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Article Summary: This is one of a series of articles based on presentations at a mini-symposium "Toward Plains Caddoan Origins: A Symposium" held at the Smithsonian Institution in November, 1976. This article examines the southwestern Plains periphery dealing with Plains Caddoan origins.

THE SOUTHWESTERN PERIPHERY OF THE PLAINS CADDOAN AREA

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INTRODUCTION

Examination of the southwestern Plains periphery offers a perplexing subject when dealing with Plains Caddoan origins. Historical records and native traditions are of limited value in determining which Caddoan groups occupied specific regions of the Southern High Plains prehistorically.

The four western-most Caddoan-speaking groups during the historic period were Kichai, Waco, Tawakoni and Wichita Proper consisting of Wichita, Taovayas, Iscani and Tawehash. Although some groups escaped historic detection for many years, none can be traced much beyond the Cross Timbers with any certainty. The Wichita Proper and Tawakoni were living along the Arkansas River from Great Bend to the Oklahoma border prior to 1757 when they moved to the Red River. The Kichai and Waco were first recorded living on the Upper Red, Brazos and Trinity Rivers of north Texas in 1701 and 1820 respectively. Apparently the Southern High Plains were not occupied by sedentary, horticulturally-oriented populations during the historic period.

An examination of Wichita and Pawnee traditions reveals that the majority refer to a southern or southeastern homeland (Dunbar 1880; Dorsey 1904; 1906; Grinnell 1889; 1893). Caddoan specialists applying the Direct Historical Approach or Sapir's time perspective techniques to the Plains Caddoan origin problem accept the southeast homeland as a working hypothesis (Wedel 1936; Hughes 1968).

Despite historical and traditional evidence, several late prehistoric complexes have been archeologically defined for the Southern Plains area. Custer, Washita River, Antelope Creek, Apishapa, Mid-Arkansan, Great Bend and Henrietta complexes reflect a sedentary, partially-horticultural lifestyle

similar to that recorded ethnographically for Prairie Caddoan-speaking groups. In addition, they share strong material culture similarities with other complexes on the Central Plains which have been linked to Caddoan-speaking people.

Recent population divergence studies of late prehistoric Southern Plains skeletal populations support a biological relationship between Central and Southern Plains groups (Patterson 1974; Johnson and McWilliams 1978).

Glottochronology also suggests that Plains Caddoan groups have considerable antiquity as a separate entity from Woodland Caddoan groups. A minimum of 30 to 35 centuries split between these two groups has been postulated (Hughes 1968; Parks n.d.).

On the basis of archeological, biological, and glottochronological evidence, it is assumed that many late prehistoric Southern Plains complexes relate to Caddoan-speaking groups. Even though cultural changes between the 15th and 17th centuries make it difficult to link these complexes to specific historically-known Caddoan groups, these complexes probably have some bearing on the problem of Plains Caddoan origins.

At this point a repetition of material traits from each would contribute little original insight to the present discussion. Adequate syntheses have appeared for most Southern Plains late prehistoric complexes within the last 20 years (Bell 1973; Campbell 1969; 1976; Hofman 1975; 1978; Keller 1961; Lintz 1974; 1978a; Wedel 1959; 1961; Witty 1978).

Rather, I will pursue aspects of Grinnell's (1893: 224) often-neglected Pawnee and Wichita origin tradition alluding to a former habitation in stone houses from where they migrated northeastward to the Missouri River. Of the Southern Plains late prehistoric complexes thought to be ancestral to Caddoan-speaking groups, only Apishapa and Antelope Creek report regular use of stone masonry architecture. Since few Apishapa house sites have been reported, my approach will focus on architectural variability and developmental trends of the Antelope Creek focus which flourished in the Texas-Oklahoma Panhandles between A.D. 1200 and 1500. Architecture along with other aspects of material culture will be used to examine proposed Antelope Creek origins and historical affiliations.

Antelope Creek Architectural Variability

Except for architecture, most of the Antelope Creek tool inventory (globular cordmarked pottery, scapula hoes, tibia digging sticks, diamond beveled knives, plano-convex end scrapers, notched bone rasps, shell scrapers etc.) clearly reflect the late prehistoric Plains Village Tradition (Wedel 1961). But Antelope Creek architectural variability and community patterning is quite complex. Sites can range from single room dwellings to villages containing 35 rooms. Individual structures range from small circular huts to relatively large rectangular chambers. Interior features include an eastward extended entryway/ventilator, central depressed floor channel, central hearth, four to six roof support posts, and a clay altar which either recesses or protrudes from the west wall. The walls are commonly a single or double row of vertically oriented stone slabs upon which additional courses may be added (Lintz 1978a: 39-41).

Previous attempts at architectural typology have been directed toward identifying developmental sequences. Two proposed sequences postulate a circular to rectangular room configuration (Campbell 1976:96), and an isolated to contiguous room community pattern (Crabb 1968:88; Hughes 1968:189). However they have failed to consider extreme heterogeneity. Careful examination of architecture indicates that a range of styles has been forced into a simplified taxonomic system. When checked against chronological data, these sequences are unsupported (Lintz 1978a:43; 1978b). The complex situation is reflected in one colleague's remarks: "Nearly every new dwelling that I excavate constitutes a whole new house type. . .each additional one proves not to fit neatly the pattern of the last one." (Hughes n.d.:103).

