, Cleland does not integrate archaeological data. He uses historical sources to document the strategies the Chippewa employed to maintain their traditional kin-based exchange system and communal land while adapting to changing European economics based first on fur trade and later on wage labor.

The chapter by Gregory Waselkov provides a discussion on the development of the Creek Confederation as a result of European contact. He then examines the archaeological record from 18th century Creek cemeteries to determine if British and French goods can be used to identify factions among the Creek. In the final chapter of Part III, William Turnbaugh discusses the Narragansetts who occupied much of present day Rhode Island. Turnbaugh uses ethnohistoric data to elucidate the impacts of 17th century Dutch and English trade on the Narragansetts. He is then able to examine goods from several Narragansett cemeteries to identify variability in individual access to European goods and document the transformation of the traditional economy to a production and consumption economy.

Part IV differs from Part III in that it examines the complex societies of Mesoamerica which were often in more direct and sustained contact with the Spanish. The three chapters in this section use ethnohistory and archaeology to define how the diverse political and economic integration of the native people led to diverse strategies of interaction for both the Spanish and the native groups. The first two chapters by Janine Gasco and by William Fowler examine the results of Spanish exploitation of cacao production in southern Mexico and El Salvador. Gasco uses written records and archaeological data on imported goods (Spanish pottery) in households from the Soconusco area to study socioeconomic changes in this society from about 1650 to 1760. Fowler's work focuses on the documentary record to identify socioeconomic factors that led to extensive Spanish exploitation in El Salvador and eventually resulted in the decimation of native populations. The final chapter in this section is Thomas Charlton and Patricia Fournier's discussion of the archaeological evidence for the processes of culture change in central Mexico from 1521 to 1620. This chapter provides interesting insights into the testing of a model of culture change using material remains from archaeological sites. The archaeological evidence is used to suggest that the impact of Spanish contact was significantly delayed for rural and lower-class Indians when compared to urban and elite groups.

Part V is the conclusions which consist only of a short afterword by the editors, Wilson and Rogers. It summarizes the various papers in the book and relates the importance of using historical evidence to aid in interpretation of the archaeological record.

This book makes an important contribution to contact studies by emphasizing the use of ethnohistoric information in combination with archaeological research. The volume provides no overall methodology or theory, but its strength lies in the variety of uses and results that the authors have obtained from examining native peoples and their diverse interactions with Europeans at contact. All of the articles are well written and interesting, and they provide archaeologists with insights into using documentary resources in their research.

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