



Woodland-Like Manifestations in Nebraska, Part II

(Article begins on page 2 below.)

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Article Summary: Excavation notes concerning woodland remains at the Leahy site (pp. 196-199), McKissick site (pp. 199-200), Baker site (pp. 200-201), Walker Gilmore site (p. 204), Do-2 site (pp. 204-205), Christensen site (pp. 205-210), Bakenhus site (pp. 211-215), Sondergaard site (pp. 215-219), Sherman County site (pp. 219-222), Ash Hollow Cave site (pp. 224-227), Conover sites (pp. 227-228), Dad's Lake site (pp. 228-231), Naper site (p. 231), Ough site (p. 232), and others

See also [Part I of this article](#), which describes woodland remains at the Vy-1 site.

Cataloging Information:

Photographs / Images: Leahy site (bank in which cultural materials occur, rim and body sherds, fragment of clay tubular pipe), McKissick site (cut gully), Baker site (rim sherds, grooved ax), Walker Gilmore site (complete vessel, chipped celt, awl, projectile point, rim and body sherds, Sterns Creek canyon), Do-2 and Do-4 sites (pottery fragments), Christensen site (mounds, bundle burials, cluster of stones, sherds, chipped flint, clay tubular pipe), Bakenhus site (rim and body sherds, chipped flint), Burjenbruck site (rim and body sherds), Sondergaard site (rim sherds, boatstones), Whalen site (boatstone), start on p. 220

Maps: Distribution of woodland materials in Nebraska

Notes Concerning Additional Woodland Remains in Nebraska

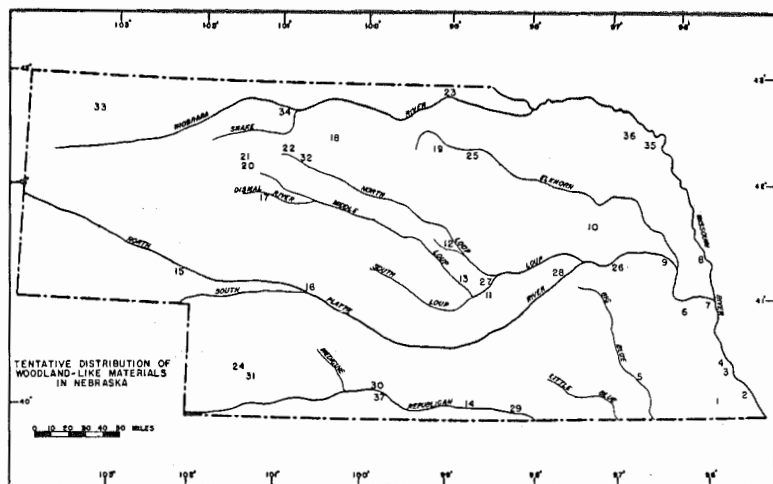
From the files of the Nebraska State Historical Society the authors have selected a number of sites whose limited artifact inventory appears to show affiliation with one or another variant of the widespread and vaguely defined Woodland horizon. These sites have been reported to the society by amateur collectors and other interested parties in all sections of Nebraska. Some have been visited by us, but, with two or three exceptions, excavations have not been attempted. As noted, a few have been described in print. In the following pages we present brief summary statements concerning these sites and the artifacts available from them. It is not to be hoped that our brief remarks will solve many of the basic problems. At the same time, since remains ascribed to the Woodland horizon promise to be among the most widely distributed and yet are the least known in Nebraska, we believe that even sketchy preliminary data may be helpful to workers in this and neighboring areas. These notes will indicate something of the variety now known to exist in Nebraska Woodland remains, and they may offer leads towards further intensive researches in the future.

List of Sites Represented By Numbers On Map

1. Preston Site
2. Site 2
3. Leahy Site, Nh 6
4. McKissick Site, Nh 7
5. Cook Site, Jo 1
6. Weeping Water Site, Cc 42
7. Walker Gilmore Site, Cc 28*
8. Do 2 Site
9. Christensen Site, Sd 3
10. Bakenhus Site, Pt 2
11. Sondergaard Site, Hw 7
12. Valley 1 Site
13. Whalen Site, Sm 2
14. Red Cloud 3 Site
15. Ash Hollow Site, Gd 2
16. North Platte Site
17. Carr Lake Site
18. Moon Lake Site, Bw 3
19. Atkinson Site
20. Twin Lake Site
21. East Twin Lake Site
22. Dad's Lake Site, C 1
23. Naper Site

24. Ough Site, Ch 13
25. Eagle Creek Site, Ht 1*
26. Abie Site, Bu 5
27. Howard County 6 Site
28. Clark's Site, Pk 1
29. Guide Rock Site, Wt 3
30. Orleans Site
31. Chase County 9 Site
32. Brownlee Site, C 2
33. Chadron Site, Dw 1
34. Snake River Site*
35. Ud K3 Site*
36. Dx 5 Wellenstein Site*
37. Fritzen Site
38. Dx 2 Wellenstein Site*
39. Dx 4 Enders Site*
40. Pk 1 Site

* Information on these sites was secured from Laboratory for Anthropology, University of Nebraska.



MAP IV — Distribution of Woodland materials in Nebraska. Each number indicates a site or area where Woodland materials have been found.

Leahy Site

The Leahy site (Plate XI-1) is located approximately 3 miles west of Peru, Nebraska, on land owned by Messrs. J. and R. Leahy. (See Map 4, No. 3) The materials are exposed in the south bank of a small unnamed draw which drains into Duck Creek $\frac{1}{4}$ mile to the southeast. Erosion has cut the creek to a depth of 15 to 20 feet, and the stream carries water but intermittently throughout the year. Cultural materials occur over a front of 75 feet to 100 feet in various re-deposited strata visible in the face of the cut. The remains consist of pottery sherds, flint chips, animal bones and burnt materials, which occur from a depth of 4 feet to as much as 15 feet. The greatest concentration of refuse seemed to occur at the 10 to 12 foot levels. These conditions are reminiscent of those at the Bakenhus site, in Platte County, to be described presently.

There were no concentrations of burnt materials or basins such as would suggest hearths. From the limited amount of collecting which was done it appears likely that the materials were washed into the position they now occupy, perhaps from the higher slopes to the south. More extensive investigations in the immediate area would probably reveal the original village site.

Pottery remains in the bank were fairly common. The total collection consists of 127 sherds (111 body sherds, 16 rim sherds). The body sherds, on the basis of body treatment, may be divided into three groups. The first group, characterized by cord-roughened exteriors, consists of 50 sherds. The majority of these are too small to determine the exact angle at which the cord marks were applied. However, in some cases a criss-cross effect has resulted while others show fine parallel cord marks varying from 1 to 3 mm in width. The tempering is grit, as it is in all the sherds found. The structure is granular and the sherds are medium to coarsely tempered. Thickness varies from 0.5 cm to 1.5 cm, with the majority measuring around 0.9 cm. Hardness varies from 2 to 5 with most of the sherds averaging around 4 (fluorite).

The 58 sherds in Group 2 are smooth, with no evidence of cord marks. They vary but little from those of Group 1 in structure, texture, tempering and hardness. Some of the smooth ware is thinner and somewhat better made than the cord-roughened. The thickness varies from 0.3 cm to 0.8 cm, with few exceeding 0.5 cm.

Group 3 (Plate XI-2, D, E) is made up of only three sherds. These have a body treatment which on present information is unique in this immediate area. It consists of rocker-roughening over the surface of the sherd. All three fragments were impressed with a smooth edentate rocker. The sherds are greatly superior in quality to the cord-roughened sherds, and have a much finer texture. Tem-

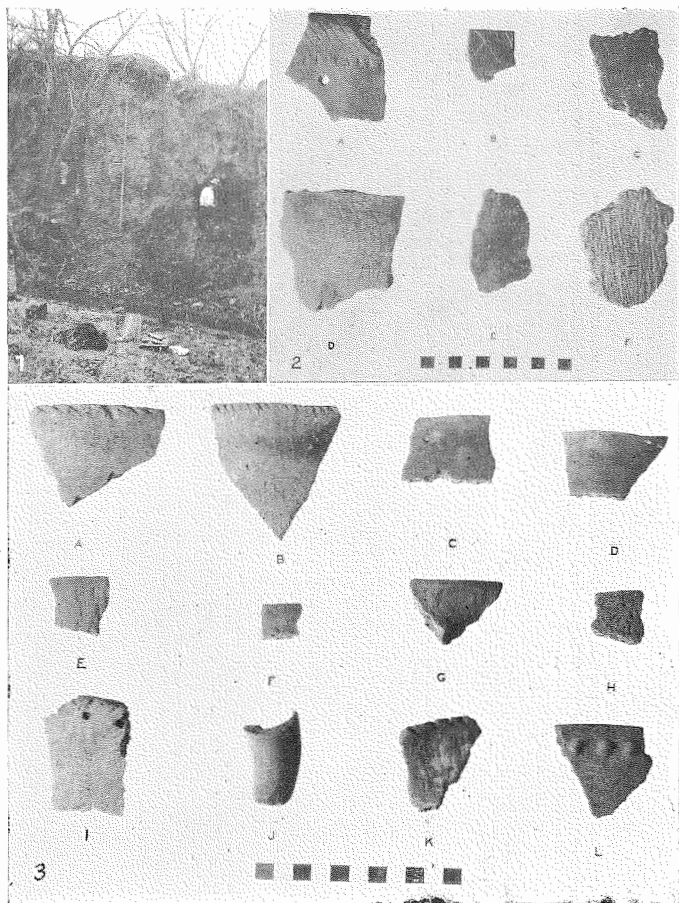


PLATE XI—1. Bank in which cultural materials occur at Leahy site.
 2. Rim and body sherds. A, B, C—type 3 rim sherds. D, E—group 3 rocker-roughened body sherds. F—cord-roughened body sherd.
 3. A, B, C, D—Rim sherds of “Walker Gilmore” type. E-H—cord-roughened rim sherds. I, K, L—Vy-1 type rim sherds. J—fragment of clay tubular pipe. Centimeter scale.

pering is of grit but is used more sparingly. Since there were no restorable vessels it is impossible to determine the body shape. Pottery of which these sherds are suggestive has been described by Wedel from the Renner village site near Kansas City, Missouri.¹ He has the following to say in regard to the ware:

"In most respects this ware closely approaches the so-called Hope-wellian type, but the body ornamentation is somewhat less intricate and the roulette or dentate stamp technique apparently less common than on pottery from the classic sites farther east."² In the same paper Wedel has reported similar sherds at a camp site near Manhattan, Kansas, 120 miles west of Kansas City. Ware of a similar type has also been reported from a site in northeastern Oklahoma.³

On the basis of rim profiles, the rim sherds may be divided into three types. Type 1 consists of twelve specimens, all of which are straight to slightly flaring with the shoulder fairly well defined. Nine of this group are smooth with no evidence of cord marks. They have some resemblance to rim sherds from the Walker Gilmore site in eastern Cass County (Plate XI-2, A, B). The other three pieces (Plate XI-3, E-G) of this group are slightly more flaring, with cord marks applied haphazardly to the exterior. The physical characteristics of the rim sherds are very similar to those of the body sherds.

Type 2 of the rim sherds (Plate XI-3, I, K, L) consists of only two specimens. Both are thick and grit-tempered with cord-roughened exteriors. The lip is flat with embossed nodes occurring below the lip on one sherd and punctates on the other. These two sherds are very similar to the ware from Vy-1.

Type 3 (Plate XI-2, A, B, C) also consists of only three sherds. The rim profile here is slightly constricted. The ware is thin and well made, with a hardness of slightly more than 4 (fluorite). The lip is rounded and narrowed. The two sherds show a more or less pronounced channel or groove on the inside, an inward-beveled lip, with a cross-hatched band 3.5 cm in width ending at the lower edge in a series of short vertical punctates. The portions of the neck which are attached to the rim are smooth in both cases. The sherds are too small to give any information in regard to the body. Wedel has described nearly identical rim sherds from the Renner site and has the following to say:⁴ "From the restorable vessels and larger sherds it is evident that the neck in this second type of ware was usually a plain smoothed band, separated by a wide incised line or groove from the ornamented body. Decorations on the body usually consisted of

¹ Wedel, W. R., 1938, pp. 99-106.

² Setzler, Frank M., 1933, pp. 1-21, and references under footnote 1.

³ Baerreis, D. A., 1939, pp. 77-78.

⁴ Wedel, W. R., *op. cit.* pp. 99-106.

rocker-roughening (See Plate XI-2, D), sometimes with scroll or other curvilinear design worked out in alternate smooth and roughened patterns separated by narrow to wide shallow grooves." It is possible that the vessels from which these two Leahy site rim sherds came were similar to those described from the Renner site near Kansas City.

Although flint chips and stones were fairly common, the only stone object which appears to have been used is a small lump of scoria which apparently served as an abrader. There are various grooves over the surface such as might have resulted from the polishing of bone and similar objects.

Mammalian remains, which were not plentiful, seem to be mainly those of deer. One piece of what is apparently a deer or buffalo skull has been cut into a rectangular shape measuring 3 by 5.5 cm. The sides are somewhat polished and the object may have been used to work hides or as an anvil in working pottery clay.