In analyzing architectural variability here, all structural features from 21 of the 28 described sites were used as a sample (Figure 1). Some often-referenced Antelope Creek sites were excluded from analysis. Architectural details at Stamper, Handley Ruins, Tarbox, Cottonwood Ruins and Lookout Pueblo were vague; and the rooms at Saddleback and Arrowhead Peak sites may have been radically modified to accommodate spatial limitations imposed by mesa tops and saddles. Because minor typological disparity exists between pit and room definitions in the original reports, all structural features at a site were used. The 21 sites under consideration contain 153 structural features.

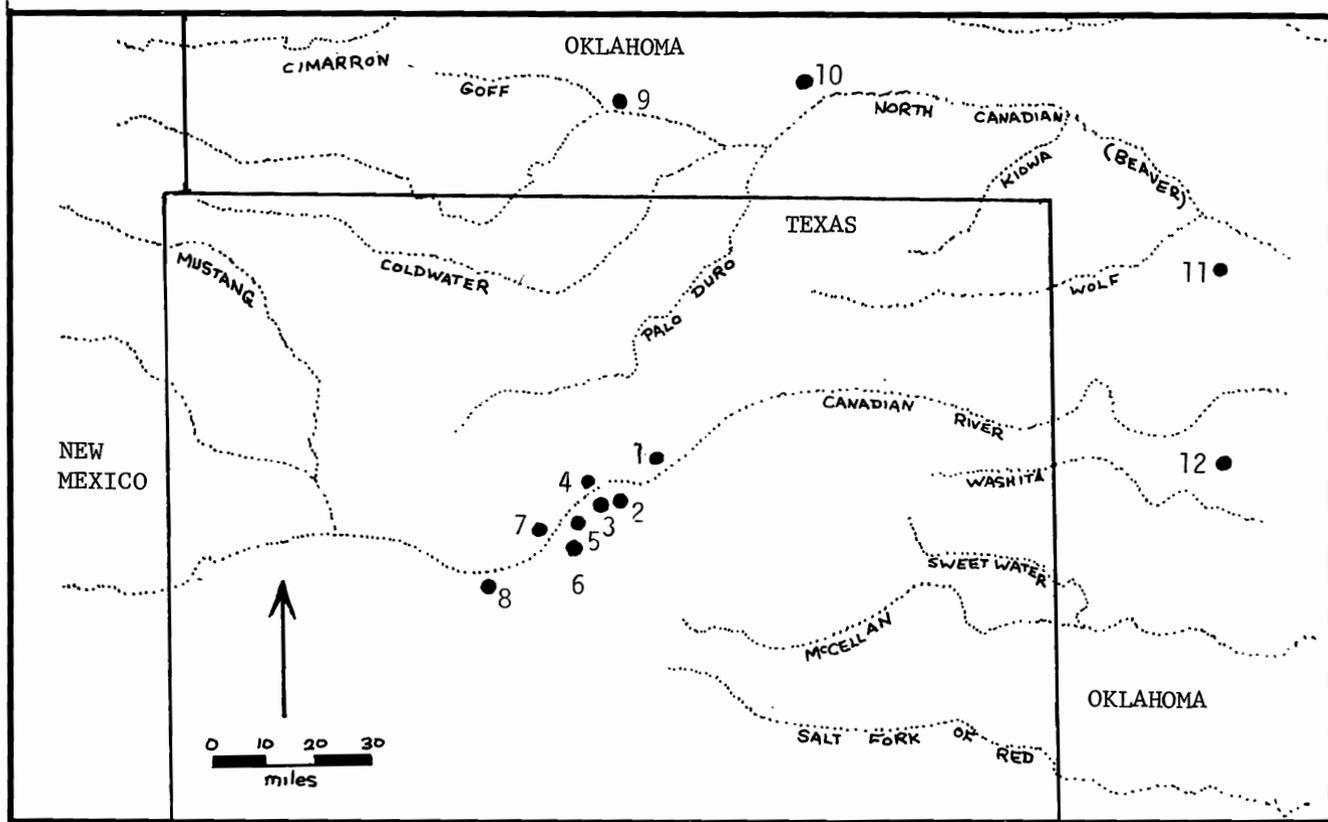


Figure 1. Distribution of Antelope Creek sites used in this analysis.

