EUROPEAN TRADE MATERIAL FROM THE KANSAS MONUMENT SITE

by

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The study of objects of European origin found in archeological sites in the Great Plains should be of assistance in determining the approximate time spans of the protohistoric and early historic culture complexes. However, when the archeologist attempts to do this he finds few comparative data in the literature. Detailed lists of trade goods from several sites would simplify the problem. Sites do not always yield items which the expert on trade materials can date within a short span of years, but if lists are available for comparison, I see no reason why sites within limited areas may not be arranged in chronological series based upon the character of and the presence or absence of various objects of European origin.

I wish to place on record a list of such specimens found at the Kansas Monument site, a Republican Pawnee village in Republic County, Kansas. In a recent issue of the Plains Archeological Conference News Letter, a brief description of the site and its contents was presented (Smith, 1949). It will suffice to state that indirect documentation places the occupation of the site prior to 1802 but probably not much earlier than 1777 (Wedel, 1936, pp. 32-33). It is hoped that the description of the trade material will prompt other workers to publish similar lists or to communicate directly with me by letter. Photographs of the specimens will be available for distribution in the near future to those who are working on similar problems.

Trade objects from the site are made of stone, iron, brass, copper, lead, and glass. In the appended list all objects made of metal are listed together. It should be noted that the specimens made of metal could have been subdivided into two broad groupings: (1) those which were manufactured as finished artifacts in Europe and used as such by the Indians; (2) artifacts made by the Indians from European materials, either from parts of European artifacts or from raw materials of European origin.

The only objects of stone are three rectanguloid gun flints made of material foreign to the region. These are of the two varieties commonly found on 18th century sites. One is flat and tablet-like with sharp end broken off. Burning has altered the flint to a chalky white color. It is common knowledge among persons familiar with old firearms that flints of this type were, and still are, made by cutting up long prismatic flakes with an iron chisel. The second variety is plano-convex, having a bulb of percussion toward the edge on one side. One flint is gray and the other buff in color. It is not known exactly how such flints were made but the technique does not appear to be one which would lend itself as well to mass production as that used in the manufacture of the first type. Both of the plano-convex flints display some pressure flaking which was evidently done by the Indians to sharpen them. Such retouching is not often found on flints used by Europeans. In this connection it is worthy of note that five other flints, one clamped in the jaws of a flintlock, are made of local materials and display chipping techniques identical with those used on non-European stone artifacts.

Objects made of metal make up the bulk of the trade material. Iron predominates over brass and copper. Lead is rare. The projectile points are classified according to the system used by Strong (1935, pp. 88-89). The common form of point is made of iron from a narrow triangular blank. The shoulders meet the slightly expanded stem at right angles (SCa1). Rejects and fragments of metal were found around the fireplaces in Houses 1 and 2. Seemingly triangular blanks were cut from sheet metal by filing from opposite sides until the desired piece could be broken off. Iron points could have been made from the thin parts of the blades of hoes. Points of brass and copper seem to have been made from pieces of kettles. One brass projectile point (SCc) retains a small section of the shaft bound to the stem with sinew. One iron lance point does not fit readily into the categories set up by Strong. It is 4 1/2 inches long with slightly sloping shoulders and an expanded stem.

Sixteen iron knives were found. Fourteen are similar to modern kitchen knives. The blades range in length from 4 3/4 to 6 1/2 inches. The tangs are broken on most of the specimens but an examination of the tangs on two complete examples indicates that the handles were nearly three inches long and were made of a perishable material held by three transverse rivets. The blades are straight except for a slight upward curve near the point. Only one edge is sharpened. Seven of the fourteen "kitchen" knives bear stamped names or symbols on the left side ahead of the tang (viewed with the point away from the body and the sharpened edge down). One knife bears a crown with three points, each terminating in a fleur-de-lis. Under the crown is the legend, "C.IZ/-IS", in two lines. The crown resembles that stamped on French military arms made by the armory at St. Etienne (Hicks, 1936, pp. 47, 110). Three other knives bear similar crowns and the two line legend, "ANDRE/ADIER". Another knife bears the two line legend, "SIMON/NIMET". The surmounting device is almost obliterated by rust but may have been a crown of some sort. Another knife bears a stamped device suggesting two implements crossed in the form of the letter X. The name below is not legible. Another knife may bear engraved lines and dots but it is deeply pitted with rust. One fragment of a skinning knife sharpened on the inside edge of the curved blade was found. One clasp knife with a blade approximately 4 1/2 inches long is present. It has a perforation at one end and a thickened button to keep the blade straight when open. On the blade is the letter B over what may have been the letter F. The blade of a straight razor was also found. The specimen does not appear to differ from modern forms and bears the legend, "FRANCE", in a rectangular cartouche. I am indebted to Mr. J. Edgar Hoover of the Federal Bureau of Investigation without whose cooperation it would have been impossible to bring out the inscriptions on the knives.

