

Report of the Investigation of

THE SWAN CREEK SITE 39WW7
WALWORTH COUNTY, SOUTH DAKOTA
1954-1956

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THE SWAN CREEK SITE, 39WW7

LOCATION AND ENVIRONMENT

The Swan Creek site, 39WW7, is among the many Indian villages in the Missouri Valley of South Dakota which will be inundated by the flood waters of the Oahe Dam when this structure is completed (Figs. 1 and 2). This site is situated on an eroded remnant of the third terrace of the valley, overlooking the river bottom land, about 1000 feet south of Swan Creek and 1300 feet east of the Missouri River. It lies in SE $\frac{1}{4}$, Sec. 17 T121N, R79W, between the elevations of 1570 to 1590 feet above mean sea level. Recent estimates indicate that the maximum operating pool of the Oahe Reservoir is to be 1620 feet above mean sea level or 30 feet above the highest level of the Swan Creek site (Robert L. Stephenson, personal communication April 26, 1957, based on U. S. Army Corps of Engineers' data). Near this site the Missouri River has an elevation of 1521 feet; thus the site is about 50 feet above the level of the river.

The general area covered by the Swan Creek village and refuse area is about 1230 feet in length and 1170 feet in width. The cemetery, however, is not encompassed in this area but lies on the third terrace to the east of an abandoned railroad cut of the Minneapolis St. Louis Railway. Surface indications of the Swan Creek site are very prominent with the house depressions, moats, and refuse heaps plainly visible. Many of the house depressions are still as deep as 5 feet below the surrounding area, while some of the refuse heaps in the areas between the houses rise as high as six feet. The refuse heaps that form a mantle on the slopes surrounding the village site are easily recognized by the many bones and sherds that are scattered over the surface.

The site was well chosen for defensive purposes, being located on the highest knoll on the second terrace. This knoll is an eroded remnant of the third terrace. It overlooks a broad expanse of river bottoms to the west and grasslands to the north, south and east. About three-quarters of a mile to the east the highest terraces of the Missouri valley begin their rise to the elevation of 1813 feet above sea level.

Several different physiographic areas are present in the immediate vicinity. The flood plain of the nearby Missouri River is an area of shifting bars and islands which are inundated in

the spring floods. The first terrace rises about fifteen feet above the flood plain and varies considerably in width. In some areas, it is not over a thousand feet wide at the point where the second terrace rises while in other areas such as the broad bottoms south of the Boehmer Ranch, about a mile south of the Swan Creek site, the top of the first terrace is as wide as 2500 feet. A large area of the first terrace is covered with a heavy cottonwood forest and a dense growth of underbrush such as willows and berry bushes. At present the area is used mainly for wintering cattle and the more open spaces for alfalfa fields. Much of this terrace was probably utilized by the Indians for agricultural plots. The choke cherries, wild plums, currants, and berry bushes undoubtedly were utilized to supplement the starchy corn and squash diet of the natives.

The second terrace is a more restricted area, being coincident in many places with the higher terraces which form cliffs along the Missouri River above Swan Creek. Between the village site and Swan Creek there is an area of the second terrace, about 1000 feet wide and 2000 feet long which was probably utilized for agricultural purposes. South of the site the terrace is less than 500 feet in width. At a distance of about a mile south are the broad bottom lands below the Boehmer Ranch, with a width of about 2000 feet.

At the Swan Creek site the third terrace, gently rising to the east, has a width of about 2000 feet. The third terrace is covered by grass and is at present utilized for grazing cattle. It is doubtful that the Indians utilized this area for farming because of their lack of a turning plow to cope with the heavy sod covering.

According to Shantz and Zon, the local uplands and terraces of the Missouri Valley of South Dakota fall within the Plains Grasslands, whereas the floodplain is an extension up the valley of the oak-hickory division of the Southern Hardwood forest (Shantz and Zon, 1924). Donald J. Lehmer describes the area of the Missouri Valley north of Pierre, South Dakota which is roughly comparable to the Swan Creek area in these words, "The maximum temperature range is from -40° to 115° Fahrenheit; the January average 17.6°, the July average 76.3°. The average growing season from killing frost to killing frost lasts from April 30 to October 8, a period of 161 days. The average precipitation is 16.2 inches per year. This is mostly in the form of summer rains, with nearly sixty

per cent of the annual precipitation concentrated in the period from May through August. Snowfall tends to be comparatively light, with the maximum generally occurring in March. Mean monthly velocities are in excess of eight miles per hour, with a mean of nearly 12 miles per hour for April. From October through April northwest winds may prevail. In May the winds are generally from the east, and June through September from the southeast." (Lehmer, 1954, p. 115).

