Large Great Bend Aspect village sites, known to represent the protohistoric Wichita, are common to the Arkansas valley of Kansas and Oklahoma. Several of the Kansas sites are thought to be the grass lodge villages visited by the Coronado expedition in 1541. As a group, these sites date from AD 1450 to the late 18th century, after which the Wichita abandoned the Arkansas valley. Great Bend Aspect sites are recognized by a distinctive aboriginal assemblage, but European trade goods are found on some of these sites in both Kansas and Oklahoma. In Kansas, European goods are exceedingly rare and occur within assemblages that cannot be otherwise distinguished from purely aboriginal Great Bend sites. On Oklahoma sites, European goods are much more abundant and are associated with an aboriginal assemblage that differs from that documented in Kansas. Explanation of the observed differences in contact-period Great Bend sites may involve chronology, different trade relationships, and different band membership.

INTRODUCTION

Between 1881 and 1889, Johan August Udden collected and studied artifacts from the Paint Creek site (14MP1) on the Smoky Hill River in south-central Kansas. Among these items, which were preponderantly aboriginal in form, was a piece of heavily rusted chain mail armor which Udden correctly concluded "demonstrates that this village was inhabited by Indians after the European race had come over to this continent" (Udden 1900:66). This find figured prominently in a then ongoing debate on the early Spanish exploration of the Plains and, in particular, on the route of Coronado's expedition into the Southern Plains.

Since this initial discovery, substantial research has been undertaken on the protohistoric Wichita. This research has been characterized by occasional finds of European goods on Kansas sites and frequent finds on sites in northern Oklahoma. Of these, finds of chain mail have received most of the attention (cf. W.Wedel 1975) and an overall synthesis of the occurrence of European goods has
been lacking. In particular, there is little in the way of synthetic or comparative study which includes Great Bend sites in both Kansas and Oklahoma. This paper attempts a synthesis, and further considers the significance and meaning of these materials for an understanding of the protohistoric Wichita.

**PREVIOUS RESEARCH**

The protohistoric Wichita are recognized archeologically as the Great Bend Aspect (Wedel 1959). Scholarly attention to the Great Bend aspect began in the late 19th century and resulted in the acquisition of collections from Marion County, Kansas, for the Peabody Museum and Smithsonian Institution (W.Wedel 1959:498-500) and in Udden's pioneering study of artifacts, including chain mail, from the Paint Creek site in McPherson County, Kansas (Udden 1900).

In Oklahoma, excavations at the Bryson-Paddock site in Kay County were conducted in 1926 by J.B. Thoburn of the Oklahoma Historical Society (Hartley and Miller 1977:3) but no detailed report was produced and the collection has since been dispersed. What we can refer to as the era of modern scientific research on the of Great Bend aspect began in 1940 when Waldo R. Wedel of the Smithsonian conducted investigations in south-central Kansas and proposed the term "Great Bend aspect" to describe sites he excavated there. Based on this work, Wedel concluded that these sites were inhabited by the protohistoric Wichita and that sites in Rice County were the best candidates for those visited by Coronado in 1541 and that sites in Cowley County may be those observed by Onate in 1601 (W.Wedel 1942).

Since Wedel's initial work 50 years ago, extensive research has been conducted in Kansas by the Smithsonian, the Kansas State Historical Society, and the University of Kansas in Rice County (Smith 1949; W.Wedel 1968; Witty 1977, 1986; Rowlison 1981); by the Wichita State University and
the Kansas State Historical Society in Marion County (Rohn and Emerson 1984; Lees 1989); by the Kansas State Historical Society in Cowley County; and by Earl Monger in Pawnee County (Monger 1970). Formal work during this period was supplemented by several important discoveries by amateur archeologists. In Oklahoma, research has been conducted by Sudbury on private collections from the Deer Creek site and by the University of Oklahoma at the Bryson-Paddock site, both in Kay County, and recently by George Odell at the Lasley Vore site in Tulsa County.

GREAT BEND LOCALITIES

The Great Bend aspect was originally proposed by Wedel to define sites in south-central Kansas. This concept has been extended by convention to include similar sites in northern Oklahoma (cf. Sudbury 1976:79).