Four complete ax heads, a fragmentary eye, and fragments of five bits were found. Axes are two sizes: One is approximately 7 inches long and could have served as a felling ax; the other is 5 1/2 inches long and probably served as a general utility tool and weapon carried on the belt. The axes were made from a flat sheet of iron, or steel, which was hammer welded around a mandril to form the eye. The line of the weld is still visible along the edges of the bit. The poll is not squared for use as a hammer; it follows the rounded contour of the eye. In general appearance the axes resemble those illustrated by Woodward in his study of tomahawks (Woodward, 1946, figs. II, III). Four broken ax bits were used as wedges. On each specimen the edge opposite the bit itself is upset by hammering.

Eleven whole and fragmentary iron hoes with blades ranging from ovoid

to rectanguloid are present. Nine complete specimens are assignable to three varieties: (1) hoes with a well-defined neck between the eye and the blade, fastened to the blade with iron rivets; (2) hoes with a well-defined neck between the eye and the blade, the entire implement having been forged in one piece by hammer welding; (3) hoes similar to the second variety but lacking the neck between the eye and the blade. A piece was cut from the blade of one hoe, probably for use as a projectile point.

Gun parts were found in sufficient numbers to permit the reconstruction of the appearance of a typical firearm. Aside from the perishable wooden stocks the only missing parts are ramrod pipes, trigger plates, front sights, sears, and a few screws and pins. An iron awl may have been fashioned from a ramrod. The following description is based upon parts found in excavations and surface collections in widely separated parts of the state. As a result the hypothetical piece is composite, embodying parts from many individual guns.

The weapon was a muzzleloading flintlock fowling piece or light musket approximately five feet long. The bore was smooth and of a caliber between .55 and .69. The barrel was octagonal at the breech, changing to round toward the muzzle. At least one specimen was equipped with a brass rear sight, an unusual feature for the type of gun and the period. The barrel was fastened to the stock by transverse pins, or wires, which passed through lugs dovetailed into the under surface of the barrel. The breech plug was fastened to the trigger plate by a flat headed screw which passed vertically through the stock.

A flintlock was mounted on the right side adjacent to the breech. One nearly complete lock was found. The lock resembles those found on French military muskets of the Models 1728 and 1746, manufactured until 1754 (Hicks, 1936, pp. 13, 36). The lock plate terminates in a point to the rear of the hammer and is rounded at the forward end. There is no groove behind the hammer. It is equipped with a removable pan having a fence and was made without the conventional tenon for the support of the frizzen screw. The frizzen is round at the top, has a low median ridge, and is equipped with a curled spur at its forward extremity. The frizzen spring has a finial in the shape of a laurel leaf. The hammer, or cock, is of the gooseneck variety, flat with a beveled edge. The cap is secured by a screw with a perforated and notched head in the form of a sphere. The posterior edge of the cap has a rectangular notch which slides on the spur of the hammer. A gun flint is held in the jaws of the hammer. The plate and the hammer are bordered by an engraved line. The interior mechanism is of conventional construction except for the tumbler which has a thin spur at the rear formed by removing metal from the under surface. Furthermore no provision is made for a bridle. The other parts consist of the mainspring and sear spring. The sear is missing.

A thick curved trigger was enclosed by a brass guard which terminates in a sharply pointed finial. The edges of the guard bow bear two parallel lines engraved into the metal. Fragments of two brass side plates were found. One bears the head of a dog and some stylized leaves cast in relief. The other bears traces of leaves. Iron and brass butt plates were in use. The fragment of the brass specimen bears an engraving of a long-necked bird holding a leafy branch in its mouth. The side screws have rounded heads. One iron mold for casting a spherical bullet of about .55 caliber and one lead bullet of similar caliber were found.

The over all appearance of the reconstructed weapon conforms in superficial characteristics with the military muskets designated as Models 1728 and 1746 (Hicks, 1936, pp. 13, 36) but in details there is a closer resemblance to arms made for civilian use and known as fowling pieces. In all probability the guns concerned were made expressly for trade with the Indians.