A fragment of baked clay is apparently the remains of a curved tubular pipe. It is from the lower portion of the stem, so it is impossible to determine accurately its original shape.

The materials from the Leahy site present some interesting problems. Particularly noteworthy are the suggested connections with a western aspect of the Hopewellian phase, not heretofore noted for the Nebraska area. There is little evidence that the materials recovered from the cut bank represent an occupational level and it is possible that they may have originated from more than one site. Additional work here, particularly if the habitational area can be located, ought to be well worth while.

McKissick Site

This site has been previously reported⁵ but is again included here, since the cultural material seems Woodland-like in origin. The site is indicated by number 4 on the key map. The following description of the site has been given:

"About three miles northwest of Peru, strata (Plate XII-1) containing cultural materials were found exposed in the sides of a recently cut gully. Owing to the limited amount of time available there, no detailed description is possible at present. The situation in several respects, however, seems to resemble that at the Walker Gilmore site in Cass County. A small stream, now dry except for brief periods when it carries run-off water, enters the wide Missouri bottom at the western edge of the ancient bend heretofore mentioned. The excavation of a drainage ditch which has straightened the channel to

⁵ Hill, A. T., and Cooper, Paul, 1937, p. 349.

the river has greatly accelerated erosion, resulting in a vertical walled gully nearly 20 feet deep. For a distance of about 100 feet are exposed two strata, at depths of 13 and 16 feet, containing charcoal and burned earth. From the upper, in addition, were removed a few sherds, a part of a large, stemmed projectile point, and several fragmentary bones, mainly bison. The exterior surfaces of the sherds are heavily cord-marked and the black paste is grit-tempered and granular. One sherd suggests the presence of a slight collar on the rim.

"A basin-shaped hearth underlain by burnt earth and containing a little charcoal and ashes appeared at a depth of 11½ feet in a redeposited yellow clay zone, with no other evidence of occupation except flecks of charcoal and burnt earth which seem to have been washed in with the soil. Two burned-earth areas in the 13-foot zone were probably also hearths. The lowest stratum, although heavily loaded with fragments of charcoal and burned earth, produced no artifacts and appeared to be washed-in material.

"From the limited evidence at hand it appears that some people, probably with an eastern culture, lived in an old stream valley while it was being silted up, and that recent erosion has cut through portions of the occupation area. The nature of much of the washed-in material may also indicate the former existence of habitation sites higher on the original slope."

The sherds from the McKissick site are very similar to those from Vy-1. The limited number of sherds in the collection makes it impossible to make any detailed comparisons between the sites. Additional work in the site would probably clarify the problem.

Baker Site

Site 6 is located in east central Cass County two miles east of Weeping Water, Nebraska, on the Samuel Baker farm. This site, which was located by Dr. L. N. Kunkel of Weeping Water, is located on a low terrace on the north bank of Weeping Water Creek. Erosion has removed a portion of the south edge of the terrace next to the creek and exposed flint chips, burnt stones, and pottery sherds to a depth of 14 inches.

The sherds (Plate XII-2) which were excavated by Dr. Kunkel are apparently all from the same vessel. They show only a few of the characteristics which were found in the pottery from Vy-1. Since the sherds from the Baker farm did not form a restorable vessel it is impossible to make any comparisons as to the body shape. However, enough of the sherds fitted together to determine the shoulder, which is much better defined than the shoulders on the Vy-1 vessels. The rim is slightly flaring with a flat lip. Tempering materials appear

to be grit with a few fragments of mica, apparently from crushed granite. The hardness of the sherds varies from 4 (fluorite) to nearly 5 (apatite). The thickness, which could be determined only on sherds above the shoulder level, varied from 6 to 9 mm. The exterior (as well as the interior) of the sherds is smooth with no evidence of cord marks. The rim is decorated with a series of connected triangles made from single-cord impressions which probably extended entirely around the rim. The imprints appear to have been made with a series of single cords pressed into the soft clay, with no evidence of the cord overlapping or terminating on the sherds. A series of shallow diagonal impressions is present on the flat lip.

Somewhat similar decorations have been described by Wilford from Woodland sites in southern Minnesota.⁶ Keyes has reported the single-cord impressed design from Iowa.⁷ Pottery which is similar to the Weeping Water material has been excavated from a series of low mounds on Eagle Creek, Holt County, Nebraska.⁸

Several stone axes have come from the surface in the surrounding area of the Weeping Water valley. The junior writer found a three-quarter grooved ax (Plate XII-2, D) in the same field several years ago. Its length is 7 cm and it has a thickness of 1.5 cm with a width of 4 cm. The ax appears to be made from dioritic stone and has a high polish.

There is evidence of other sites along the Weeping Water Creek which yield Woodland-like pottery sherds. Thick, heavily corded pottery with straight or slightly flaring rims has been found in deeply cut ditches along the creek. It is likely that there are at least two variants of Woodland-like materials in the Weeping Water Valley. One type appears to be heavily corded and resembles the ware from the Vy-1 site with node, punctate, and cord-wrapped stick decorations.

The second type appears to be a somewhat thinner ware and is more carefully made. No body treatment is present except for smoothing. Single-cord impressions seem to form the decorations, which are usually made of individual cord impressions. Until further work is done in the area, it is impossible to set up a trait list for either type or to determine with which the grooved ax is associated. However, it seems likely that it will be associated with some of the Woodland materials in the area. Extensive work has been done on the Nebraska and Upper Republican aspects in the valley, but no grooved axes have been associated with either.⁹

⁶ Wilford, L. A., 1941, pp. 346-347.

⁷ Keyes, C. R., 1929, pp. 135-143.

⁸ Field Notes, Laboratory for Anthropology, University of Nebraska, 1940.

⁹ Dr. L. N. Kunkel in an unpublished paper, "Archeology of the Weeping Water Valley."

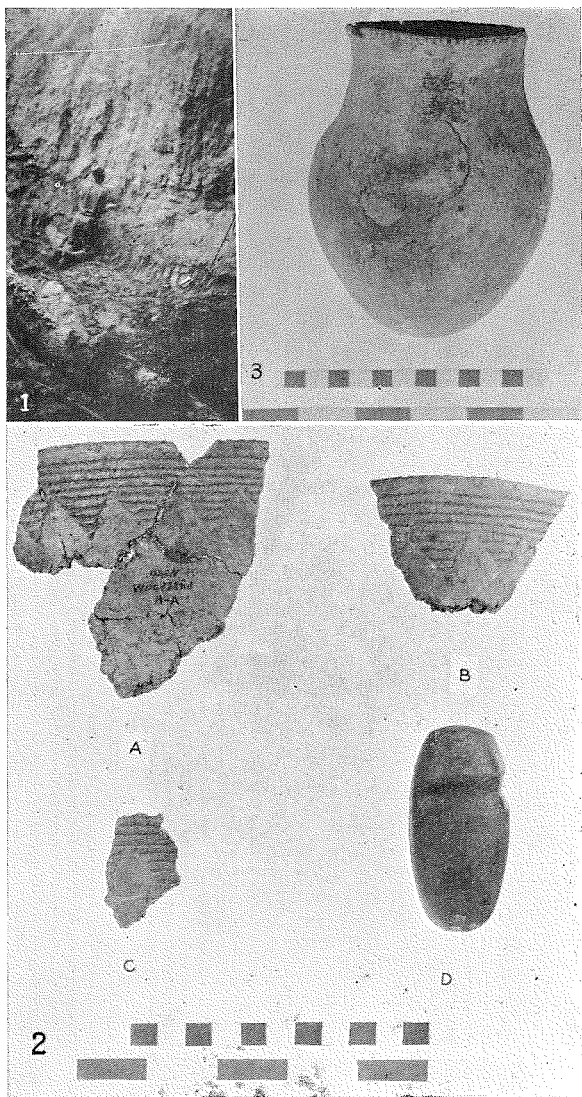


PLATE XII—1. Cut gully, McKissick site.
 2. A, B, C—Rim sherds, Baker site, Weeping Water.
 D—grooved ax, Baker site.
 3. Walker Gilmore site, complete vessel. Centimeter & inch scales.

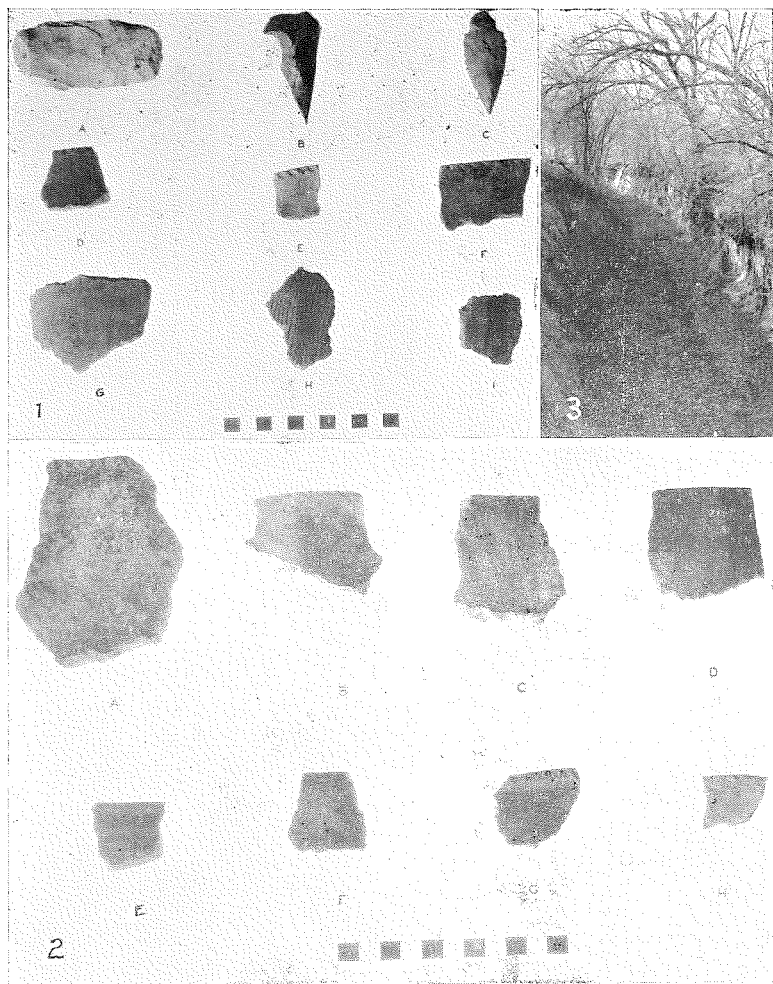


PLATE XIII — 1. Walker Gilmore site. A — chipped celt. B — awl. C — Projectile point. D, E, F — Rim sherds. G, I — smoothed-body sherds. H — cord-roughened body sherd.
 2. Rim sherds, Walker Gilmore site.
 3. Sterns creek canyon, Walker Gilmore site. Centimeter scale.

Walker Gilmore Site

The Walker Gilmore site, which is represented by number 7 on Map 4, is located in eastern Cass County, Nebraska, about a quarter-mile west of the Missouri River.¹⁰ Sterns Creek, which has a deep channel with sheer walls (Plate XIII-3), has exposed various occupational levels varying in depth from 6 to 27 feet. Masses of charred materials and small post molds may indicate a house type somewhat like that described for Vy-1.

Hearths, ash lenses, and scattered debris indicate that the camps may have been scattered along the old valley floor for a considerable distance. Strong has reported traces of squash and gourds, but none of maize or beans. Deer and other mammals seem to have been used for food; bison rarely, if at all. Bone working seems to have been well developed, while stone specimens were rare.

Pottery (Plate XIII-1-2) remains consist of small to medium-sized thin-walled jars with more or less conical bases, small mouth openings, smooth exteriors, and scalloped ("pie-crust") or incised rims.¹¹ Rim sherds which appear similar to this type occurred at the Leahy site (Map 4, No. 3).

The Walker Gilmore site has been assigned by Strong¹² "to a Woodland culture of northeastern affiliations, apparently related to the 'Algonkian' and Lake Michigan cultures of Iowa and Wisconsin."

Wedel has elaborated upon the Lake Michigan pattern:¹³ "The Lake Michigan pattern, so far as the writer (Wedel) was able to determine, is characterized chiefly by conoidal pottery vessels, highly varied stone industries, effigy mounds, horticulture, and perishable houses of bark or thatch. The pottery, perhaps its most distinctive feature, has been found at sites known to have been occupied by historic pottery-making Algonkians, and is basically identical with Algonkian ware. For these reasons, it has been attributed to a 'Western Woodland Algonkian,' probably similar to that of the Menomini of historic times."

On the basis of present information, Vy-1, with the cord-wrapped paddle applied in the final shaping of the outer surface of the pots, seems more closely related to the Lake Michigan phase than does the Sterns Creek pottery.

Do-2 Site

Site 8 has been previously reported¹⁴ but will be included in this report, as the material evidently represents some variant of the Woodland Culture. The material came from three low mounds in

¹⁰ Strong, W. D., 1935, pp. 175-198.