A number of semi-discrete localities of Great Bend settlement have been identified. These localities are spatially defined but also express minor differences in material culture. Kansas sites have been found principally in Pawnee County near Larned, Rice County along the Little Arkansas River, McPherson County along tributaries of the Smoky Hill River, Marion County around the city of Marion, and Cowley County near Arkansas City. Sites in Rice county were assigned by Wedel to the Little River focus and in Cowley County to the Lower Walnut focus. Another Kansas locality probably exists in Wilson County near a site known as "Neodesha Fort" (14WN1). Oklahoma sites are known along the Arkansas River north of Ponca City in Kay County and south of Tulsa in Tulsa County.
Perhaps because so little is known of the McPherson county sites and their proximity to the Rice County sites and because sites in both areas have so called "council circle" features, the Rice and McPherson county sites have generally been lumped. Based on a provisional comparison of collections from these two counties, which shows a striking and unexpected difference in lithic raw material selection, it may be more appropriate to consider Rice and McPherson counties separately. This distinction is supported by apparent differences in trade materials between the areas. In Rice County evidence for contact with the southwest is common in the form of obsidian, pottery, and turquoise. Such material seems to be rare in McPherson County; the recent collector discovery of Lower Loup pottery at the Sharps Creek site in McPherson County is probably significant in this equation.

In conceiving of the Great Bend Aspect, then, it is possible to speak of at least eight distinct localities: six in Kansas and two in Oklahoma. Although substantial research collections exist from most of these localities, we are, for a variety of reasons, a long way from a systematic understanding of the material relationships between them.

**CONTACT-PERIOD SITES**

There are 12 Great Bend sites in Kansas and Oklahoma for which European made artifacts have been documented. These sites are distributed between five of the eight localities defined above. In Kansas, contact items have not been identified in Pawnee, Wilson, or Cowley counties but Wedel suggests they may be present in Wilson County.

**Marion County, Kansas**

Despite extensive work on eight Great Bend sites in Marion County, contact materials are known only from the Mem site (14MN328) and are restricted to a single glass bead, a complete rolled
brass tube, and a fragment of another rolled tube also probably made of brass. Of interest, the bead, which dates to ca. AD 1700 and complete brass tube were found in a single cache pit in association with a turquoise bead and an obsidian flake from a New Mexico source (Hughes and Lees 1990). The only other Southwestern trade material known from Marion County, also a flake of New Mexico obsidian, comes from this site.

Rice County, Kansas

European artifacts are found in Rice county at the Major (14RC2), Tobias (14RC8), C.F. Thompson (14RC9), Paul Thompson (14RC12), Kermit Hayes No. 2 (14RC13), and Saxman (14RC301) sites. Finds of European artifacts are rare except at Tobias. At the Major and C.F. Thompson sites only chain mail has been found. At the Saxman site chain mail and a single glass bead were found on the surface. At the Paul Thompson site the only European artifacts noted by Wedel are "small metal scraps" and at the Kermit Hayes No. 2 site 30 glass beads possibly from a necklace were found. The Tobias site has the largest inventory of contact materials from any Kansas Great Bend site but it has also been the most intensively investigated. At Tobias, finds include chain mail, glass beads, rolled brass beads and tinklers, an iron knife blade, an axe, and an awl.

McPherson County, Kansas

In McPherson County, artifacts of European origin are exceedingly rare but are found at both the Paint Creek (14MP1) and Sharps Creek (14MP408) sites. Neither site has received scientific study after Udden's attention in the 19th century but both have been a continual attraction to local collectors who have found small pieces of chain mail at both sites (W.Wedel 1975:191). In addition, passing reference to "one or two perforated beads of blue glass" found on the surface of one of the refuse mounds at Paint Creek was made by Udden (1900:67).
Kay County, Oklahoma

Artifacts of European origin are found in quantity in Kay County at the Deer Creek (14KA3) and Bryson-Paddock (14KA5) sites. Extensive surface collections from the Deer Creek site contain 47 different categories of European trade goods including a wide range of gun parts; iron knife sections; possible iron and glass scrapers; brass, iron, and glass arrowheads; glass beads; rolled brass and copper cylinders and tinklers; numerous brass and copper kettle fragments; and many other items (Sudbury 1976). Testing in 1974 and systematic excavation in 1975 at the Bryson-Paddock site resulted in the recovery of 39 categories of trade items similar to those from the Deer Creek site (Hartley and Miller 1977). These items are generally identified as deriving from the French trade.

Tulsa County, Oklahoma

In Tulsa County the Lasley Vore site (14TU65), recently discovered and investigated by George Odell of the University of Tulsa, yielded quantities of European made artifacts alongside an aboriginal assemblage that is patently Great Bend (Odell 1990). These artifacts are fewer in number and in diversity than at the Kay County sites described above, but include gun parts, glass beads, tinklers, knifes, kettle fragments, and other artifacts in quantities impressive in comparison to Kansas sites. As with the Kay County sites, a French derivation for these materials is indicated.

DISCUSSION

In the balance of this paper, I would like to examine the meaning of these European artifacts in the context of Wichita contact and culture change.