Game animals and birds were very common in the past and several species are still present. The surrounding grasslands and woods held at one time many buffalo, deer, antelope, rabbits, waterfowl and grouse. All these species formed a prominent part in the diet of the natives. Fish abound in the Missouri River and in the mouth of Swan Creek, including such species as catfish, bullheads, suckers, and sturgeon. The relative scarcity of fishhooks and fish bones found in the 1954-56 excavations, at the Swan Creek site, however, indicates that fish were not important in the diet of the local inhabitants.

The nearest Indian village site, 39WW300, is located about 1000 feet from the Swan Creek site and is on the second terrace. The house depressions of this site can no longer be seen from the surface but two elongated refuse mounds rise about three feet above the surrounding area. In Refuse Mound I a stratigraphic trench was cut by the 1955 project. To the northeast of Site 39WW300 across the abandoned railroad grade and on top of the bluff of the third terrace is Site 39WW301. Further to the north of this site along the same terrace is the main burial area of the Swan Creek site. It is possible that Site 39WW301 represents only a southern extension of this area. However, the presence of a refuse mound at Site 39WW301 distinguishes it from the burial area. Three excavation units were made at Site 39WW301 in the 1955 project.

COMMUNITY PLAN

At the Swan Creek site there were at least three distinct occupations which covered four different areas. The exact size of the oldest village, which will be referred to as Occupation Area A, cannot be determined because a large portion of it is covered by the later occupations. The culture of this occupation has been assigned to the Akaska Focus. The part of this area that is ex-

posed to the surface is located along the eastern edge of the Swan Creek site. No depressions of houses are visible but seven low refuse mounds extend above the surface. Excavation units were cut in Refuse Mounds A-E, and G. No fortification ditch was visible in this area.

During the next period of occupation (Occupation Area B), the houses of the village were concentrated on the knoll in the west half of the site and enclosed by a ditch and palisade. Within this area are the depressions of about 27 houses and one large ceremonial structure. Without doubt there were more than 27 houses in Occupation B because many of them were covered in the northeast part of the area by houses belonging to Occupation C. In the areas between the houses of Occupation Area B are many refuse mounds and in addition some of the refuse was thrown on top of mounds belonging to Occupation Area A. The cultural complex of Occupation B is assigned to the Le Beau Focus. The large ceremonial structure (House 4) and Refuse Mound F were excavated in the 1955-56 project. Trenches also were cut through the moat and palisade on both the east and west sides.

The houses of the last period (Occupation Area C) occupy the northeast third of the area of Occupation Area B. A new fortification area ditch and palisade were constructed, enclosing at least 20 houses. In the 1955 project House 1 was excavated and House 2 cross trenched. A stratigraphic trench was cut through the moat and palisades and through the refuse layers on the west side of the site. The cultural complex of Occupation Area C is also assigned to the Le Beau Focus.

Immediately to the northwest of the area of Occupation C were two irregular depressions that may indicate the presence of houses. These depressions were not cross-trenched. Along the entire west slope of the Swan Creek site are many layers of refuse that appear to belong, in the main, to Occupation Areas B and C.

On the south side of the Swan Creek site outside of the fortification ditch and the palisade of Occupation Area B is a cluster of high refuse mounds that appear to have been formed throughout all of the period of habitation of the site. These mounds surround two house depressions, one of which was excavated in 1955 and designated House 3. This house, in reality a group of superimposed houses, was roughly contemporary

The following sherd types characterize Occupation Areas C and D (Charts VII, X):