- | | | | | | |
|-----------------------|-----------------|------------------|-------------------|---------------------|---------------|
| 1. Black Dog Village | 3. Roper | 4. Medford Ranch | 6. Alibates 28-I | 7. Footprint | 10. Roy Smith |
| 2. Antelope Creek 22 | 3. Conner | 4. Spring Canyon | 6. Alibates 28-II | 8. Coetas (Ruin 55) | 11. Hedding |
| 2. Antelope Creek 22A | 3. Sanford | 5. 41-Pt-8 | 6. Alibates 28A | 9. Two Sisters | 12. Zimms |
| 2. Antelope Creek 24 | 3. Pickett Ruin | 5. 41-MO-7 | | | |

A problem with previous investigations has been the failure to develop a flexible typology to accommodate architectural heterogeneity. Preconceived notions of developmental trends often influenced the definition of architecture types. In the present trial formulation, several different procedures were used. The range of architectural variability must be defined before spatial, temporal and functional differences can be examined. Also, rather than examine the total structure configuration, the proper lowest level of observation are traits within each structural feature.

Thirty-five observations were collected on each of the 153 structural features. Major observation classes include feature size, shape, orientation, relative location to other contiguous structural features, construction techniques of walls and floors, and the presence and location of such interior traits as hearths, floor channels, roof support posts, altars, and interior pits. Next a series of architectural types and varieties was identified for analytical purposes. An architectural *Unit Type* is a structural feature defined by a predominance of trait co-associations into a recognizably distinct form. A *Unit Variety* differs from the Unit Type to which it is related by only one or more minor particulars. Thus, deviations in the number of roof support posts may be considered Varieties of the same Unit Type. The type-variety concept works well with individual structural features, but occasionally the spatial relationship between a number of contiguous features would consistently appear patterned at a number of sites. An *Aggregate Type* is defined as a patterned cluster of structural features occurring either as a solitary contiguous structure, or connected with other aggregates to form larger contiguous structures. Minor deviations in feature patterning are considered to be *Aggregate Varieties*. The validity of the proposed Aggregate Types and Varieties rests primarily on stratigraphic differences within the same large contiguous room block, and their repetitious occurrence at a number of different sites.

Seven basic analytical Types have been tentatively identified (Figure 2) and each will be briefly described.

Unit Type 1 has a large (100 to 650 sq. ft.) rectangular room; stone slab walls; a long eastward extended ventilator or entryway; an entry step; central depressed floor channel; central hearth; two, four, or six roof-support posts set along the chan-

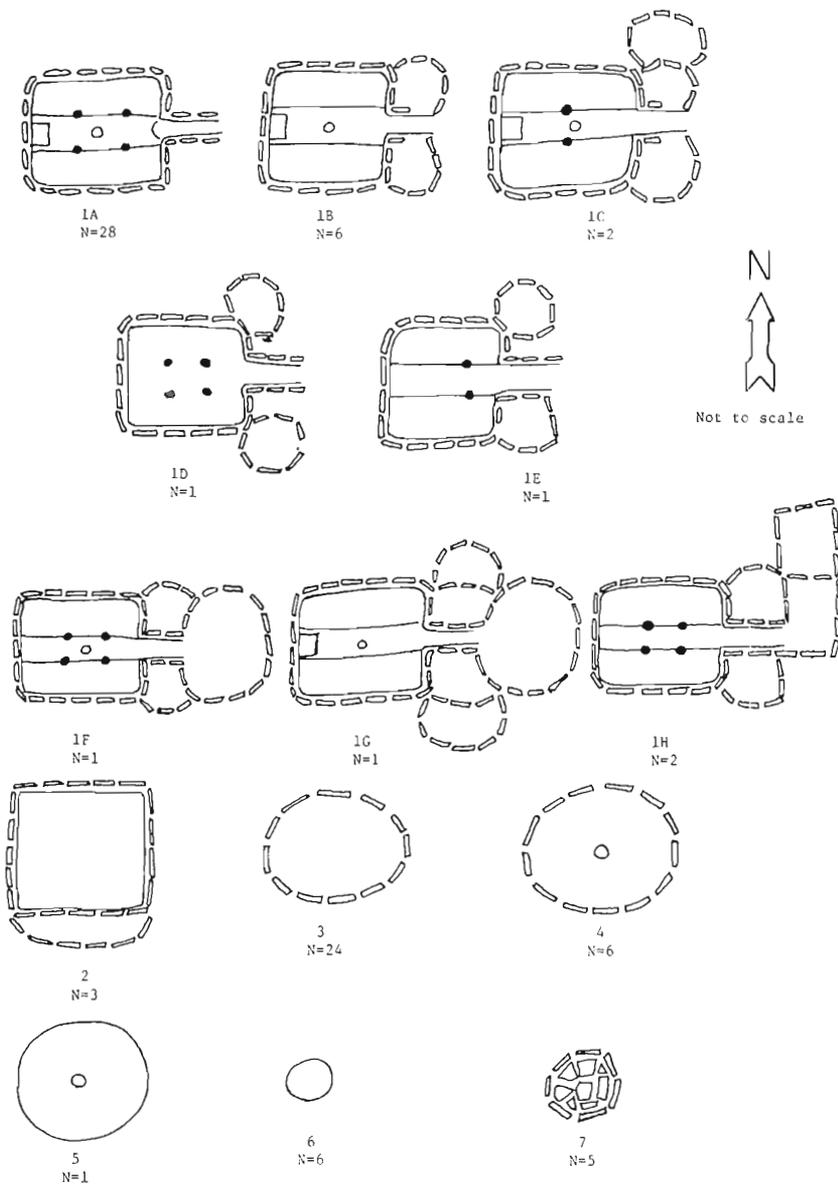


Figure 2. Type units and variety aggregates in Antelope Creek architecture.