Post-contact settlement pattern

The information introduced above can initially be used to delineate the Great Bend settlement
pattern for the period of ca. AD 1450 to 1800. In Kansas, contact sites are found in localities alongside sites with no evidence of contact. In Marion County, European materials are limited to three items and these are from a single site. In McPherson County, European goods are found at the Sharps Creek and Paint Creek sites; these are within 2.5 miles of one another. Occurrences in Rice County are at the Major, Tobias, Kermit Hays No. 2, C.F. Thompson, and Paul Thompson sites, located within 2.5 miles of each other, and at the Saxman site, located some 12 miles distant. The Deer Creek and Bryson-Paddock sites in Kay county are located only 2 miles apart. The Lasley Vore site in Tulsa county is apparently close to a similar site identified through survey (George Odell, personal communication 1990).

In Kansas, therefore, contact sites are found in localities where other Great Bend sites also cluster but the contact sites have a tighter cluster. Further, important Great Bend localities in Cowley and Pawnee counties have produced no evidence for European contact. In Oklahoma the contact sites in Kay and Tulsa counties appear to be isolated from other Great Bend sites of any consequence.

Localities of Great Bend settlement can therefore be segregated into three groups based on evidence of contact: 1) localities containing no evidence for European contact, 2) localities where some sites produce evidence for contact, and 3) localities where all sites contain contact materials. Groups 1 and 2 include Kansas sites and Group 3 includes the Oklahoma sites. Based on differences between their assemblages these groups are hypothesized to represent migrations of the Wichita between AD 1450 and 1800.

Proximity to the Arkansas River

It is interesting to examine the relationship of this tripartite grouping to geographic information, specifically the proximity of the various localities to the Arkansas River. Group 1 localities, including
sites in Pawnee and Cowley counties, Kansas, are located, for all practical purposes, directly on the Arkansas River. Class 2 localities in Marion, Rice, and McPherson counties are, instead, located on tributaries well upstream from the Arkansas or within a different drainage altogether. Class 3 localities in Kay and Tulsa counties, Oklahoma, are, once again, located directly on the Arkansas. Variables of geography and evidence of European contact can thus be observed to co-vary, adding support to the utility of the proposed three-way grouping of Great Bend localities.

The meaning of chain mail

In examining the nature of the assemblages of European artifacts it is first useful to consider the Kansas sites where these materials are so rare. It is particularly useful to examine the relationship of chain mail to other European artifacts, and it is important to review not only occurrence by site but also by site context. In particular, a contrast between artifacts found in association with "council circle" features and those found elsewhere is drawn.

Three sites in Rice County (Tobias, Kermit Hayes No. 2, and Paul Thompson) and two in McPherson County (Paint Creek and Sharps Creek) are characterized by the presence of what have become known as "council circles." No site has more than one of these circles, which have been described by Wedel as "consisting of a wide shallow ditch some 30 to 60 yards in diameter, with a mounded center" (W. Wedel 1959:574). Wedel conducted excavations at the three Rice County circles between 1940 and 1967 and found these to be complex features consisting of a series of four kidney-shaped semi-subterranean structures surrounding a central plaza (W. Wedel 1959, 1968). A civic and/or ceremonial function is suggested. These council circles occur only in the Great Bend localities in McPherson Rice counties. Similar and perhaps related features may also occur at the "Neodesha Fort" site in Wilson County, Kansas, and at the Deer Creek site in Oklahoma.
An iron awl, axe blade, knife blade fragments, a mass of iron, three copper beads, five loose blue glass beads, and a necklace made of 250 glass, turquoise, and bone beads were found during Wedel's 1940 excavations of the "council circle" at the Tobias site. From the Kermit Hayes No. 2 circle, 30 blue glass beads in a pattern suggestive of a necklace were found (W.Wedel 1968:381). Similarly from the Paul Thompson site, Wedel noted the contents of the circle closely paralleled the Tobias site, including "the finding of small metal scraps" (W.Wedel 1968:378).

Most of the known European trade goods found on Great Bend sites have, in fact, been recovered from the "council circles." Important exceptions exist in the chain mail, none of which has been found in these features. The only other European goods from Kansas sites that were not found in direct association with the "council circles" are the glass and copper-alloy beads from Marion County, the glass bead and copper-alloy tinkler found at Tobias in 1977, and the glass bead found on the surface at the Saxman site. Several conclusions from these observations are possible.

First, the "council circles" are obviously important contact period features; they are prominent not only in their design but in their significant association with European goods. Indeed, in Kansas the "council circles" were the primary recipient of European goods other than chain mail. While it is impossible at this point to say whether they were used prior to contact, these features were clearly in use afterwards and the argument can be made that they should themselves be viewed as post-contact developments.