Type	Percentage	Total
Stanley Cord Impressed		
Type A ----- rare -----	1.8	40
Type B ----- rare -----	.4	10
Type C ----- rare -----	.1	1
Le Beau Cord Impressed		
Type A ----- common -----	14.2	304
Type B ----- rare -----	.3	7
Type C ----- rare -----	.6	14
Type D ----- rare -----	.1	1
Type E ----- rare -----	.1	1
Le Beau S-shaped Rim		
Incised ----- common -----	5.6	121
Rainbow ----- common -----	4.4	94
Horizontal Cord Impressed ----- common -----	5.2	112
Punctated ----- rare -----	.9	19
Diagonal and Vertical Cord Impressed ----- rare -----	.9	20
Incised and Cord Impressed ----- rare -----	.1	3
Triangular Cord Impressed ----- rare -----	.1	1
Plain ----- rare -----	.1	1
Wheeler Ridged Rim ----- rare -----	.1	2
Staley Wavy ----- common -----	7.7	165
Le Beau Finger Indented ----- common -----	19.4	415
Talking Crow Brushed ----- common -----	2.7	76
Le Beau Tool Impressed ----- common -----	7.4	158
Le Beau Plain ----- common -----	5.9	126
Stanley Plain ----- rare -----	.7	15
Akaska Tool Impressed ----- common -----	7.2	154
Stanley Tool Impressed ----- rare -----	.9	21
Steamboat Cord Wrapped Rod ----- uncommon -----	1.1	25
Le Beau Cord Wrapped Rod ----- uncommon -----	1.3	29
Le Beau Punctate ----- uncommon -----	1.6	36
Le Beau Bowls ----- rare -----	.8	18
Twelve Mile Black on Gray ----- rare -----	.2	4
Nordvold Horizontal Incised ----- uncommon -----	1.8	40
Akaska Stab and Drag		
Variety A ----- rare -----	.4	9
Variety B ----- rare -----	.4	8

SUMMARY AND CONCLUSIONS

The Swan Creek site, 39WW7, Walworth County, South Dakota, was excavated during the years 1954-1956 in a project co-sponsored by the South Dakota Archaeological Commission, the University of South Dakota Museum, and the National Park Service. Three houses were uncovered and several trenches were cut through the refuse heaps and the fortification ditches. Additional excavations were made in the main cemetery and at the nearby sites 39WW300 and 39WW301.

Two distinct foci, designated the Akaska Focus and the Le Beau Focus, and four separate occupations were found at the Swan Creek site. The earliest occupation, Occupation A is assigned to the Akaska Focus. The area of this focus was the greatest of the four occupations and extended completely over the isolated terrace of the Swan Creek site. No house or fortification depressions were visible but several refuse mounds extended plainly above the surface. In this area two refuse heaps were cross-sectioned, uncovering in one post hole patterns that may represent the re-

mains of outdoor scaffolds. The lack of house depressions on the surface and signs of a fortification moat are features shared with Site 39W-W300, which also has been assigned to the Akaska Focus. The lack of surface indications of these features, however, does not prove that they were not present. At the Payne site, 39WW302, located about 6 miles upriver from the Swan Creek site, cross-trenching in 1956 by Roscoe Wilmeth revealed both houses and fortifications. Yet there was no sign of any fortification on the surface of the Payne site. The fill over certain sites of the Akaska Focus in contrast to those of the later Le Beau Focus is so deep that the house depressions are completely covered.

The Akaska Focus as represented at Occupation A of the Swan Creek site is closely related to the La Roche Focus manifested by the Wheeler Component of the Scalp Creek site, 39GRI, the La Roche Component at the La Roche site, Component C at the Talking Crow site, 39BF3, and the cultural complex of the Meyer site, 39ST10, of the Bennett Focus. Judging by the overall similarity in ceramics and artifacts the La Roche, Akaska, and Bennett Foci probably occupied about the same time period. Differences are noted, however, in the ceramic content and percentage distribution of types within these three foci. The technique of brushing the pottery, a common trait of the Akaska Focus, is absent in the La Roche Focus. Lyon J. Hoard calls attention to only one brushed sherd at the Meyer site (Hoard, 1949, pp. 29-30). The percentage of Nordvold Horizontal Incised varies greatly in these three foci. In the Akaska Focus there was 4.2% and at the Meyer site, 77%. A closely related type to Nordvold Horizontal Incised, Wheeler Horizontal Incised, was represented by 13.9% at the Scalp Creek site and 51% at the La Roche site.

Another difference noted in the ceramics of the three foci is the relatively high percent of S-shaped rims in the Akaska Focus. At the Swan Creek site 31.1% of the rims are S-shaped in the Akaska Focus in contrast with 8.8% in the Wheeler Component of the Scalp Creek site. Hoard does not indicate in his report the percentage of S-shaped rims found, although his drawings indicate the presence of a few (Pl. IV, Fig. 7; Pl. VI, Fig. 9). Elmer E. Meleen reports 8% of the rims from the La Roche site to be S-shaped (Meleen, 1948, p. 24). It is quite possible that the source for the idea of S-shaped rims of the

Akaska Focus was from upriver where such foci as the Huff have a high frequency of S-rims. It is also possible that the brushed surface technique of the vessels represents diffusion from the north.