Several fragments of gun barrels were used secondarily as tent pegs, wedges, or scrapers. All have one end upset by hammering and some of them are flattened at the other end. One which is upset by hammering at both ends may have served as a hammer head.

Two iron hooks approximately 4 inches long were found. It is probable that these were used as pothooks since one was found near the fireplace in House 2. Six iron awls ranging in length from 3 to 4 inches were found. Another specimen, 9 3/4 inches long, may have been fashioned from a ramrod or from the handle of a kettle. It was found in a heap of charred maize and may have been used in husking. Other objects of iron include two cut nails which are square in cross section, and two rectangular iron scraper blades.

Ornaments consist of a ring made of lead wire, two jingles of copper and brass, and a brass escutcheon plate which may have been placed over the key hole of a chest. The latter specimen is ornamented with a double headed bird cast in relief.

Fragments of cooking kettles indicate that some were of copper, and that others were of brass. The handles were made of heavy iron wire which passed through rectangular brackets of brass or iron on opposite sides of the rim. Copper rivets were used in the construction and repair of the kettles. No whole kettles were found. All of the fragments appear to have resulted from the intentional destruction of the containers to obtain raw material for projectile points and ornaments.

In addition to the classifiable artifacts of metal described above large quantities of amorphous fragments were found. Several pieces of brass had been melted; two had been hammered flat after melting.

Objects of glass consist of 479 beads and one bottle. Most of the beads are approximately one-eighth inch in diameter and occur in white, turquoise blue, blue, and black colors. Rounded beads occur in the first three colors. Cylindrical beads 3/32 to 5/16 of an inch in length occur in white and black. The green glass bottle has a capacity of between a pint and a quart. It measures 10 1/8 inches in height and 3 1/4 inches in diameter. There is a raised ridge around the mouth below the lip; the shoulders are well defined and the bottom is concave.

The Republican Pawnee were receiving gifts from St. Louis in 1777 (Houck, 1909, p. 143). An indication of the variety of artifacts and substances supplied to the Indians in 1787 is obtained from the study of a document found by Houck in papers from Cuba in the General Archives of the Indies (Houck, 1909, pp. 268-270). When Lt. Governor Cruzat turned over the post at St. Louis to Don Manuel Perez, he placed on record an inventory of the trade goods on hand as of November 27, 1787.

Perishable items include: gunpowder, white blankets, limbourg cloth,

white shirts, white ornamented shirts, striped shirts, "garments trimmed with lace for chiefs," "lace trimmed hats for chiefs," white plumes, "silk ribbon for medals," woolen ribbon, sewing thread, "banners," tobacco, and "brandy made from sugarcane" in caska.

Non-perishable items include: bullets, gun flints, muskets, wad drawers for muskets, ordinary knives, clasp knives, large axes, medium axes, hatchets, hoes, awls, sewing needles, thimbles, beads, steels for strike-a-lights, mirrors, combs, vermillion, large silver medals, small silver medals, wire, gorgets, hawk bells, and copper kettles.

A comparison between the goods on hand in St. Louis in 1787 and those found at the Kansas Monument site is, with two exceptions, only possible in regard to the non-perishable items. One exception is the inferred presence of alcoholic liquor on the basis of the bottle which was unearthed. The other exception is the necessity of a supply of gunpowder for the firearms. Ten non-perishable items in the St. Louis inventory of 24 occur at the Kansas Monument site: bullets, gun flints, muskets, ordinary knives, clasp knives, medium axes, hatchets, hoes, awls, and copper kettles. Aside from the artifacts made by the occupants of the village from European materials, the only artifacts present at the site and absent in the St. Louis inventory are: a straight razor, a bullet mold, two pothooks, a buckle, two nails, an ornamental escutcheon, and a green glass bottle. It is worthy of note that many of the items present in the St. Louis inventory and absent in the collection from the site are often found in graves but rarely in and around habitations. I refer to mirrors, combs, silver medals, gorgets, and hawk bells. This leaves only large axes, sewing needles, thimbles, steels for strike-a-lights, vermillion, and wire. Vermillion may be represented by traces of red pigment found on the floor of House 2. Perhaps further excavation would have yielded some of the other items.

Conclusions

The Kansas Monument site yielded a large collection of objects of stone, metal, and glass which came to the occupants by way of European traders. Some of the specimens are traced to France on the basis of inscriptions stamped on them. The firearms appear to be French on the basis of their characteristics. It is known that St. Louis was supplying the Pawnee with trade items as early as 1777. Furthermore, a comparison with an inventory of trade goods on hand in St. Louis in 1787 demonstrates a similarity to the list from the site.