Second, the distribution of chain mail is different from that of other European goods. It has already been noted that chain mail does not occur in the features making up the "council circles." In the contexts where it does occur, chain mail is in reality much more common than other types of European artifacts. The processes that resulted in the occurrence of chain mail on these sites may thus have
differed significantly from those which brought other European goods to these sites.

**Contrasting Kansas and Oklahoma sites**

Having examined the distribution of European goods on Kansas sites, it is now useful to contrast Kansas and Oklahoma sites in terms of 1) the occurrence of European goods and, 2) the structure of the corresponding aboriginal assemblages.

Ignoring stylistic variation it is possible to say that the only type of artifact that is present on the Kansas sites that is not also found in Oklahoma is chain mail. Since mail is not a typical trade item its restricted distribution is not surprising and is probably related to chronological differences between the Kansas and Oklahoma sites. Although perhaps difficult to associate with Coronado, as many have done, it is nonetheless easy to associate it with early Spanish exploration.

The only general type of artifact found on the Oklahoma sites that is totally absent on Kansas sites is gun parts, which make up from 4.7 to 7 percent of the trade materials from excavated contexts in Kay and Tulsa counties. Once again, this difference is probably chronological. Firearms were typically not the first item to be introduced in trade, especially if trade was indirect. The low frequency and diversity of goods on Kansas sites may be evidence of indirect trade while the much higher frequency and diversity of goods on Oklahoma sites is most certainly the result of direct trade, in this case with the French.

Although figures are not available, it is probable that European goods represent a greater percentage of the overall assemblage on Oklahoma sites than in Kansas. A growing frequency and diversity of trade goods is typically seen as a marker of concurrent change in the aboriginal culture through the process of acculturation. Although only a very coarse understanding of the Kansas sites
exists, there does not appear to be any difference between the assemblage of aboriginal artifacts between sites with and without evidence of European contact. This is not true, however, when the Kansas and Oklahoma sites are contrasted.

Two significant changes are apparent; others are probably present as well. First, a striking absence of hafted and unhafted alternately beveled knives, characteristic of the Great Bend in Kansas, is noted for the Oklahoma sites. This is probably explained by reference to the common occurrence of metal knives on the Oklahoma sites. Another difference noted in the Oklahoma sites is the virtual absence of pipestone pipes, common on Kansas site, and the common occurrence of pottery pipes which rare to non-existent in Kansas. Suggestive of other more subtle changes is an apparent increase in incised decorations on pottery vessels of otherwise classic Great Bend form.

**CONCLUSIONS**

In this paper I have examined several aspects of Great Bend settlement in Kansas and Oklahoma and in particular have focused on evidence for European contact. Based on the nature of the European goods within the Great Bend assemblages, I have proposed that the eight localities of Great Bend settlement may be divided into three groups which include those with no contact sites, those with sites having evidence of peripheral contact, and those with sites where European goods are a significant part of the assemblage. Based on differences between these groups, it is suggested that they reflect different periods in Wichita culture history with Group 1 sites being the earliest, Group 2 intermediate in age, and Group 3 the most recent.

Geographic data further show different settlement locations for sites within each of these groups and when conceived within a chronological framework show initial settlement along the Arkansas River followed by a move away from this stream followed in turn by a return to the banks of the Arkansas.
Renewal of settlement along the Arkansas between the second and third period was perhaps a response to an increasing dependence on the European trade and perhaps reflects the shift from the overland Spanish to the river-based French trade.

My goal in this paper has been to draw together information on one aspect of the Great Bend aspect and to develop a model to explain observed variation. The model presented describes variability as currently understood and importantly does not preempt the utility of other variables, such as band affiliation, in explaining synchronic variability in Great Bend settlement. Whether or not this model has any lasting merit will, of course, depend on how effective we are in tackling the massive research problem represented by the Great Bend aspect.
REFERENCES CITED

Hartley, John D. and A.F. Miller


Hughes, Richard E. and William B. Lees

1990 Provenance Analysis of Obsidian from Two Late Prehistoric Archaeological Sites in Kansas. Transactions of the Kansas Academy of Science. In press.

Lees, William B.


Monger, Earl


Odell, George H.


Rohn, Arthur H. and Alice M. Emerson

1984 Great Bend Sites at Marion, Kansas. Wichita State University Publications in Anthropology, No. 1, Wichita, Kansas.

Rowlison, Don


Smith, Carlyle S.


Sudbury, Byron


Udden, Johan August

Wedel, Waldo R.

1942  Archeological Remains in Central Kansas and Their Possible Bearing on the Location of Quivira. Smithsonian Miscellaneous Collections, Volume 101, Number 7, Smithsonian Institution, Washington.


Witty, Thomas A.