The burial complex associated with the Akaska Focus included primary flexed inhumations in log-covered graves. The main burial area was the cemetery across the railroad cut from the village. Burial accompaniment was rare and included several large, finely flaked side notched arrowpoints, a few plate chalcedony knives, shell beads, a columella ear plug, and small deposits of red ochre. A puzzling feature of the primary burials was Skeleton No. 16, an adolescent inhumation associated with a tubular copper bead. Not only was this the sole metal artifact that apparently was associated with the Akaska Focus but the skull of this burial was trephined. There is no published record of the practice of skull trephination among the prehistoric Indians of the Dakotas. Neither is there any evidence of Europeans introducing this trait to the Plains Indians. With the exception of these traits associated with Skeleton No. 16 at the Swan Creek site there is no evidence of European contact with the various sites of the Akaska Focus.

On the chronological chart (Chart I) the Akaska Focus is placed later in time than the La Roche and Bennett Foci. This assignment is based on the assumption that the circular earth lodge tradition moved up river through time and that it therefore took longer to reach the area of the Akaska Focus than it did the down river sites of the La Roche and Bennett Foci. In addition, the copper bead and trephined skull of Skeleton No. 16, suggests that the Akaska Focus may have extended into the proto-historic period. If this were true the Akaska Focus was later in time than the La Roche and Bennett Foci which contain no evidence of metal artifacts.

The next period of habitation at the Swan Creek site is designated as Occupation B. The cultural complex of this occupation is assigned to the Le Beau Focus. A smaller area was encompassed by the fortified village of Occupation B. The house depressions, refuse mounds, and fortification moat were plainly visible on the surface. A portion of the area is covered by Occupation C, making it impossible to count the exact number of houses present in Occupation B.

In the area of Occupation B a large structure,

has a time period about 1700 A.D. There was no evidence of any time gap between Occupation B and the earlier Occupation A (Akaska Focus). Therefore, a period between 1675 - 1700 A.D. is suggested for the Akaska Focus.

APPENDIX I

ARTIFACTS FROM SWAN CREEK SITE, 39WW7, 39WW300, 39WW301

by Roscoe Wilmeth

Bone Artifacts

Awls (Fig. 16, 1-9)

Type IA: Made from split deer ribs. Much of the cancellous material removed. One specimen has neatly squared sides and a rounded head. Vary considerably in length from 130 mm. to 305 mm. 4 examples.

Type II: Awls made from splinters of deer cannon bones and occasionally from splinters of rib bones. Many specimens are polished and ground to neat cylindrical shape with rounded ends. Others do not evidence as high a degree of workmanship. Vary considerably in length from 53-159 mm. 55 examples.

Type IIA: Made from small mammal rib bone, outside surface ground and polished. 1 fragmentary example.

Type IVA: Made from split deer and antelope metapodial bones with split distal end used as the butt. The joint has been left intact or split. This joint may be polished and ground. Cancellous material removed leaving a U-shaped cross-section. Lengths, 65-97 mm. 12 examples.

Type V: Made from split deer and antelope metapodial bones with the proximal end used as the butt rather than the distal joint as in Type IVA. Cancellous material removed leaving a U-shaped cross-section. Polished upper surface. Length: 65-175 mm. 32 examples.

* The artifact classification used was that contained in the publication by Todd Willy and Wesley R. Hurt, "A Classification of South Dakota Artifacts Types," Loose Leaf Series No. 1, W. H. Over Museum, University of South Dakota, 1953. In describing certain artifacts revisions or additions were made.

Type VI: Awls made from bird bones. Polished by altering one end. Remainder of bone left unmodified. Length, 83-103 mm. 5 examples.

Type XV: Awls made from short fragment of bison scapula (post-scapular process). Worked only at tip; remainder left unmodified. 82 mm. long. 2 examples.

Beads and Tubes (Fig. 16, 10)

Type I: Made from cylindrical cross-sections of bird bones. A few are polished. Vary in length from 35-88 mm. 18 examples.

Type IV: Small segments of bird bone, outline square with rounded corners. 6 mm. square. 1 example.