¹¹ Wedel, W. R., 1940, p. 305.

¹² Strong, W. D., 1933, p. 281.

¹³ Wedel, W. R., 1935, p. 189.

¹⁴ Hill, A. T., and Cooper, Paul, 1940, pp. 115-117.

Douglas County, Nebraska, approximately a mile north of the Ponca Creek valley. Several villages of the Nebraska Culture aspect were excavated in the vicinity. The authors have the following to say in regard to the Woodland-like materials: "Three low and inconspicuous elevations occurred at scattered points on the ridge, and these two were investigated. In Mound 1 the situation was not at all clear, but a few scattered bones were found. Mound 2, adjacent to House 1, was richer in information. On what was apparently the mound floor there was an area of concentrated human bones, which represent the simultaneous burial of many individuals. The bones were in a completely haphazard pile, indicating that the bodies had been exposed until no flesh remained and then the bones had been gathered up and deposited here. Over the bones lay a deposit of reddish brown earth which appeared to have been burned. Its mixed character bore evidence of the fact that the burning had occurred, not in the mound, but before its construction. Mound 3 was a slight elevation near House 3. In it were a few scattered bones and other specimens. A few fragments of pottery (Plate XIV-1) from the mounds (and, in one instance, from just beneath the surface near one of the houses) are distinctly different from the pottery found in the houses. The sherds are thick and made with a coarse stone-tempered paste. The body, which lacks a neck, is usually roughened with cords and ends in a flat lip. Just beneath the rim in each instance a series of holes is punched part way through a vessel wall from the outside, forming a row of small nodes on the inside. In three cases what appears to have been a small, cord-wrapped stick has been pressed into the still wet clay near the rim. In another instance a plain stick or other object was similarly pressed into the clay."

Apparently, the mounds which have been described represent some of the few in the area which have had sufficient cultural materials associated to identify the remains as Woodland. In many respects the pottery sherds from the mounds seem more closely related to those from the Vy-1 site than to pottery sherds from the Walker Gilmore site in Cass County, Nebraska.

Christensen Site

During the field season of 1936 the members of the Nebraska Historical Society Archeological Survey investigated a series of mounds on the bluffs and table-lands bordering the south side of the Platte River in Saunders County, approximately $3\frac{3}{4}$ miles east and $1\frac{1}{2}$ miles north of Cedar Bluffs, Nebraska. The Christensen site (Plate XV-1) is indicated by number 9 on the map. Of fifteen mounds tested, five were further investigated by trenching.

The first mound investigated was No. 5 in the series which extended along the bluff from north to south. Mound 5 was rather shallow, with a depth of 10 inches near the edges and 26 inches near the center, which was the highest point. It was circular in outline and measured 32 feet north and south by 30 feet east by west. Bundle burials (Plate XV-2) of three adults were found in the central portion. There was no evidence of a basin or pit below the mound. The burials were apparently placed at the old ground level and the earth then heaped up over them. A curved tubular clay pipe was associated with Burial 3 near the center of the mound at a depth of 20 inches. Some pottery sherds were mixed throughout the soil, but none were directly associated with the burial. Small sherds of coarsely tempered pottery were found in the upper portion of the mound, mixed with flint chips and fragments of stone.

The second mound investigated, which was number 7 in the series, was trenched. This was smaller than Mound 5. It was circular in shape and measured 18 feet in diameter. The depth varied from 5 inches at the edges to 29 inches near the central portion. Fragmentary human bones were scattered throughout the central portion. A few fragments of pottery, flint chips and stones were scattered throughout the fill. The mound appeared to have been built up from



PLATE XIV—Fragments of pottery from sites Do2 and Do4 (lower group) from mounds and surrounding area in Douglas county, Nebraska. Inch scale.

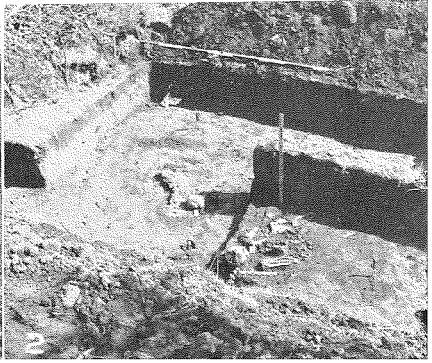


PLATE XV—1. Christensen site showing mounds in foreground.
2. Bundle burials, Mound 5, Christensen site.

the old ground level from loess soil which makes up the bluffs along the Platte River.

Mound 3, which was number 9 in the series, was also circular in shape with a diameter of 34 feet. It varied in depth from 6 inches at the outer edge to 34 inches near the center. Fragments of human bone, pottery sherds, and flint chips were mixed throughout the mound.

Mound 4, which was number 13 in the series, was in a plowed field to the south. The major portion had been plowed and eroded away, leaving only a dark circular area of earth 16 feet in diameter and 12 inches in depth. When this had been cleared a shallow basin was found to underlie the central portion of the former mound. The basin was 14 inches in depth and measured 12 feet north by south and 8 feet 6 inches east by west. Some burnt earth and charcoal occurred near the floor of the basin, mixed with pottery sherds and burnt stone. No bones were found in the mound or basin.

Mound 5, which was number 14 in the series, was in the plowed fields south of the other tumuli. The mound measured 11 feet north and south by 6 feet east and west. The greatest depth was 18 inches at the central portion. The mound was probably originally larger and deeper, but had been plowed and eroded away for a number of years. In the south half were found the remains of eleven bundle burials and numerous bones. There was no pottery. Several of the bones and many of the stones had been burned. One small chipped-end scraper was found in the mound fill. An individual extended burial of an adult was found in the north half, lying supine. This burial was the only one found which must have been in the flesh when buried.

Additional tests 75 feet west of Mound 5 revealed a cluster of stones (Plate XV-1) in a circular mass measuring 3 feet in diameter. There was some indication that a mound may have been eroded away in this area. The stones were found at a depth of 18 to 20 inches. There was no other material in the immediate area and it is difficult to account for the presence of these rocks. They were surrounded by yellow soil which appears to be sterile. Discolored soil areas suggest that there may have been several more mounds along the ridge, but all have been eroded and plowed level.

Pottery Remains

Since the pottery from the five mounds investigated is apparently of a single type, it will be considered as a group. The pottery remains (Plate XV-2) consist of twenty sherds (19 body sherds, one rim sherd). The body sherds all have fine parallel cord marks on the exterior and are smooth on the interior. The color varies from brown to black with the majority dark in color. The tempering is

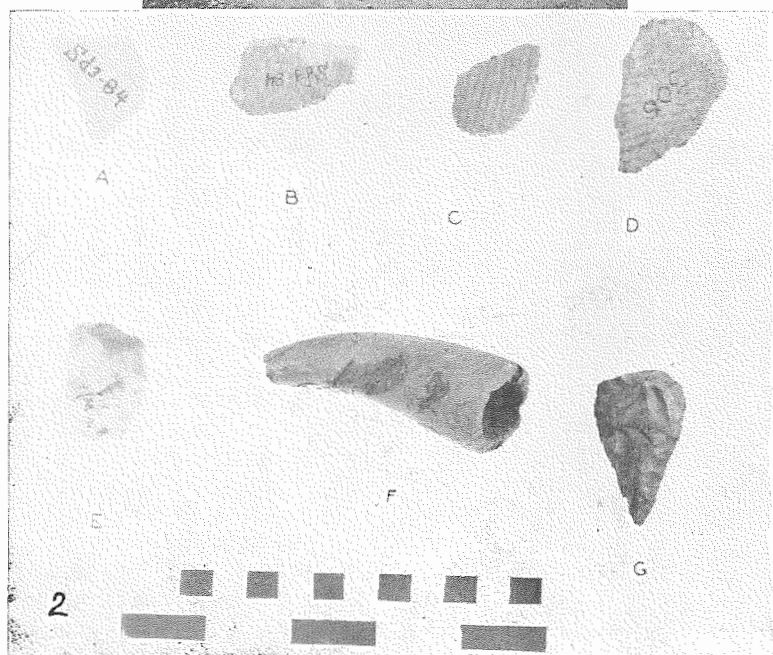
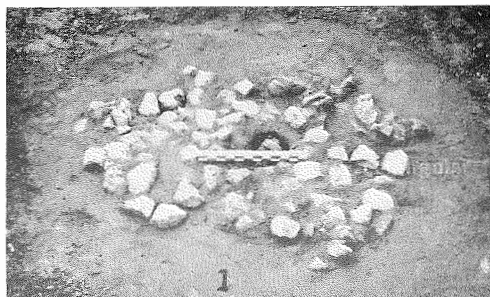


PLATE XVI—1. Cluster of stones west of Mound 5, Christensen site. Inch scale.

2. A-D—cord-roughened body sherds. E, G—chipped flint from mounds. F—clay tubular pipe from mound 1. Centimeter and inch scales.

grit, which varies from very fine to 3 mm in diameter. The sherds are granular in structure and tend to crumble readily. The hardness varies from 2 (gypsum) to 4 (fluorite), with the majority being slightly less than 3 (calcite). The sherds vary in thickness from 5 mm to 10 mm, with the majority 7 mm in thickness.

The one rim sherd in the collection is very similar to the body sherds in tempering, hardness, and structure. The rim is slightly flaring while the lip is flat. The exterior of the sherd has fine vertical cord marks. The surface is smooth except for projecting bits of grit. There are no decorations on the sherd.

Other Materials

A clay tubular curved pipe (Plate XVI-2, F) came from Mound 1. The pipe, which has a length of 7.5 cm, tapers to a point from the bowl to the stem. The diameter of the bowl is 2.5 cm while the stem has a diameter of 0.8 cm. The interior of the bowl has been burned slightly. The exterior of the pipe is dark brown while the interior is black. There is no evidence of tempering materials in the clay from which the pipe is made. Although flint chips and stones were quite common in the mounds, there were no stone artifacts.

The limited amount of materials from the mounds prevents many definite conclusions. There can be little doubt that the mounds are artificial and represent extensive work by a people who used them for the disposal of at least part of their burials. The most common method of interment seemed to be bundle burials with few mortuary offerings. Only one burial was found which had been placed there in the flesh. On the basis of pottery, the remains resemble those which have been generally classed as "Woodland-like" in the Central Plains area. Earth lodges attributed to the Nebraska aspect are plentiful in the vicinity, but the tubular clay pipe found in Mound 1 was the only object which resembled materials from the earth lodge sites. It is not now possible to say whether or not Woodland pipes in the area also included the bent tubular form. There was nothing at the site by which the relative ages of the mounds and the earth lodges could be determined. From findings elsewhere it is probably safe to believe that the mounds, if indeed of Woodland origin, are considerably older than the Nebraska aspect materials.

Bakenhus Site

The latter part of the 1936 Archeological Survey season was spent under the direction of A. T. Hill at a buried site in east central Nebraska, in Platte County. This site is given the number 10 on the map. First reported to Dr. Waldo R. Wedel by Mr. Walter Feye of Creston, Nebraska, it has been commonly known as the Bakenhus site after the owner of the land, Mrs. Fredia Bakenhus. It lies in eastern Platte County, about 22 miles north of the Platte River.

The site (Plate XVII-1) is located in the east bank of Loseke Creek (also shown as Lasker Creek on some maps), about one hundred fifty feet below the forks of Elk and Deer creeks in the north-east section of the county. Loseke Creek is a tributary of Shell Creek, which in turn empties into the Platte River east of Schuyler, Nebraska. The courses of the streams are fairly well timbered with cottonwood, ash, willow, burr oak, and elm trees. Fairly high bluffs and hills lie to the south of the site, while the terrain to the north is more level. Near the site, the distance between the terraces is approximately two hundred feet.

Previous to our excavations the creek had cut into the east bank, in which the site is located, exposing cultural materials at a depth of eight to twelve feet below the terrace surface. No extensive excavations were carried on at the site because of the limited number in the party and the amount of work involved in excavating such a site. However, the eroded face of the bank was cut vertically and the loose soil removed to a depth of sixteen feet below the surface. The objectives of the excavations were to determine the extent of the site, its greatest depth, origin of materials, and the general type of cultural materials.

The exposed face of the site was measured off in sections and the excavations were spaced accordingly, so that a general survey of the site was made. The tests covered a distance of approximately fifty-five feet along the creek bank. Whenever possible, specimens were left *in situ* until maps and photographs were made. Concentrated areas of cultural materials occurred but appeared to have been either washed or thrown there. Ashes occurred quite frequently, but the surrounding earth showed no evidence of the ash having been burned *in situ*. Other remains consisted of isolated chunks of burnt earth, charcoal fragments, animal bones, some polished stone, chipped flint, and pottery sherds.

The pottery (Plate XVII-2) remains consisted only of sherds. Since no vessels were restorable, it is impossible to determine definitely the shape of the original vessels. The five rims which were recovered from the cut bank have a profile which varies from vertical to slightly flaring. Two types of decoration are found on the rim

sherds. The first type is exterior nodes which extend horizontally around the upper portion of the rim in a single line. These nodes are present on only one of the sherds, while punctates forming the same general type of pattern occur on three rim sherds. The other rim sherd has no decoration. The lip form is flat in all cases. Tempering materials consist mainly of grit—apparently crushed granite. However, fine sand is present in two of the rim sherds and ten body sherds.