nel edges; and a platform or altar feature either recessing or protruding from the center of the west wall. Occasionally interior storage pits occur, flanking the central channel. Although this single isolated unit is the most frequently reported Type, it may also occur in a number of Aggregate Varieties. Seven Aggregate Varieties are postulated (Figure 2). Aggregate Varieties 1B, 1C, 1D, and 1E have smaller units (28 to 80 square feet) immediately flanking the ventilator/entrance, or located at the eastern corners of the main room. Aggregate Varieties 1F and 1G include the small entry-flanking units in addition to a large (80 to 180 sq. ft.) circular "anteroom" at the east end of the ventilator/entrance. Aggregate Variety 1H has small entry-flanking rooms, a square anteroom, and a large room flanking the anteroom to the north.

None of the interior trait characteristics are mutually exclusive in the isolated or aggregate form of Unit Type 1 (Figure 3). Hence the apparent heterogeneous appearance for this type. It is beyond the scope of this paper to fully explore the co-occurrence of interior traits. However, the exterior walls separating aggregate units within large structures frequently have a double row of stone slabs while walls used to divide rooms within the aggregate unit often have a single row of slabs.

Unit Type 2 is a large (75 to 110 square foot) rectangular room with a single narrow room located to the south. Interior features are limited to an occasional storage pit. No entryways or roof support posts have been defined. This Unit Type has been reported as an isolated form at Black Dog Village, and two examples were found as a contiguous aggregate at the Medford Ranch Site. It has not been found incorporated into the same structure with Aggregate Type 1, although both types do occur at the same site.

Unit Type 3 is a small to large (28 to 120 sq. ft.) circular structure with stone slab walls and earthen floors. Interior traits and discernible entryways are absent. Although this is the second most common type, it rarely occurs with other circular structural features in an aggregate form.

Unit Type 4 consists of small (28 to 50 sq. ft.) circular structures characterized by vertical stone slab walls and a central hearth in an earthen floor. This type most often occurs as an isolated form. It frequently is associated with Unit Type 3, but rarely occurs on sites with rectangular Unit Types 1 and 2.

Unit Type 5 is a large (210 square foot) circular structure without stone walls. This type has a central hearth in an earthen floor. No entryways have been found. This type does not occur as an aggregate form, although it is similar in size to the circular anterooms of Aggregate Types 1F and 1G. Rooms of these latter Aggregate Types occasionally have a central hearth, but differ from Unit Type 5 by stone slab walls.

Unit Type 6 is a small (3 to 20 square foot) circular feature lacking stone walls, floors or interior traits. The depth of the feature averages 2.5 ft. below occupation surfaces. This Unit Type occurs only as an isolated feature.

Unit Type 7 is also a small (6 to 26 square foot) circular shaped feature. It is defined by outward flaring stone slab walls and a stone floor. The stone walls of this isolated feature type may be either above or even with the occupation surface.

The seven unit types account for 84 percent of the architectural features at the 21 Antelope Creek sites (Figure 4). Many rooms not conforming to these basic patterns represent structural features which either have been minimally tested or have suffered extensive erosion and vandalism. A few appear to be later modifications added to existing structures, but in some instances, the unaccounted variation may reflect undefined unit types.

All seven defined Unit Types occur as isolated features and some are contiguously attached to other units. Five Unit Types are circular shaped features whose morphological characteristics correlate with a discrete range in size (Figure 5). The small size of some Unit Types suggests that they did not function as rooms. An examination of interior features occurring inside large rectangular rooms (Unit Type 1) reveals a series of "pit features" identical in size and morphology to circular Unit Types 6, 7, and lower size range of Type 3. Since the upper size range limit of Unit Types 6 and 7 is less than the lower-size range limit of small entry-flanking rooms in Aggregate Unit 1, I consider these two types to be pits or cists. The function of these exterior pit features has not been determined on the basis of artifactual content. However, Green (1967) suggests that Unit Type 6 (shallow pits lacking stone walls and floors) may have served as borrow pits for obtaining or mixing adobe.

The size range of Unit Type 4 and much of Type 3 is within size of the small rooms flanking the entryways of Unit Type 1.