Fish Hooks (Fig. 16, 11-13)

Type III: Polished bone fish hook with round cross-section. Incisions on shank for tying line. 62 mm. long. 1 example.

Type IIIA: Similar to above, but lacks the incisions. 57 mm. long. 1 example.

Incomplete: Flat hooks that have not been finished or polished. Probably a stage in the manufacture of Type III hooks. 2 examples.

Flakers (Fig. 16, 14-17)

Type V: Flakers made from deer and bison rib bones, one end chisel-shaped. Length 140 mm. to 270 mm.; width 18 mm. to 33 mm.; and thickness 7 mm. to 16 mm. 6 examples.

Type VIB: Small flakers made from splinters of deer cannon bone. Heads rounded. Blunt rounded tips. 65-72 mm. long. 3 examples.

Type VIII: Large flakers made from split sections of cannon bone of deer and bison. Several examples have cancellous material removed, leaving U-shaped cross-section. Lengths: 97-191 mm. 6 examples.

Type IX: Large flaker made from fragment of bison scapula. Acromion process not removed. Edges smoothed and polished. Tip also polished from use. Butt broken. 1 example.

Fleshers (Fig. 16, 2-5)

Type IIB: Made from elk radius. Proximal end cut away. Long gradual bevel cut on shaft, ends with serrated cutting edge. Length 95 mm. 1 example.

1 example.

Copper Dangle (Fig. 19, 6)

Type I: Conical-shaped artifact made of rolled sheet copper. A small opening is left at the pointed end. Largest is 32 mm. long, and 23 mm. in diameter. 2 examples.

Knife Blade (Fig. 19, 7)

Rectangular copper knife blade with forward end cut at a slight angle and higher than the rear. The cutting edge has small notches or serrations. 186 mm. long, 31 mm. wide, and 2 mm. thick. 1 example.

Sheet-copper Fragments (Fig. 19, 8)

Two fragments of sheet copper. One is triangular in shape and the other a long irregular-shaped piece.

Tubular Beads (Fig. 19, 10)

Tubular beads made of wrapped sheet copper. Some vary to a conoidal shape. In House 1, there was a pile of 55 beads of varying lengths from 8-22 mm. Each was wrapped around a small piece of wood, indicating that they were in process of manufacture. With Burial 16 was another copper tubular bead, 42 mm. long and 8 mm. in diameter. The last specimen, from refuse Mound E, was 31 mm. long and 5 mm. in diameter.

Miscellaneous (Fig. 19, 9)

Small fragment of copper hammered and ground roughly into the shape resembling a horse's head and neck, with projecting ears. 35 mm. long, 3 mm. thick.

Clay Artifacts

Miniature Vessel: Small crudely made clay bowl, with restricted aperture. Diameter 40 mm. height 21 mm., diameter of aperture 16-20 mm.

Glass Artifacts

Beads

✓ **Type I:** Spherical bead of blue glass 9 mm. in diameter.

Wood Artifacts

Pointed Slab: A slab of cedar with a pointed end. It was in poor condition and highly charred. Use unknown but may have been butt of a post. 210 mm. long, 75 mm. wide, and 34 mm. thick.

Plug (Fig. 19, 11)

A plug-shaped piece of wood found by William H. Over in the artifact cache below Skeletons 2182, 2183, and 2185. The plug has a disc-shaped end and a long cylindrical wood handle. Use unknown. The object is 140 mm. long; diameter of the disc is 50 mm.

Miscellaneous

Basketry: Small fragments of coiled basketry. Found in fill of Burial 12. Foundation made of thin strips of what was probably inner bark of cedar. These strips 6 mm. wide. Strips held together by thin flat strips of vegetable fiber, laid side to side in a diagonal pattern. From a very thin-sided coiled basket.

Perforated Corncobs: Charred corncobs with the pithy center removed by drilling or boring. Use unknown. 3 examples.

APPENDIX II

POTTERY

LE BEAU WARE

COMPONENT TYPES:

Le Beau Bowls, 19 rim sherds, .6% of rim sherds

Le Beau Cord Impressed, 380 sherds, 12.8% of total

Le Beau Cord Wrapped Rod, 51 rim sherds, 1.7% of total

Le Beau Finger Indented, 497 sherds, 16.7% of total

Le Beau Plain, 138 rim sherds, 4.6% of total

Le Beau Punctate, 65 sherds, 2.1% of total