Body treatment on all sherds consists of some variation of cording. On several of the sherds the cord-marks have been nearly obliterated, apparently by partially smoothing the surface while the vessel was still soft. Three general methods of applying the cord-marks are represented. The greater number have fine parallel cord-marks which probably have been applied by a paddle vertically from the rim to the base of the vessel. Other sherds have cord-marks which appear to have been applied by a cord-wrapped paddle held at an angle so that a criss-cross pattern has resulted. A third method of applying the cord-marks so that they extended diagonally from left to right toward the base of the vessel was present on one sherd. The sherds are somewhat softer than the majority of wares from other sites of this type in Nebraska.¹⁵ They range from 2 (gypsum) to less than 5 (apatite), with the majority not more than 3 in hardness. The color ranges from light tan to black with the dark colors predominating. The texture is coarse, with the tempering materials making up more than one-half of the bulk of the paste. The sherds are thick and granular in structure.

Stone artifacts were rare at the site and are represented by only three specimens. Two of these are of chipped flint while the other is polished stone. One of the chipped specimens is a notched triangular projectile point with a length of 3.2 cm. The chipping is fine and the point well made. The other chipped specimen is a crudely flaked, rectangular-shaped piece of flint 3.1 cm in length, which may have been utilized as a knife or scraper. The piece of polished stone is of dark igneous material and may be from the bit of an ax or celt. Many small unworked fragments of stone were scattered throughout the levels but none appeared to have been used as artifacts.

No artifacts of either bone or shell were recovered, but unworked scraps of animal bones occurred throughout the strata. The bulk of the bones appeared to be from bison, but other mammal bones were present. Vegetable remains appear to consist mainly of charred wood and grass.

Pottery sherds, which made up the majority of the specimens, were found from the 6-foot level to the 12-foot level. Some charcoal

¹⁵ See Valley 1.

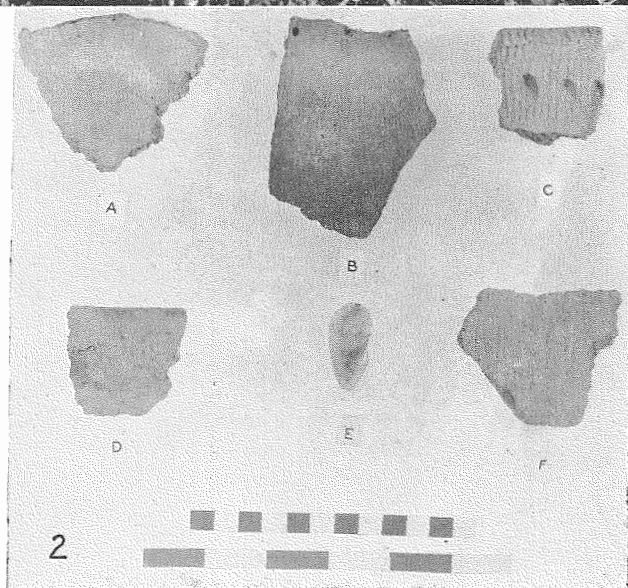
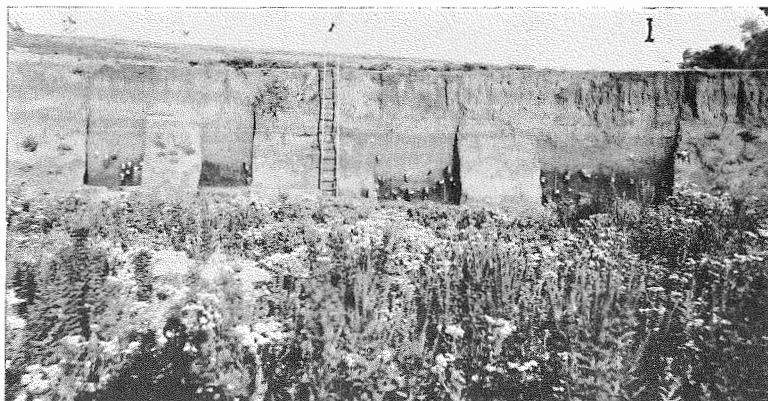


PLATE XVII—1. Bakenhus site. White cards on cut bank indicate specimens.
 2. C, D—Rim sherds, Bakenhus site. A, B, F,—body sherds. E—chipped flint. Centimeter and inch scales.

was found to a depth of 16 feet. The bulk of the material came from the 8- to 12-foot levels.

No very suitable solution as to the origin of this material has been suggested. From tentative observations it seems unlikely that the remains represent an occupational level. Materials of the same general type (Plate XVIII-2) were excavated in preliminary tests on a terrace on the Burjenbruck farm, approximately three hundred feet northwest of the deeply buried site. These tests revealed pottery sherds on the terrace at a depth of 5 to 22 inches. There was some evidence of a definite village stratum, but lack of work prevents any definite conclusions. The terrace appears to have been the site of a village with the same general type of material as occurred in the Bakenhus buried site. It is entirely possible that materials may have washed downstream from the Burjenbruck site to lodge in the bank at the Bakenhus site.

Burial tests on the hills about $\frac{3}{4}$ mile northeast of the Bakenhus buried site revealed a burial pit containing disarticulated and fragmentary human bones. The large pit had been divided into three smaller pits. The pits extended from north to south with the larger one at the north end of the series. The pits occurred on a slight north slope approximately 20 feet from the point of highest elevation. Stones, flint chips, and fragmentary human bones were present on the surface which had been cultivated. Pit Number 1 was roughly circular in shape with a diameter of approximately 9 feet. It was filled with very black soil mixed with stones, charcoal fragments, gastropod shells, flint chips, pottery sherds, animal bones, and scattered human bones. The materials had all been disturbed by rodents so that it was difficult to determine their original position. Some cultural materials extended to a depth of 6 feet, but the original pit was probably somewhat shallower before being displaced by rodents. The other two pits which extended south of Pit Number 1 contained the same general type of materials but were somewhat shallower.

The burial pits probably contained, originally, disarticulated burials with some grave materials. The pottery (Plate XVIII-1) associated with the human remains is very similar to that from the Bakenhus burial site and the Burjenbruck terrace.

Tests for other burials were made on an uncultivated hill approximately 325 yards southwest of the Bakenhus site. Cultural materials were located here which again were not on the highest elevation but approximately midway down the slope. Preliminary tests showed mixed soil here, so the area was trenched. No human bones were found, but there was a dark, well-mixed soil to a depth of 44 inches. Mixed in the soil were charcoal fragments, burnt earth, gastropod shells, and pottery sherds. Rodents had disturbed this area extensively so that it was impossible to locate definitely the walls of

a pit. Our excavations here were very limited, but it seems unlikely that the area was used extensively for burials. The pottery is of the same general type as that from the Bakenhus site.

It is evident that these remains indicate a fairly permanent village somewhere in the area. The Burjenbruck terrace may represent the remains of this village. Additional work should be done in the area to determine the relationship between the various scattered remains. Although remains of earth lodges of the Upper Republican aspect were found in the vicinity, no pottery of that type was found with the deeply buried pottery from the Bakenhus site.

The Bakenhus site has been tentatively classified as a component of the Woodland Pattern, and there is little doubt that the Burjenbruck site and the burials are closely related.¹⁶ Any estimates of the age of this material will have to take into consideration the physiographic setting as well as the archeological findings. As yet there has been no really adequate study of either the archeological remains or the physiography of the site. This station is one of the few now known in Nebraska where an opportunity is presented for a study of the mortuary customs in relation to a Woodland village complex.

Sondergaard Site

The Sondergaard site, which is given number 11 on the map, is located in the northwestern portion of Howard County, Nebraska. It is on a terrace on the south bank of Davis Creek and is about 40 feet above the stream. The site, which had been fenced as a hog lot, was investigated by means of a series of trenches dug during October of 1939 by the Archeological Survey of the Historical Society. Mr. Paul Mortensen of Cotesfield, Nebraska, had reported the site and had donated a collection of pottery.

Sherds which appeared to be of the Upper Republican type, and others suggesting some variant of the Woodland pattern, were found on the surface of the ground. Excavations revealed subsoil at a depth of 7 to 15 inches below the surface. The Upper Republican sherds occurred from 4 inches down to subsoil. Several trenches were excavated in the site, so that the major part of that portion of the terrace was excavated. In general the Upper Republican sherds (which were at a higher level than the Woodland remains) appeared to be only washed and scattered materials and did not represent an occupational level.

The Woodland horizon, which extended from a depth of 4 to 14 inches, consisted of flint chips, stones, burnt earth, charcoal, animal bones and pottery sherds, and appeared to be the remains of a definite occupational level.

It seems likely that the major portion of the Woodland materials

¹⁶ Wedel, W. R., 1940, pp. 344-345, and Fig. 22.

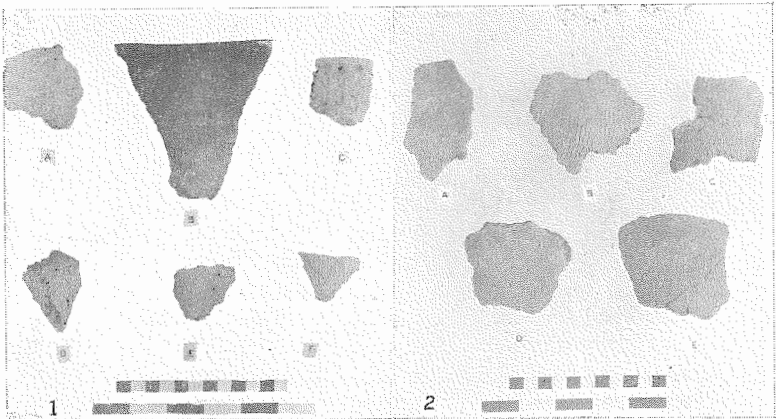


PLATE XVIII—2. Burjenbruck site. Rim and body sherds.
 1. Bakerhs site. Rim and body sherds from burial pits.
 Centimeter and inch scales.

may have been eroded away, and that a portion of the remnant of the terrace was then later used by people of the Upper Republican aspect.

The material from the Upper Republican horizon consisted of 22 pottery sherds. Two of these were rim sherds while the remainder were body sherds. The rim sherds are both of the typical collared rim type. The tempering material is grit and they are medium-textured. The sherds vary in thickness from 0.2 cm to 0.8 cm, with the majority of the sherds not more than 0.6 cm in thickness. The hardness is seldom more than 4 (fluorite) and is more commonly 3 (calcite). The exteriors of the sherds have cord marks which appear to have been applied haphazardly so that a criss-cross pattern has often resulted. The shoulder is well defined and the rim is generally collared.

Pottery from the Woodland horizon (Plate XIX-1), which generally underlay the Upper Republican material, consisted of 272 sherds. Sixteen of these were rim sherds while 256 were body sherds. The rim profiles of eight of the sherds were slightly flaring, four were nearly vertical, while four were slightly constricted. The lip form of fourteen of the rim sherds was flattened while two were rounding. Nine sherds were decorated on the rim or lip. Decorations on the rim consisted of horizontal rows of embossed nodes punched from the interior, and horizontal rows of punctates which were punched from the exterior. The lip surface on three of the rim sherds had been impressed with what may have been a cord-wrapped stick. There

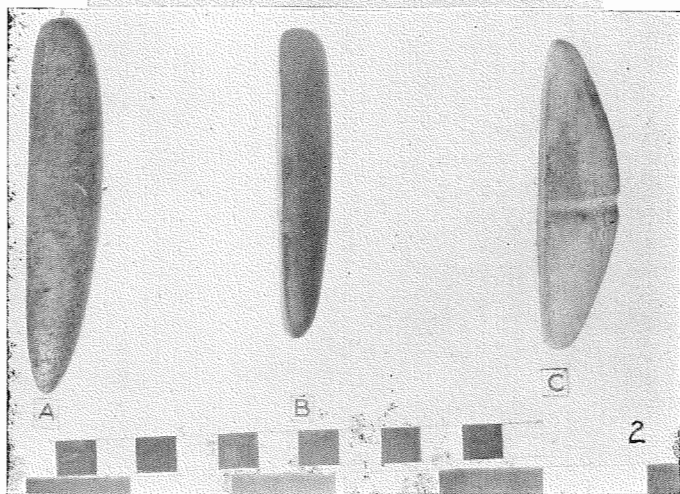
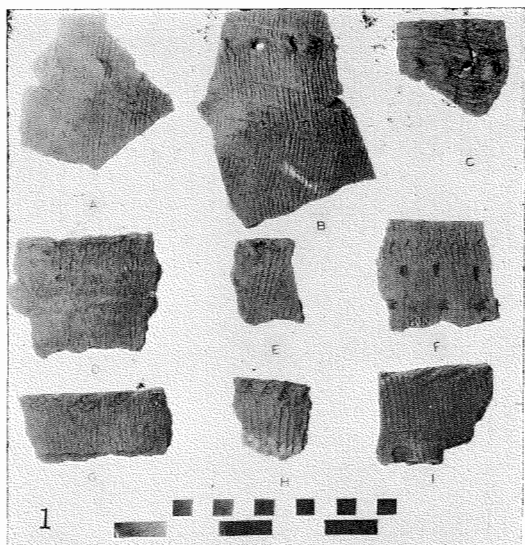


PLATE XIX — 1. Sondergaard site. Rim sherds.
 2. A — boatstone, Sondergaard site. B — boatstone, Weeping Water creek. C — boatstone from Whalen site.
 Centimeter and inch scales.

was some tendency for the vertical rims to be undecorated. All showed some form of cord marking. Seven of the rim sherds have fine parallel cord marks which were nearly vertical, while the remainder have cord marks which are irregular and often cross one another.