FIGURE 4. NUMBER OF ARCHITECTURAL FEATURES, UNIT TYPES AND AGGREGATE TYPES

Unit Type Rooms per type	1A	1B	1C	1D	1E	1F	1G	1H	2	3	4	5	6	7	Accounted Rooms (84%)	Unaccounted Rooms (16%)	Total Rooms
Alibates 28 - I	1				1	1		2		1					19	2	21
Alibates 28 - II	15									8			1	4	28	9	37
Alibates 28A	1														1	0	1
Antelope Creek 22		6					1				1				25	5	30
Antelope Creek 22A			1												4	0	4
Antelope Creek 24	1														2	1	3
Black Dog Village	1								1	1		1			4	1	5
Coetas (Ruin 55)*	2														2	0	2
Conner										2					2	0	2
Footprint	3									1			5		9	0	9
Hedding	1														1	0	1
Medford Ranch									2						4	1	5
41-Mo-7	1									1				1	3	0	3
Pickett												1			1	0	1
41-Pt-8										1	2				3	0	3
Roper										3	1				4	0	4
Roy Smith				1						1					4	5	9
Sanford										4	1				5	0	5
Spring Canyon										1					1	1	2
Two Sisters			1												5	0	5
Zimms	1														1	0	1
Total Unit Types	28	6	2	1	1	1	1	2	3	24	6	1	6	5	128	25	153
No. of Rooms								80	6	24	6	1	6	5			-

* Described rooms only; many others excavated but unreported.

The function of a central hearth in Unit Type 4 might pose an interpretative dilemma since the small size (28 to 50 square feet) would not make a comfortable habitation structure. This room type rarely occurs at villages. However, it is usually found as an isolated structure at a site. Faunal analyses from Pickett and Roper sites suggest that they may represent seasonally occupied field huts (Duffield 1970).

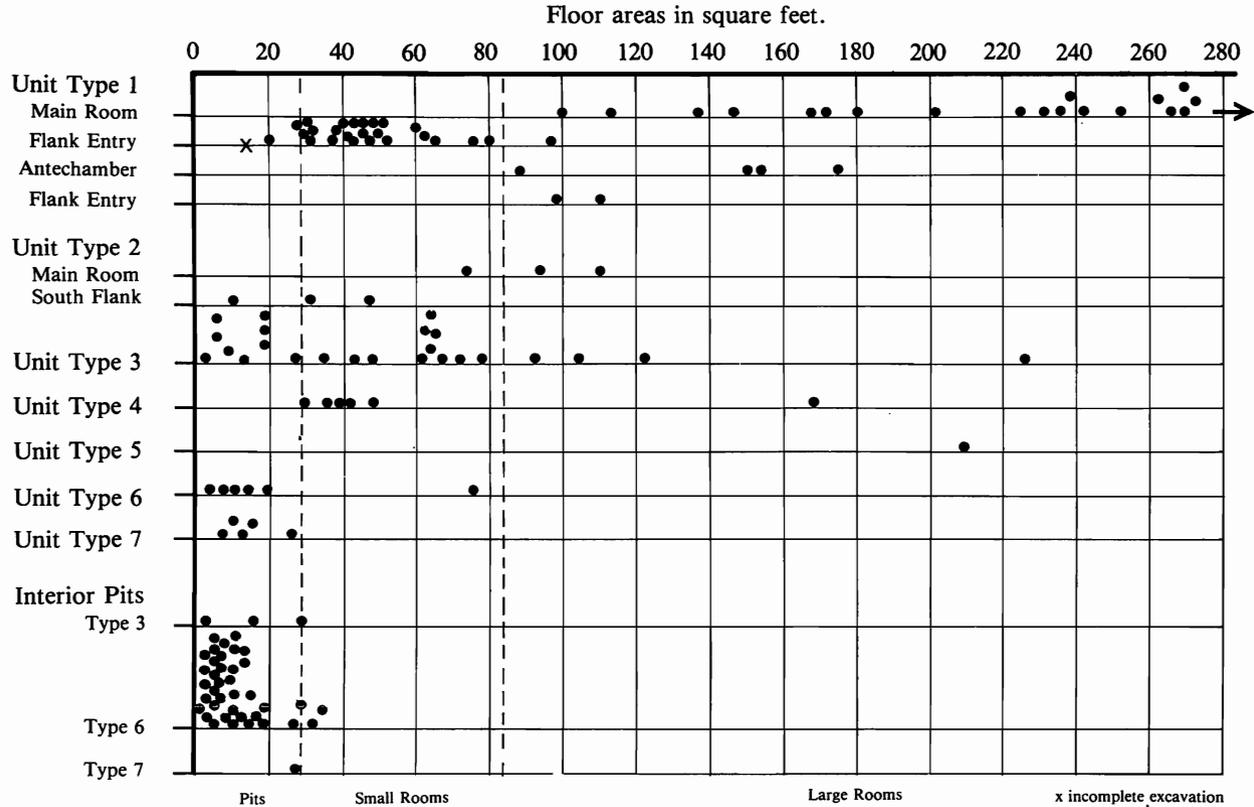
The size of circular room Type 5 and the upper limits of Type 3 fall within the range of the main rectangular and anterooms in Aggregate Types 1F, 1G and 1H. Most large circular structures occur at village sites, but their specific function is uncertain.

The full size range of Unit Type 3 features is extreme. Several different functions are suspected.

The main rectangular rooms at Unit Type 1 appear to be the common habitation structure on the basis of abundance, size and interior trait associations. The nature of activities occurring in auxiliary rooms at Aggregate Type 1 and Unit Type 2 remain to be explored. Some of these rooms contain storage pits but the majority do not.