TRADE GOODS FROM THE KANSAS MONUMENT SITE

Category	TRAIT	NUMBER
OBJECTS OF STONE		
Gun flints:	Tablet-like	1
	Plano-convex	2
OBJECTS OF METAL (Iron unless otherwise stated)		
Arrow points:	NAa	1

	NBb	1
	NC, brass	2
	SAb	1
	SBc	1
	SCal	5
	SCal, brass	1
	SCal, copper	1
	SCc, brass	1
	Fragments, iron and brass	15
Lance point:	Elongate, expanded stem	1
Knives:	"Kitchen" knives, no marks	7
	"Kitchen" knife, crown over C.IA/-IS	1
	"Kitchen" knives, crown over ANDRE/ADIER	3
	"Kitchen" knife, SIMON/NIMET	1
	"Kitchen" knife, crossed implements	1
	"Kitchen" knife, traces of engraving (?)	1
	Skinning knife, reverse curve blade	1
	Clasp knife, B over F (?)	1
Razor:	Straight razor, FRANCE in cartouche	1
Axes:	Narrow at poll, wide bit, 7" long	2
	Narrow at poll, wide bit, 5 1/2" long	2
	Fragments	2
Wedges:	Made from broken ax bits	4
Hoes:	Neck between eye and blade, rivets	1
	Neck between eye and blade, welded	2
	No neck, welded	5
	Fragments	3
Gun parts:	Sections of barrels reworked as stakes, wedges or scrapers	3
	Section of barrel reworked as hammer head	1
	Fragments of barrels	6
	Flintlock mechanism, nearly complete	1
	Flintlock hammer	1
	Flintlock frizzens	2
	Flintlock pans	2
	Flintlock sear spring	1
	Flintlock mainsprings	2
	Flintlock side screws, rounded head	3
	Flintlock frizzen screw, rounded head	1
	Tang screw, flat head	1
	Butt plate fragment, perforated	1
	Butt plate tang, brass, engraved	1
	Barrel pin lug, perforated	1
	Rear sight, brass	1
	Side plate fragments, dog and leaves, brass	2
	Trigger guard fragment, brass	1
	Trigger	1

Bullet mold:	Pincer-like, ca. .55 cal.	1
Bullet:	Spherical ball, lead, ca. .55 cal.	1
Hooks:	Pothooks, length ca. 4"	2
Awls:	Square, bi-pointed, 3" to 4" long	6
	Round, one point, 9 3/4" long	1
Buckle:	Crescentic, fragmentary	1
Nails:	Square cut nails	2
Scrapers:	Rectanguloid blades	2
Ring:	Lead wire	1
Jingles:	Conical sheet copper	1
	Conical sheet brass	1
Escutcheon:	Double headed bird ornament, brass	1
Kettles:	Handle, heavy iron wire	1
	Handle brackets, brass	2
	Handle bracket, iron	1
	Section of bottom, copper	1
	Fragments, copper	20
	Fragments, brass	7
Miscellaneous:	Sheet, iron, fragments	230
	Sheet brass fragments	21
	Melted brass, puddled	8
	Melted brass, hammered	2
	Sheet copper fragments	68

OBJECTS OF GLASS

Beads:	White, rounded	228
	White, cylindrical	48
	Turquoise blue, rounded	114
	Blue, rounded	80
	Black, cylindrical	9
Bottle:	Green glass, height 10 1/8", diameter 3 1/4", concave bottom.	1

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A TECHNIQUE OF POTTERY DECORATION

by James H. Gunnerson

In the past, laboratory experiments at the University of Nebraska have failed to disclose a technique capable of producing a type of cord impressed design found on some of the pots from the Sweetwater Focus of the Upper Republican Aspect. The design in question was described and illustrated by Champe.[1] This design shows the impression of a two strand twisted cord with a loop present at one end indicating that a single strand was doubled. The over-all design consisted of series of opposed diagonals very precisely impressed upon the rim with the loop ends plainly showing.

Various methods of twisting cords had been tried but none would produce both a loop end and a stable twist. Recently a method was discovered in which a single strand was twisted under sufficient tension to prevent fouling, doubled, and the tension released. The cord immediately twisted about itself in the

[1] Champe, John L., The Sweetwater Culture Complex. in Chapters in Nebraska Archeology, (E. H. Bell, ed.), pp. 249-299.