The body sherds may be divided into two groups on the basis of body treatment. The larger group, including 248 body sherds, appear to have been treated with a cord-wrapped paddle, but the angle at which the paddle was applied is not determinable because of the small size of the sherds. However, the cord marks on the greater number of the sherds are parallel and fine. Group Number 2 consists of eight sherds which show no cord marks and are smooth.

The ware varies in hardness from 2 (gypsum) to less than 5 (apatite), with the majority around 3.5 in hardness. The thickness of the sherds varies from 0.3 cm to 1.1 cm, with the majority of the sherds around 0.8 cm in thickness. Tempering materials consist of sand and gravel ranging from fine sand to pebbles 5 mm in diameter. The texture of the sherds varies from medium to coarse, with a tendency for the sherds to be rather coarse and to crumble readily. The color ranges from brown to black with a definite tendency toward the darker shades. The interior of the sherds is often coated with charred organic materials.

Objects of chipped stone from the site are rare and consist only of two small end scrapers. One of these measures 1.5 by 1.15 cm and is nearly circular in outline, while the other measures 2.8 by 1.6 cm and is more the typical elongated type. The chipping is coarse and the scrapers are rather crudely made.

Although no polished stone artifacts were excavated at the site, an unusual polished object has been found on the surface (Plate XIX-2, A), and was made available so that it could be described and photographed. It is made of a green stone with a hardness of about 5 (apatite), and is roughly boat-shaped. It measures 9.2 cm in length and tapers at each end, with the greatest thickness of 1.5 cm near the central portion. One side is rounding while the other is flat and slightly concave. There is no groove or perforation that might be used for attachment. The implement is very similar to the object found at the Nicholas Whalen site (Plate XIX-2, C) in Sherman County, which was called a boat-stone. Its use is unknown. An object that is similar in shape, but made from what appears to be a fine red sandstone (Plate XIX-2, B), was found several years ago in Weeping Water Creek in Cass County, Nebraska.¹⁷ This stone is shaped very much like the one found on the Sondergaard site and does not have any groove or perforation. From the present evidence it seems that these objects occur but rarely and will probably be associated with some variant of Woodland culture. They are very

¹⁷ Kunkel, L. N., Collection, 1940.

similar to those objects generally called "boat-stones" in the eastern United States. A similar object has been described from the Gooden component of the Maple Mills focus of the Woodland pattern.¹⁸ Whether their use was ceremonial or utilitarian is unknown.

In conclusion, the Sondergaard site evidently represents materials of two distinct types. The deeper materials appear to be the remains of a Woodland occupational level. The pottery is very closely related to the pottery from the Vy-1 site in Valley County. Lack of information in regard to the other materials prevents any detailed comparisons.

Overlying the Woodland materials were a few scattered sherds of pottery and flint chips which are quite different from the Woodland materials below. On the basis of these few pottery sherds the less deeply buried material can be tentatively classified as ware of the Upper Republican aspect.

Sherman County Site

Number 13 on the map is a site located on the top of a steep hill (Plate XXI-1) in the northeast corner of Sherman County on the south bank of Davis Creek. The land is owned by Mr. Nicholas Whalen, who kindly gave the survey permission to excavate. The remains were found during the 1939 field season while searching for burials of an Upper Republican village which occurred on a terrace east of the hill. The site was the second in Sherman County to be investigated, hence was designated Sm-2. The remains consisted of a small circular pit approximately 2 feet in diameter and 3 feet in depth. The pit was filled with very black soil mixed with animal bones, mussel shells, flint chips, lumps of burnt earth 4 to 8 cm in diameter, burnt stones, pottery sherds, and scattered human bones. The bones were those of an infant and well scattered throughout the pit. None showed any evidence of having been burned. The walls of the pit showed some evidence of burning, but were not baked hard and did not appear to have been intentionally prepared by firing. Small fragments of charred wood occurred throughout the pit without any definite concentrations.

A polished stone object (Plate XX-2, F), which appears to be a boat-stone, came from a depth of 16 inches near the center of the pit. The stone terminates in a rounding point at either end and with the greatest width near the center, where shallow grooves partly encircle that half of the face which is convex. The other portion of the face tends to be slightly concave and has no evidence of a groove. The length of the object is 7.5 cm, while the greatest width, (near the

¹⁸ Cole, F. C., and Deuel, T., 1937, pp. 195-198.

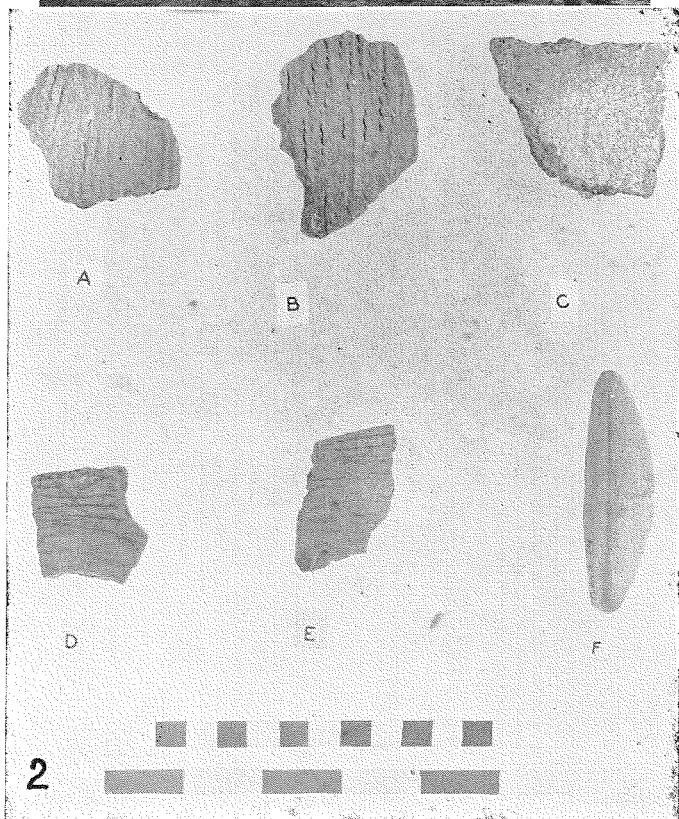


PLATE XX — 1. Whalen site, Sherman county.
 2. Whalen site. A-C—cord-roughened body sherds.
 D, E—Rim sherds.
 F—Boatstone.
 Centimeter and inch scales.

center) is 2.2 cm. The stone is banded shale which varies from light brown to gray in color. The material is soft and does not have a high polish. This object is unique in type, inasmuch as no similar piece appears to have been previously reported from this area. This may be partly accounted for by the lack of work which has been done in Woodland-like burials or villages in the Central Plains area.

The pottery remains (Plate XX-2, A-E) from the pit consist of 98 sherds (90 body sherds, 8 rim sherds). These were scattered throughout the pit, although the majority of them occurred in the six inches of mixture immediately above the floor.

On the basis of profile the rim sherds may be divided into two general groups. The first group includes rims which are slightly flaring. Seven specimens will fall into this group. In it is represented only one general type of body treatment. Four of the sherds have cord marks which appear to have been applied by a paddle diagonally to the lip of the rim, so that the cord marks extend in fine lines from left to right over the body of the vessel. The width of the cord marks varies from 1 mm to 2 mm. Five of the sherds have a flat lip while two have a rounding lip. The tempering is plentiful and consists of sand and pebbles up to 3 mm in diameter. The interior is smooth with the exception of some finger impressions. The ware varies in color from light brown to dark gray, with a majority of the sherds dark in color.

One of the rim sherds has decorations on the lip which appear to have been applied with a cord-wrapped stick imprinted at right angle to the lip. Another has a small tab extending outward from the lip for a distance of 0.6 cm. The sherds vary in hardness from 2 (gypsum) to less than 4 (fluorite).

The second group has a slightly constricted rim. Only one sherd is of this type. The lip is flat and the tempering is grit. The exterior of the rim has at least five parallel lines of trailing which apparently extended horizontally around the vessel. The sherd has a black interior, while the exterior is brown. There is a slight polish on the exterior. Hardness is around 4 (fluorite).

The body sherds all show some form of cording on the exterior but are too small to determine the angle at which the cord marks were applied. On the basis of tempering materials the body sherds may be divided into two types. Type Number 1 has a tempering of sand and pebbles ranging from very fine to pebbles 3 mm in diameter. The color is dark. Thickness varies from 2 mm to 1.2 cm. The majority of the sherds are around 7 mm in thickness. These sherds are medium-textured with a hardness of 4 (fluorite).

The second type of body sherds has a tempering of crushed calcite and bits of hematite. The tempering has been leached from the exterior of many, leaving small cells. Fifteen of the ninety body

sherds were of this type. The color is usually light gray on the exterior and very black on the interior. The hardness is slightly less than 3 (calcite). The cord marks on the sherds have been nearly obliterated in several cases, apparently by smoothing while the vessel was still soft. The sherds vary in thickness from 1.5 cm to 1.9 cm.

Although a few flint chips occurred there were no chipped stone artifacts. Various bits of burnt stone were scattered throughout the pit, but none showed any evidence of having been worked.

The pottery remains from the Sm-2 site do not differ greatly from the pottery at the Vy-1 site. However, there were no sherds at Vy-1 which were tempered with calcite and hematite. The small number of rim sherds from the Sm-2 site prevents any detailed comparison with other sites. However, from all available materials, it is apparent that the Sm-2 site is closely related to other Woodland materials in the Central Plains area. Whether the scattered human bones represent a definite burial, or the remains of some other type of ceremony involving the remains of the dead, cannot be determined definitely. The mixture of human bones and animal bones makes the site rather difficult to interpret. A somewhat similar situation was found at the Bakenhus site and has been reported from other sites. Usually there are only scattered fragments of human bone mixed with other cultural materials in a pit or basin which is much larger than would be needed to accommodate the scanty remains. As yet, there has been no satisfactory solution to the problem.

Other Sites

Number 14 on the map is concerned with a large broken jar (Plate XXI-1) from Red Cloud 3, House 2, in the Republican Valley. Wedel has described this vessel in some detail under the heading "Intrusive Wares."¹⁹ To quote from his report: "Special mention should be made of a large broken jar from Red Cloud 3, House 2. Though scattered freely over the floor, the fragments were readily recognized as not of local type. The size and shape of the vessel, not yet restored, were calculated as accurately as possible in the field. It was evidently a full-bodied jar with conoid bottom. The mouth was approximately 12 inches across. The maximum diameter, 6 inches below the mouth, was 13.5 inches. The lip turns outward very slightly, is roundish, and has no decorations. Walls vary in thickness from .25 to .75 inch, the bottom being heaviest. The paste is gray, tempered with coarse grit which shows on the interior surface. The exterior shows coarse cord impressions, vertically placed."

Two other restored vessels are also described by Wedel in the same report. One of these (Plate XXI-2) is from a drainage ditch

¹⁹ Wedel, W. R., 1935, pp. 188-190.



PLATE XXI—1. Restored vessel from Red Cloud, House 2, Republican Valley.
 2. Restored vessel from near Preston, Nebraska.
 Inch scale.

about two miles from Preston, Nebraska, near the Nemaha River. This site is represented by Number 1 on the map. There is very little information as to the manner of occurrence. The vessel has a height of 46.4 cm with an orifice of 28.3 cm, a neck diameter of 27.3 cm, and a body diameter of 38.8 cm. The greatest diameter is approximately one-third of the way down on the vessel. The tempering varies from fine sand to gravel. The exterior of the vessel has been treated with fine parallel cord marks which have been applied vertically. The base, which is conoidal, has cord marks which are criss-crossed.

The second vessel (Plate XXII-1) mentioned by Wedel is from southeastern Nebraska, but its exact provenience is doubtful. This site is Number 2 on the map. The vessel has a height of 47.8 cm, an orifice diameter of 29.6 cm, with the greatest body diameter of 37.5 cm. The greatest diameter occurs approximately one-fourth of the way down on the vessel. The tempering is also sand and gravel, and vertical cord marks which are present on the exterior of the vessel terminate near the conoidal base, where they become more irregular and often cross one another. The rim profile is slightly flaring and

the lip form is flat. There is no decoration on either of the vessels. Both vessels are rather hard, being about 4 (fluorite). These vessels are not greatly different from the vessels from the Vy-1 site except for lack of decorations. It is reported that both vessels were deeply buried. Whether they indicated a village level has not been determined.