Available chronological information has not been rigorously used to examine temporal changes in architecture. Antelope Creek is one of the best dated manifestations on the Southern Plains. However, its development and florescence is relatively brief (A.D. 1200 to 1500). The large deviation factor of many radiocarbon dates coupled with discrepancies in some dates from specific architectural types poses problems in understanding architectural development. There is some evidence to suggest that contiguous aggregate unit structures are generally earlier than sites with only single room units (Lintz 1978b). Furthermore, there is a tendency for later rooms in single room rectangular structures (Unit Type 1) to be larger than similar rooms in earlier Aggregate Unit structures. Perhaps the breakdown of contiguous room structures reflects dispersal of people into smaller social units in response to deteriorating local resources with the onset of dryer conditions in the Texas Panhandle after A.D. 1300 (Duffield 1970:265). However, temporal, spatial, functional, ecological and socio-political differences could all contribute to architectural diversity.

FIGURE 5. COMPARISON OF FLOOR AREAS OF ANTELOPE CREEK ARCHITECTURAL UNIT TYPES, AND INTERIOR ROOMS PITS



Antelope Creek Origins

The origins of Antelope Creek are not easily traced. Architecture reflects only one part of the cultural assemblage. Other aspects of material culture must also be considered when searching for cultural antecedents and subsequent developments. The Antelope Creek material traits used in the following comparisons are based on recent syntheses (Lintz 1978a: n.d.).

Antelope Creek origins have long been a matter of speculation. Numerous theories have been advanced; but as additional investigations refined cultural assemblages, inconsistencies with most theories became apparent. The five manifestations most often cited for Antelope Creek origins are local Woodland, Caddoan, Upper Republican, Apishapa and Puebloan.

Few Plains Woodland sites have been excavated in the Texas-Oklahoma Panhandle region (Hughes 1962; Green 1967; Wedel 1975). Little is known about specific assemblage details and no house structures have been reported, even though local origins for Antelope Creek are appealing since it requires no population displacements. Local Woodland manifestations share such traits as cordmarked pottery, keeled end scrapers, slab metates and manos with Antelope Creek. Presumably, similar cultural transitions that are occurring for the Woodland-Custer-Washita River Phases east of the High Plains are also occurring in the Texas Panhandle (Hughes 1968; Lintz 1974; Hofman 1975; 1978).

A major problem with accepting this model is the lack of reported transitional and intermediate stage sites. Presently available radiocarbon dates are limited to one site for the High Plains Woodland occupation: A.D. 400-850 (Wedel 1975). Dates for Antelope Creek begin abruptly at A.D. 1200 (Bryson, Baerreis and Wendland 1970). If the development of Antelope Creek occurred simultaneously with Washita River, then some sites in the panhandle area should show a transitional artifact assemblage and date to the 9th through 12th centuries. None have been reported to date.

Other early influences on local Woodland cultures may be from the Southeast. Many Woodland sites in the Palo Duro, Tule, Canadian, and Red Deer drainages contain crushed scoria tempered cordmarked pottery in association with a plain brownware Mogollon pottery tempered with crushed andesite from the Sierra Blanca region, New Mexico (Hughes and Willey

1978:189; Hughes n.d. 101). Radiocarbon dates of Mogollon pottery-bearing horizons at Deadman's Shelter in the southern part of the Texas Panhandle date to A.D. 120 through 710. Although Antelope Creek architectural antecedents cannot be directly tied to local Woodland manifestations, there does appear to be a pattern of lengthy ties between indigenous Plains Woodland groups in the Texas Panhandle and Southwestern groups which date back to the first millenium.

Several investigators have posited Antelope Creek origins in the Caddoan area of eastern Oklahoma (Hobbs 1941; Bell 1961). Prior to adequately dated complexes in Oklahoma, Bell suggested that Southern Plains Village complexes were derived from late Gibson aspect Caddoans who were drawn up major river systems and onto the Plains by population pressure in the Southeast. This model accounted for a decline in Caddoan ceremonial complexity during the later Fulton aspect and a similarity in bone and stone tools between Ft. Coffee focus and adjacent Plains Village stage Washita River focus. Architecturally the Caddoan area shares with Washita River and Custer foci a rectangular-shaped house with an eastward entry and two or four central posts surrounding a central hearth (Wallace 1962). These houses resemble the Unit Type 1 pattern defined for Antelope Creek, but lack the central trough and altar features. The three Plains Village complexes in western Oklahoma formed a continuum, with Washita River earliest and Antelope Creek latest. Differences between the Plains Village complexes were believed to reflect local specialization and borrowing of ideas as the Caddoans pushed further onto the Plains.

It became apparent that the model did not work as dates for these manifestations accumulated. An evaluation of dates suggest that most Plains Village complexes are earlier than the Fulton aspect in the Caddoan area. The total Caddoan area becomes smaller rather than larger (Bell 1968:48). Actual Caddoan influences in western Oklahoma and Texas are relatively scarce (Hofman 1978; Lintz n.d.). A single Caddoan sherd has been reported from Antelope Creek Ruin 24. Although direct Caddoan area origins for Antelope Creek seem unlikely, it continues to be cited in recent literature (Keller 1975).