Another large restored vessel (Plate XX-2) in the collections of the Nebraska State Historical Society was restored and presented to the Society February 17, 1935, by Mr. L. C. Kuster of Tecumseh, Nebraska. The location where this vessel was found is represented by Number 5 on the map. The vessel was recovered one mile west and one-half mile south of Cook, Johnson County, Nebraska, in a drainage ditch near the junction of Coon Creek with the Little Nemaha River. The pottery sherds were 11 feet underground and were broken into 58 pieces. Mr. Kuster has reported a small knoll approximately $\frac{1}{4}$ mile south of this location on which are found flint chips and pottery of this same type. It is possible that the village is located on this knoll and the vessel in the museum represents washed or scattered material from the site.

The restored vessel has a height of 45.8 cm with a body diameter of 37.2 cm. The greatest diameter occurs near the central portion of the vessel. The base is conoidal in shape and the shoulder is rather well defined, with a neck diameter of 29.6 cm. The rim flares outward rather sharply from a definite junction at the neck. The lip is rounded and narrowed. The interior and exterior are smooth, with no evidence of any cord-roughening. A series of elongated punctates encircles the vessel at the neck. The punctates are approximately 1 cm apart and appear to have been made with a blunt instrument.

This vessel is somewhat different from those at Vy-1, the principal resemblance being in the conoidal base and the elongated walls. In general this vessel more closely resembles those found by Strong at the Walker Gilmore site south of Plattsmouth, at a depth of 16 feet.

Ash Hollow Cave

Site 15 is located in the southeastern part of Garden County, Nebraska, about $3\frac{1}{2}$ miles southeast of Lewellen. The material was found in a cave (Plate XXIII-2) in the east wall of Ash Hollow canyon. Members of the Nebraska Historical Society archeological party excavated the cave during the field season of 1939. Four definite occupational levels were found (Plate XXIII-1), with each of the upper three bearing pottery of distinct types. For the purposes of this paper we are concerned only with Level 3.

Pottery from this horizon consists of 71 sherds, four of which are rims while 67 are body sherds. The rim sherds are small and

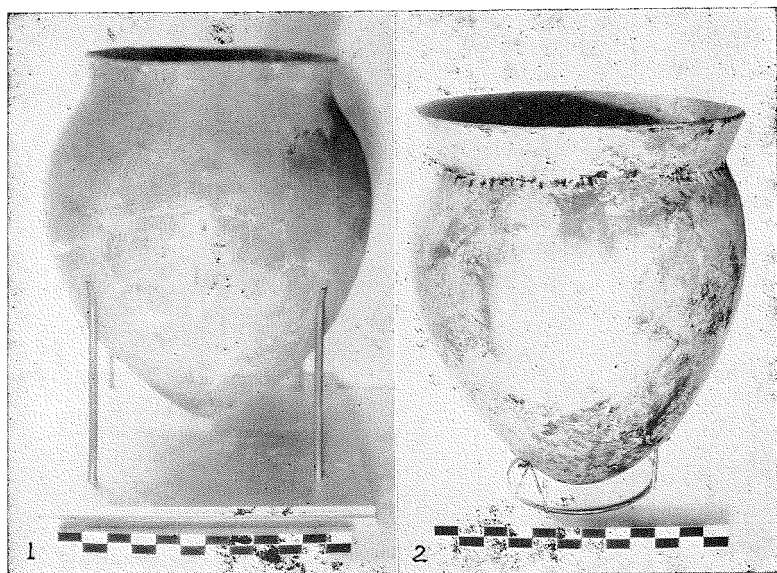


PLATE XXII—1. Restored vessel from east of Falls City, Nebraska.
 2. Restored vessel from drainage ditch south-west of Cook, Nebraska. Inch scale.

little of the vessel shape can be determined. However, the largest has a rim profile which is slightly constricted with a flattened lip. The shoulder is poorly defined with the lip thickened slightly on the interior, so that a narrow inner band is formed. The exterior has diagonal cord marks. On the exterior of two of the rim sherds are cord marks which run vertically. The cord marks tend to be thick and deep. One small rim sherd has a smooth surface finish in contrast to the prevailing cord-marked ware. The lip form is flattened and the exterior edge has been lightly impressed with what appears to have been a smooth stick or rod. One of the rim sherds has a rounding lip and deeply impressed horizontal cord marks. In color the rim and body sherds range from gray to black on the exterior, with the interior often quite light in color. The ware is quite thick, ranging up to 1.27 cm. The majority of the sherds have a hardness which would fall between 3 (calcite) and 4 (fluorite). Fine sand is the principal tempering material, although a small amount of finely crushed shell was noted. The paste is generally compact and fine. The sherds are not heavily tempered and the aplastic is evenly distributed. The ware is medium-textured and is flaky in structure.

Forty-six projectile points were classified from this level. The points range in length from 2.5 cm to 3.84 cm. They are rather

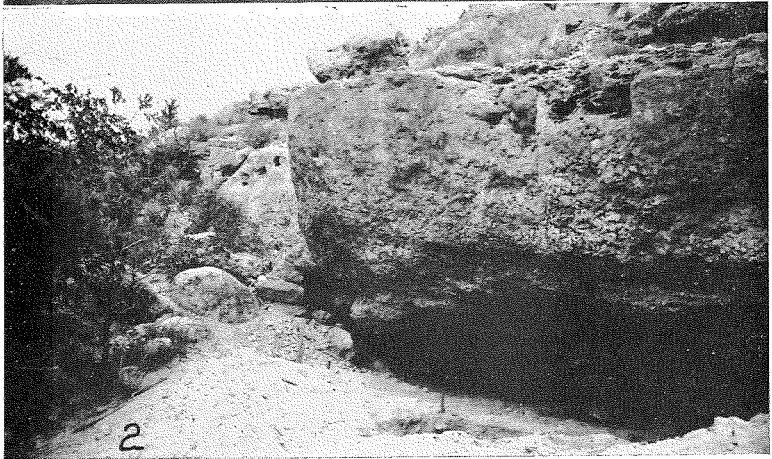
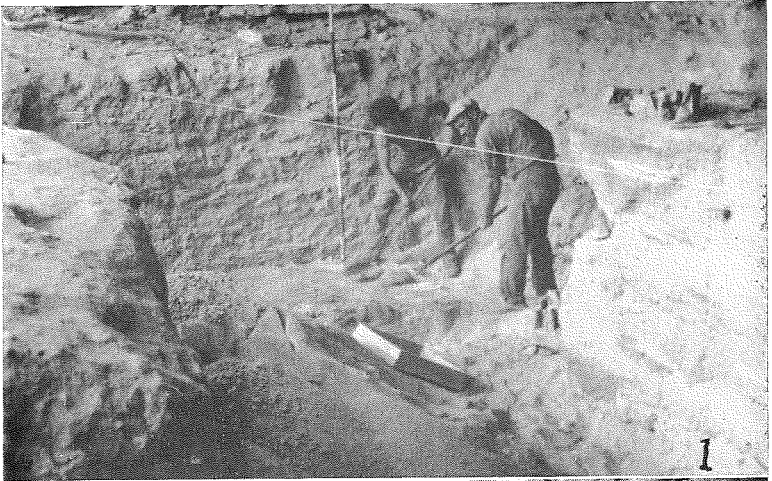


PLATE XXIII — 1. Excavating Ash Hollow Cave.
2. Entrance to Ash Hollow Cave.

crudely chipped, although there are some with fine flaking. The majority appear to have been triangular in shape with side notches. Stemmed points are second in number in proportion to the total.

End scrapers were of the usual Central Plains planoconvex type and were fairly common. Triangular-shaped knives with rounding bases were also quite common but were not large in size.

Bone implements were uncommon. They included an awl, tubular beads, tubes, and various other polished pieces for which the original use is not known.

The material from the third level at the Ash Hollow cave appears to be some variant of the Woodland culture. The ware is usually of a finer texture and less coarsely tempered than the usual Woodland material in the area. The two predominant types of points agree fairly closely with the types from Vy-1. The general appearance of the ware is also quite similar to that from Vy-1. However, until a more intensive study is made of the Ash Hollow material few comparisons can be attempted. It is extremely interesting to note that here, as elsewhere in the Central Plains area, the Woodland horizon appears to be the lowest pottery-bearing level represented.²⁰

Connover Sites

Sites 16, 17, 18, 19, 20, and 21 were reported by Mr. V. C. Connover of North Platte, Nebraska.²¹ Mr. Connover has located these sites and donated materials collected on the surface at each. He has described Site 16 as being located about five miles west of North Platte, Nebraska, on the bank of an old watercourse. Woodland-like pottery occurs here on the surface along with another ware of entirely different type. The site is located in the flat valley country between the North and South forks of the Platte River. Possibly it represents more than one occupational level. However, until a more detailed investigation is made it can only be concluded that among the remains there appear to be some which may be affiliated with one of the Woodland complexes of the area.

Site 17 is located in western Hooker County, Nebraska. It is known as the Carr Lake site. Village materials extend for at least a mile along the lake shore. The lake has been the principal source of water between the Middle Loup River and the lakes of Arthur and McPherson counties. An abundance of pottery sherds have been found here, and some have been of the thick, coarsely tempered, cord-marked sherds which have been classified as Woodland-like materials.

Site 18 is located in western Brown County, Nebraska, on Moon Lake at the source of the Calamus River. There are indications of

²⁰ Additional information on the site will be presented in a manuscript by John L. Champe.

²¹ Letter of December 6, 1940.

several sites along the shores of the lake. A predominant amount of the pottery appears to be of the Woodland-like type.²²

Site 19 is in western Holt County, southwest of the town of Atkinson, in a well-protected valley north of Holt Creek. A restorable vessel 10 to 12 inches in diameter and 15 inches in height has been found at this site. The pottery (Plate XXIV-1) appears to be of the coarsely cord-roughened Woodland type.

Site 20 is located in Cherry County at the eastern most extremity of the Twin Lakes. East Twin Lake is now dry and has been so for several years. The pottery and other artifacts, for the most part, appear to be showing up below the old lake bed of recent years. The height of water in the lakes varies from year to year, so that an old camp site occupied during a low stage might become covered by rising waters in a comparatively short time.

Site 21 is east of the Twin Lake site on the north bank of the Loup River. There is some indication that the site may extend to the south bank of the river. Materials, which are not plentiful, seem to be of the thick, heavily cord-roughened Woodland type.

The majority of the sites reported by Mr. Conover are in the Sandhill area of Nebraska. It has been thought that the area was inhabited, as in historic times, by roving bands of non-pottery making peoples. Recent investigations in the area have shown that pottery-bearing sites are found on virtually every lake and stream of any consequence in the area. It is not yet clear whether these were merely temporary hunting or gathering camps, or whether horticulture may have been practised occasionally. In many cases the movement of the sandy soil has left only the heavier materials on the soil below the original site. Additional work should be done in the area to determine the actual extent of such remains.

Dad's Lake Site

Site 22 is located in east central Cherry County, on the southeast shore of Dad's Lake. Dad's Lake (Plate XXV-1) is one of the larger bodies of water in the Sandhills area, extending for more than a mile from east to west. Today, the lake and surrounding area serve as a refuge for wild life. The area was doubtless an excellent hunting ground during an earlier period. Flint chips and pottery sherds are found quite commonly along the margins of the lake, especially along the southern and eastern shores.

A surface survey of the area revealed pottery of several distinct types. The sand shifts almost daily (Plate XXV-2), so that materials are constantly being exposed and covered again. A concentra-

²² Pottery from this locality is in the collection of the Laboratory for Anthropology, University of Nebraska.

tion of materials was found on the southeast shore of the lake in an area which appeared to have been under water a short time before. This material occurred on the surface and tests in the wet sand below

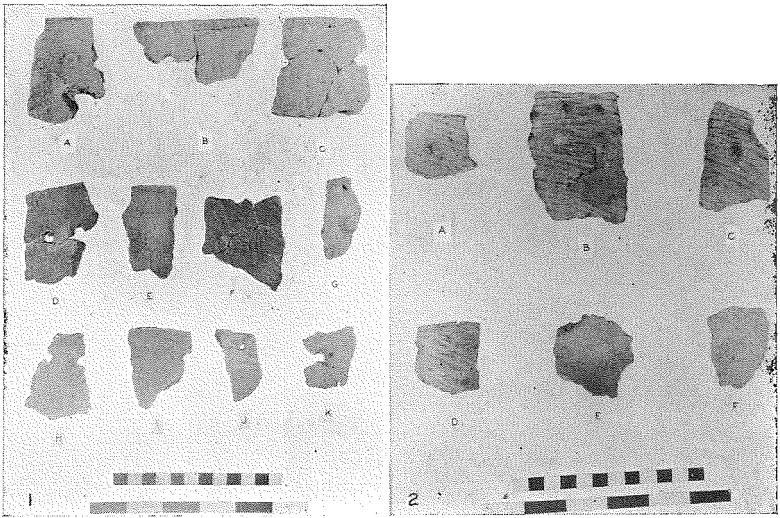


PLATE XXIV—1. Site 19, Atkinson, Nebraska. Rim and body sherds.
2. Dad's Lake site. Cherry county. Rim and body sherds.

gave only negative evidence. It is possible that the remains may have been on higher ground and reached their present position as the result of erosion.

Pottery (Plate XXIV-2), which made up the bulk of the materials in this immediate area, consists of 55 sherds (50 body sherds, 5 rim sherds). The exteriors of the sherds are often pitted, possibly through sand-blasting at times of high wind. The ware is very homogeneous in appearance and all the fragments may have come from a single vessel. The sherds are thickly tempered with fine sand which often penetrates the surface. The ware tends to be around 4 (fluorite) in hardness and crumbles readily. The thickness of the body sherds varies from 0.4 cm to 1.6 cm with the majority about 0.9 cm. The color varies from light brown to dark gray, most of the sherds being brown. Cord marks which are found on the exterior of all fragments have been applied diagonally to the vessel. The cord marks vary in width from 2 mm to 4 mm.

The five rim sherds, which appear to be from a single vessel, have a slightly constricted rim profile. The lip is rounding. Decorations consist of a double horizontal row of embossed nodes on the rim

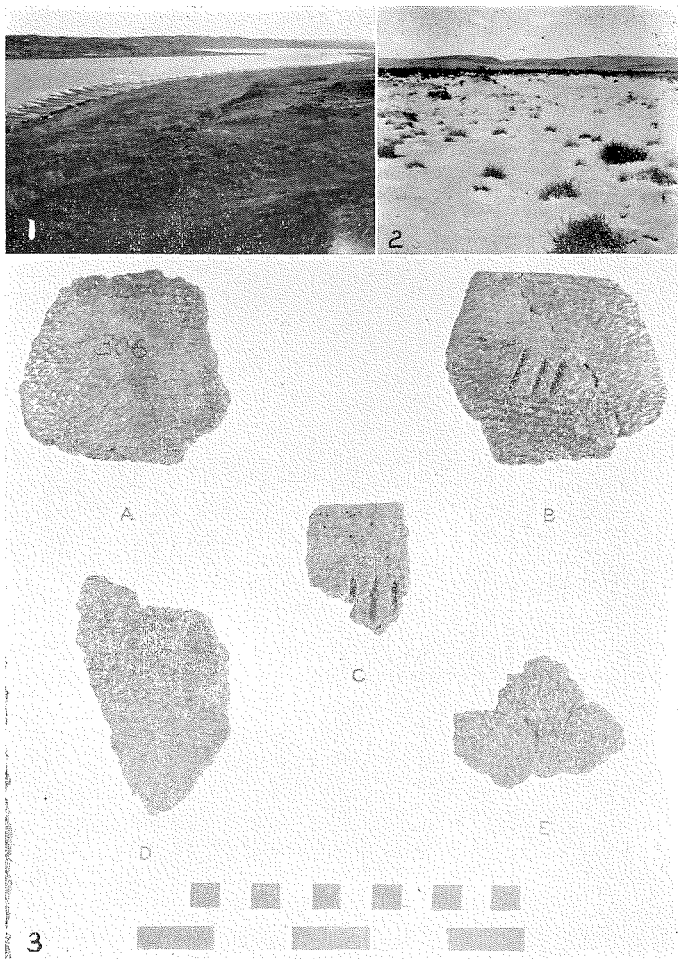


PLATE XXV — 1. Dad's Lake, Cherry county.
 2. Shifting sand, Dad's Lake.
 3. Naper site, rim and body sherds. Centimeter and
 inch scales.

exterior. Broad shallow impressions which may be finger marks are especially noticeable on the interiors of the rim sherds.

Although flint chips and stones were plentiful in the immediate vicinity, no stone artifacts were found. Any bone implements which may have been present at one time would soon be destroyed by the action of sand, wind and sun.

While no definite village site was located, it seems unlikely that the relative abundance of pottery in the area would be due solely to the former presence of hunting camps. The ware appears to be of the usual heavily corded thick ware which may be termed Woodland in type. The tempering, however, is much finer and gives the pottery a medium texture. The ware is of the same general type as that from Vy-1.

Naper Site

Site 23 is located 3 miles southeast of Naper, Nebraska, in Boyd County. The material was found in association with a burial, but the method of interment is not given. The remains were sent into the museum by Dr. C. F. Zimmerman of Naper in 1929. Unfortunately there is very little information in regard to it, hence it is impossible to reach any definite conclusion.

The pottery (Plate XXV-3), which consists of 8 sherds (6 body sherds, 2 rim sherds), is interesting. The sherds are all of one type and may be from a single vessel. The exterior has parallel cord marks which appear to have been applied diagonally to the vessel. The impressions vary from 2 to 3 mm in width. The tempering material is coarse and consists of fine sand and pebbles up to 5 mm in diameter. The ware has a hardness of nearly 4 (fluorite) and tends to be granular in structure. The interior of the sherds shows several shallow grooves, as though a blunt instrument might have been used to shape the vessel. The color is most commonly dark brown on the exterior and black on the interior. Sherds vary in thickness from 0.5 to 1.0 cm. The two rim pieces in the collection show a slightly flaring profile with a flat lip. Decorations on the rim consist of groups of three elongated punctates vertically placed. The decorations have cut through the diagonal cord marks and were apparently made after the cord marks. There is not a sufficient amount of the vessel to determine its original shape.

Few conclusions can be made on the limited amount of material available. However, the pottery seems to be of the thick, coarsely tempered type which is generally classified as a Woodland type. The ware is quite similar to much of the pottery from the Vy-1 site.

Ough Site

Site 24, known as the Lloyd Ough site, is located in southeastern Chase County, one mile east of Wauneta. The material is found in the south bank of the Frenchman River (Plate XXVI-1) in a ten-inch dark soil horizon which is approximately 40 inches below the surface of the ground. The ten-inch horizon contained flecks of charcoal, small lumps of burnt earth, ash, flint chips, animal bones, stones, and pottery sherds. The dark stratum is exposed in a horizontal line along the bank of the river for a distance of approximately 100 yards.²³

Pottery sherds number 45, of which two are rim pieces. All have cord marks (Plate XXVI-2, A, D) on the exterior which appear to have been applied with a cord-wrapped paddle. On several sherds the marks are parallel while on others a criss-cross effect has resulted. The sherds are coarsely tempered with sand; a single fragment has bits of shell, calcined bone, and sand. All tend to crumble readily. The hardness varies from 2 (gypsum) to 4 (fluorite), with the majority of the sherds slightly more than 3 (calcite). Thickness in most cases exceeds 9 mm.

The two rim sherds have a nearly vertical rim profile with a flattened lip form. The exteriors have vertical cord marks. The ware is nearly black in color and tends to be thick and coarsely tempered, so that it crumbles readily. It appears to be of the same general type as that at Vy-1 but is not so well made.

Artifacts of bone (Plate XXVI-3) from the site consist of well made bone awls, polished tubular bone beads, a perforated deer leg bone which appears to have been used as an arrow-shaft "wrench," and several fragments which may have been used but are broken too badly to permit determination of their original purpose.

Chipped flint objects (Plate XXVI-2 E, H, G) include several oval to rectangular knives, and three small crudely flaked triangular points.

Shell artifacts are represented by only one fragment which is apparently a perforated disc bead. The only ground stone object is a crudely made abrading stone which is roughly rectangular in shape.

Animal bones, which were quite common, appear to be mainly bison, although turtle and bird bones were also present. It seems likely that the buried horizon at this site may represent an old village level used by people with a material culture which is probably some variant of the Woodland culture. However, this cannot be definitely determined until additional work is done at the site so that more materials may be secured for comparison.

²³ Field notes of George Metcalf and Walter Fox of Wauneta, Nebraska, 1935.

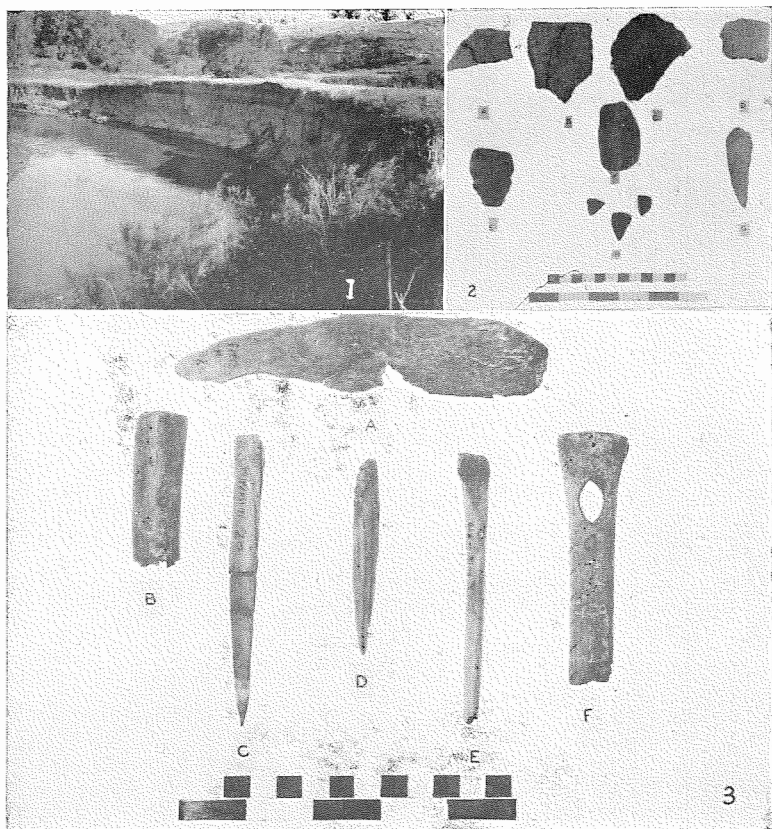


PLATE XXVI—1. Frenchman River showing dark horizon in bank where cultural materials occur. Ough site.
 2. Ough site materials. A-D—pottery sherds. E, G—chipped knives. F—abrading stone. H—projectile points.
 3. Ough site. A—bone tool. B—bone tube. C, D, E—bone awls. F—shaft wrench. Centimeter and inch scales.

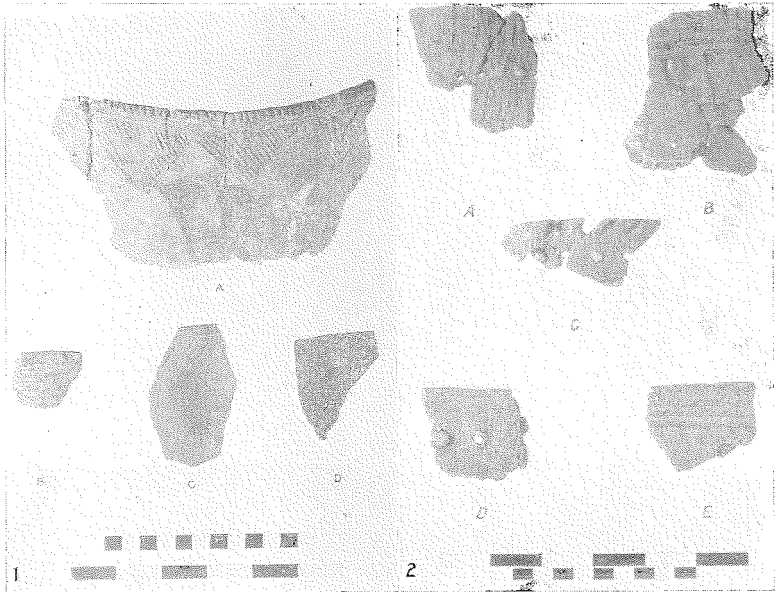


PLATE XXVII—1. Rim sherds, Eagle creek site, Holt county.
 2. Eagle creek site, Holt county. Centimeter and inch scales.

Additional Sites

Numbers 26 to 37 on Map 4 are various other locations throughout Nebraska where pottery tentatively classed as of Woodland type has been found. In the main, only surface surveys have been made at the various sites, and many appear to represent shallow surface sherd areas. Space in this paper does not permit a discussion of the materials. The location (and, in several instances, photographs of materials from several sites excavated by the University of Nebraska's archeological field party) were made available for this paper. Various collectors throughout Nebraska also supplied Woodland-like materials from their collections, which were photographed and the locations noted on the map. Until additional work is done at these sites no detailed discussion is possible.