Similarities in subsistence strategies, tool inventories, and generalized architectural patterning have led some to suggest an

Upper Republican origin for Antelope Creek (Watson 1950; Bryson, Baerreis and Wendland 1970). Both areas have such distinctive artifacts as globular cordmarked pottery, diamond-beveled knives, side-notched projectile points, T-shaped drills, scapula hoes, bone awls, disc beads, and stone elbow pipes. Upper Republican house forms are reminiscent of Antelope Creek's Unit Type 1 and both contain square rooms with eastward "entrances."

Dates for Upper Republican are slightly earlier and overlap Antelope Creek dates. An onset of drought conditions at A.D. 1200 in the Central Plains is cited as a cause for the rapid southward migration. Presumably a drought would have collapsed the subsistence base in the Central Plains by reducing horticultural productivity and altering bison migratory routes around desiccated areas.

Upper Republican and Antelope Creek differ in a number of unique items and decorative styles. Tibia digging sticks, manos and metates, and bone rasps occur frequently at Antelope Creek sites, while Upper Republican sites have bone beamers, bone gorgets, bow guard bracelets, fish hooks, and pottery elbow pipes. The distinctive Upper Republican collared rim on jars is reported less often than Southwestern trade sherds at Antelope Creek sites. A few sites in Texas reportedly have a high proportion of collared rim sherds (Crabb 1968:84; Hughes 1968:189). One such site also yielded Santa Fe, Wiyo, Galisteo and Rowe Black-on-white trade sherds (Crabb 1968). Recent tree ring correlations indicate that all four types were made between A.D. 1300 to 1375 (Baerreis and Bryson 1966; Breternitz 1966; Honea 1973; Smiley, Stubbs and Bannister 1953). These dates are considerably later than one would expect if Upper Republican were responsible for the rise of Antelope Creek. Although both groups were in contact and exchanged ideas, if not people, the proposed rapid southward migration at A.D. 1200 seems unlikely for the origins of Antelope Creek.

A recently devised model derives Antelope Creek out of Apishapa and pre-Apishapa Woodland complexes in southeastern Colorado (Campbell 1969; 1976). Both have horticultural-hunting subsistence base, side-notched projectile points, snub nose scrapers, globular cordmarked pottery, slab metates, oval manos, and flexed burials. Architecturally both have circular structures made with vertical and horizontal slab

masonry. Some circular room structures form contiguous aggregate units. Campbell (1976:89) has suggested that the progressive Antelope Creek developed out of Apishapa by adopting new traits from groups living to the north and east. The borrowed traits include square house patterns, beveled knives, scapula hoes, tibia digging sticks, and bone rasps. In order to derive Antelope Creek houses from Apishapa architecture, Campbell postulates a developmental sequence involving circular to square isolated houses, to large contiguous room structures. However, radiocarbon dates for Apishapa structures range from A.D. 1135 to 1550 and are contemporaneous with Antelope Creek (Campbell 1969:345-348). Furthermore, available Antelope Creek radiocarbon dates do not support such a developmental sequence (Lintz 1978b).

The pre-Apishapa architectural remains from Metate Cave in southeastern Colorado, dated at A.D. 270, do not reflect a house structure, but rather a linear rock wall at the Cave's mouth (Campbell 1969:190, Figure 21). More chronological information from Woodland structures in southeastern Colorado would help clarify the proposed relationships. Undoubtedly there are strong relationships between the two cultures, but the phylogenetic relationship has yet to be conclusively demonstrated.

Many early investigators were impressed by the contiguous room architecture employing stone masonry, and postulated a Puebloan origin for Antelope Creek. Contacts between Antelope Creek people and Puebloans are indicated by the abundance of Alibates agate in numerous Puebloan sites near the Sangre de Cristo Mountains, and by the presence of at least 15 Puebloan ceramic types recovered from Antelope Creek sites (Kidder 1932; Crabb 1968). Similar Plains-Southwestern interaction has been well documented historically (Wedel 1950; Kenner 1969).

However, the architectural resemblance is only superficial. A search for architectural analogs in the Puebloan trade pottery source areas—the lower Chama and Rio Grande Valleys—failed to locate many similar architectural traits. Although both areas have stone slab pits and contiguous room features, the formal arrangement of Aggregate Type 1 is a configuration foreign to the Pueblos.

Material culture traits between the two areas are quite dif-

ferent and common items are so scarce that they are easily recognized as trade goods. Antelope Creek artifacts suggest a Plains origin with an overlay of Southwestern influences. Perhaps the most damaging evidence to the Southwest origin thesis comes from skeletal data. Osteometric and dentition analyses of burials from Antelope Creek 22, Alibates 28, and the Footprint sites indicate that Antelope Creek populations are phenotypically closer to Central Plains (Upper Republican) populations than to Pecos Pueblo populations (D. K. Patterson 1974; D. E. Patterson 1974). More recent discrete trait analysis of crania from Antelope Creek, Upper Republican and Washita River sites indicates that the Footprint population closely resembles Washita River people at the McLemore site (Johnson and McWilliams 1978). Although the samples are small these studies support the notion of Plains, rather than Southwestern, origins for Antelope Creek.

Many Antelope Creek architectural styles may represent local innovations. The square room, extended east "entryway," central hearth, and interior post arrangement are generalized patterns found throughout the Plains and Caddoan areas. The predominant use of vertical stone slabs and contiguous room arrangement may be derived from either Apishapa or Puebloan influences. But the central channel and altar features are clearly local developments. The extreme heterogeneity of Unit and Aggregate Type 1 interior features may represent experimentation with new architectural forms.

The development of both Apishapa and Antelope Creek ca. A.D. 1150-1200 roughly coincides with a major Puebloan expansion east of the Sangre de Cristo Mountains (Wendorf 1960:59). It is at this time that the Mogollon sphere of influence declines, and in the Texas Panhandle, Mogollon brownware ceramics are replaced by Puebloan types as trade items. This suggests that the Southern High Plains Woodland populations, which Hughes (1968) postulates as Caddoan speakers, were well aware of neighboring groups and may have been responding, in part, to major shifts occurring in the Southwest. The absence of Woodland house sites reported from the Texas Panhandle may simply reflect the small sample of excavated sites and an archaeological preoccupation to dig sites with masonry architecture.

Historical Affiliations

Links between Antelope Creek and ethnographically identifiable tribes are not clear. The use of stone masonry architecture and material trait complex were radically modified during the apparent turmoil that swept Southwest, Plains, and Caddoan areas with the onset of the Neo-Boreal climatic episode and Athabaskan intrusion between 1450 and 1550.

By 1541 Coronado records only nomadic bison hunting groups in the Texas Panhandle. Permanent villages were gone and the ruins were not noticed or worthy of comment. Furthermore, after the 16th century, few archeologically or historically documented cultures on the Plains lived in stone slab houses, used many forms of stone and bone tools, or decorated their pottery as did the Antelope Creek people. Although the culture pattern cannot be traced with certainty after A.D. 1500, several historical connections have been suggested.

Grinnell's 1893 Pawnee origin myth alluding to a former occupation in stone houses somewhere to the southwest has led Hughes (1968) to postulate a combined Antelope Creek-Lower Loup origin for the Pawnee. The antecedent of Pawnee earth-lodge altar feature is attributed to Antelope Creek architectural influence. As previously indicated, Grinnell's interpretations are unique among many myths in suggesting a southwestern origin for the Pawnee, and the altar similarities offer a meager thread of continuity. Most other architectural and artifactual traits are generally dissimilar.

Other investigators have speculated that Coronado's nomadic Teyas Indians were Antelope Creek people who changed their subsistence base, settlement pattern, and other aspects of culture to meet deteriorating climatic conditions (Schroeder 1962). This suggestion does not require a rapid replacement of different cultural groups in the Panhandle between A.D. 1500 and 1541. Rather, the culture's extensive sedentary-oriented cultural inventory is replaced during the transition to a nomadic lifestyle. Unfortunately, it is virtually impossible to test since no Teyas sites have been archeologically identified in the Panhandle and cultural traits remain poorly known.

Another possibility suggests that Antelope Creek populations coalesced with other western Oklahoma Plains Village groups and moved towards the east. The association of Antelope Creek architecture with Washita River artifact assemblage at a 16th

century village in western Oklahoma is cited as support for the merging of closely affiliated cultures (Saunders 1973; Lintz 1978a). Cultural similarities in bone and stone tools between the Washita River and Fort Coffee foci suggest an eastward drift (Hofman 1978).

Campbell (1976) suggests that the Great Bend aspect of south-central Kansas received a direct influx of Antelope Creek people. The Great Bend material assemblage shares many generalized items with Washita River, Custer and Antelope Creek foci of the Southern Plains (Wedel 1959:582). But the four, partially stone-lined oblong or curving "stone basins" arranged in a quadrilateral pattern at the Tobias* site council circle do not resemble Antelope Creek architecture in specific details or general layout (Wedel 1959; 1967). Differences in material culture, particularly vessel form and decorative motifs, are also noteworthy.

These suggestions are not mutually exclusive and more than one could be correct. Apparently the Antelope Creek focus did not remain intact. A variety of cultural responses to external pressures in the early 1500s may have occurred. Early documents record a number of presumably Caddoan-speaking groups or bands in northern Texas and western Oklahoma for which we have no archeological and little ethnographic information (cf. Hughes 1968:319-329; Newcomb and Field 1967:332-339; M. Wedel n.d.). Although some names may merely reflect synonyms or differences in pronunciation and transcription for well-known bands of the Wichita confederacy, other names may reflect separate bands who were reduced by warfare or disease and assimilated into other related bands. The historical identification(s) of Antelope Creek may never be resolved to everyone's satisfaction.

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