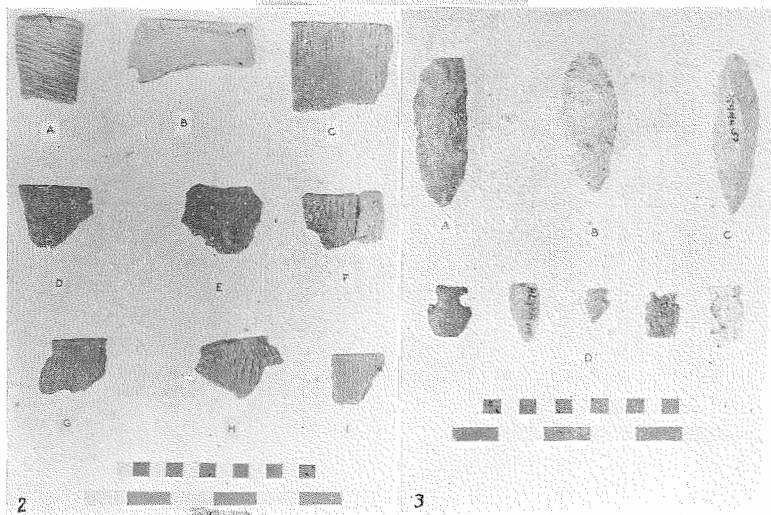
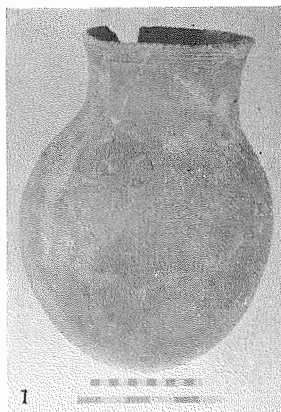


PLATE XXVIII

1. Restored vessel from Eagle Creek site. Holt county, Nebraska.
2. Woodland-like rim sherds found in association with Upper Republican materials. Howard county, Nebraska.
3. Flint work, Eagle Creek site. A, B, C—knives. D—projectile points. Centimeter and inch scales.

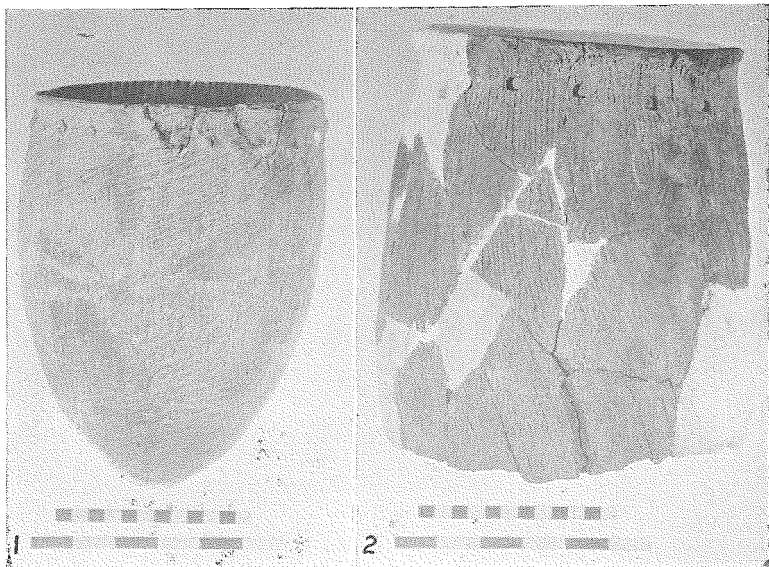


PLATE XXIX

1. Restored vessel from Wellenstien village site. Dixon county, Nebraska.
2. Restored portion of a vessel from Wellenstien village site. Dixon county, Nebraska. Centimeter and inch scales.

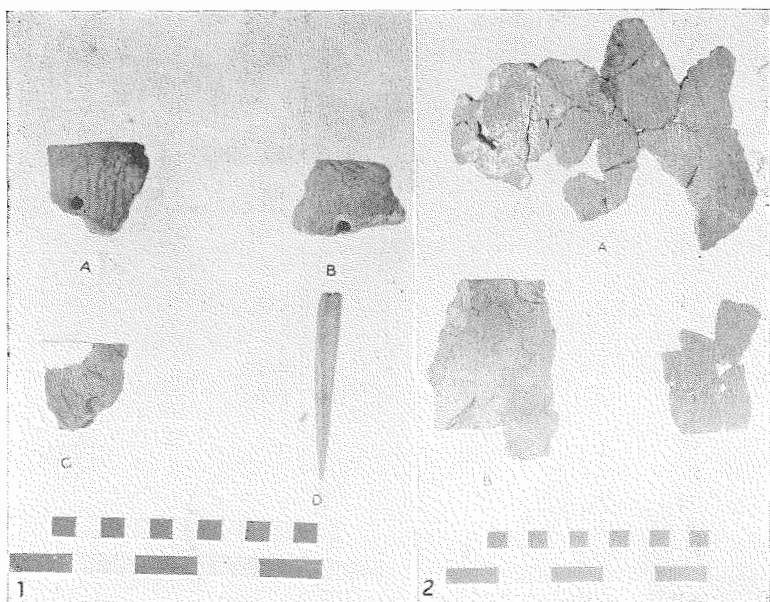


PLATE XXX

1. Wellens'tien village site. A, B, C—rim sherds. D—bone awls.
2. Wellens'tien village site. A, C—Body sherds. B—Rim sherds.

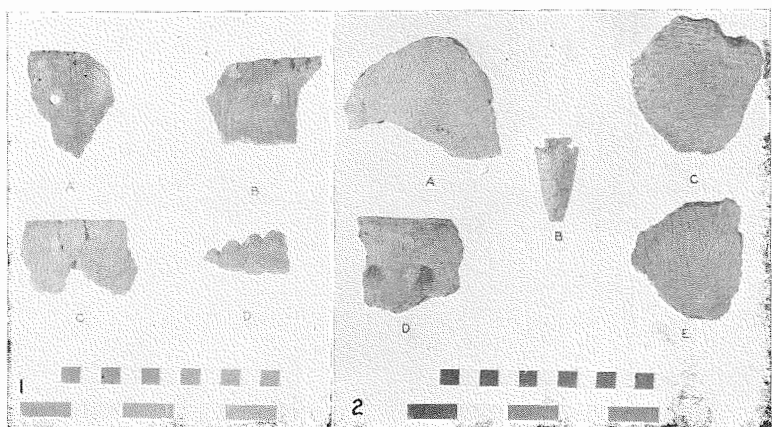


PLATE XXXI

1. Wellens'tien village site. A, B, C, D—Rim sherds.
2. Wellens'tien natural mound. A, C, E—body sherds. D—rim sherds. B—projectile point.

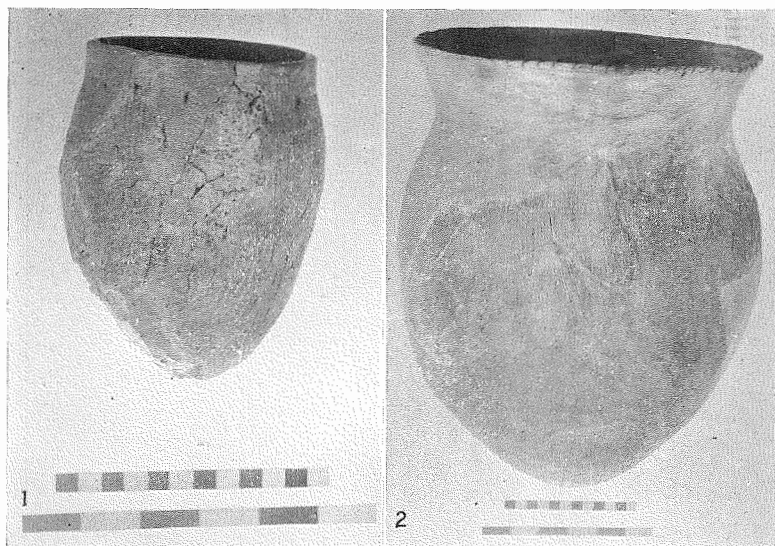


PLATE XXXII

1. Restored vessel from Enders site, Dixon county, Nebraska.
2. Restored vessel, Larson site, Knox county, Nebraska.

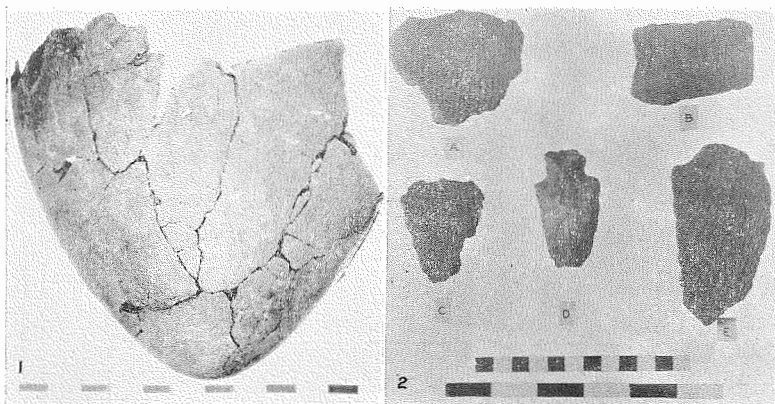


PLATE XXXIII

1. Restored conoidal base from a hill top near Clarks, Polk county, Nebraska.
2. Surface material from a site near Moon Lake, Brown county, Nebraska. A, B, C, E—body sherds. D—projectile point.

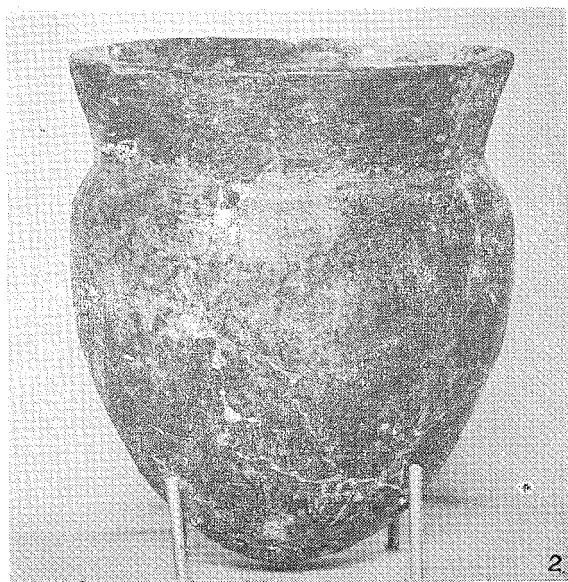
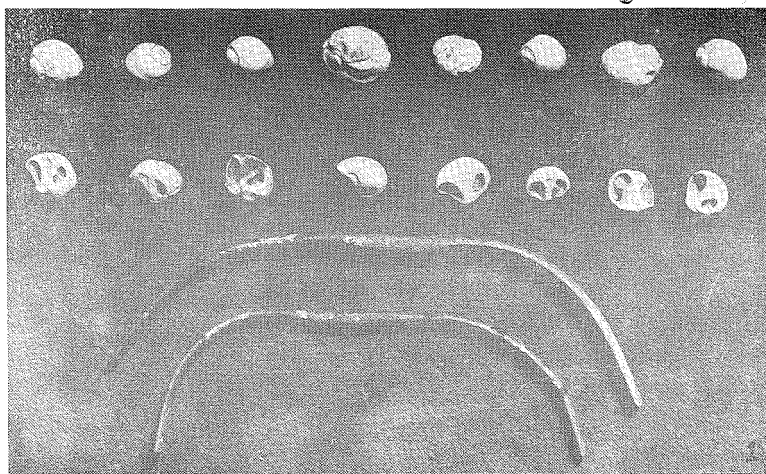


PLATE XXXIV

1. Shell beads and bone armlets, Burial 1. Whitten site, Nemaha county, Nebraska.
2. Pot found with Skeletons 8 and 16, Burial 1, Whitten site. Restored height, $4\frac{3}{8}$ inches; greatest diameter, $3\frac{7}{8}$ inches.

Discussion

It is hardly necessary to reiterate here that the scanty collections and other data from the several sites briefly described in the foregoing pages are inadequate to permit precise classification of each of the stations. At none has it been possible as yet to define the cultural complex clearly and fully, or to relate it with finality to other site complexes. Nevertheless, certain generalizations seem to emerge as we review the evidence.

In the first place, it seems that from the standpoint of pottery remains, Vy-1 (see first part of this bulletin) may be representative of a far more widely spread horizon than is the Walker Gilmore site in eastern Cass County, Nebraska. With few or no exceptions, the so-called Woodland sherds from stations west of the 97th Meridian in Nebraska are thick, coarsely gravel-tempered, have all-over cord roughening; and, perhaps, are from large vessels with pointed bases. Unthickened rims with punched bosses, less commonly with cord-wrapped stick impressions, are characteristic. Little is known concerning the associated artifact types, but projectile points seem to be of stemmed or notched forms usually heavier than those of other Nebraska pottery horizons.

East of the 97th Meridian, along and near the Missouri valley, smoothed wares become relatively more plentiful. At Walker Gilmore they occur to the near exclusion of cord-roughening. At the Leahy site, near Peru, smooth and cord-roughened sherds are about equally plentiful. The finely scalloped or "pic-crust" rim, typical of Walker Gilmore deep-site pottery, is rare to the west, but Wedel (1940, p. 305) reports identical specimens from Holt County, Missouri. It thus appears that, on present evidence, the Walker Gilmore complex may be considered typical of but a relatively small segment of the Nebraska Woodland remains.

Still another Woodland type is hinted at by certain smooth sherds from Weeping Water valley, which bear triangular or serrate patterns filled with single-cord impressions. Similar sherds are known from Iowa (Keyes, 1939, pp. 348-377); and Wilford (1941, pp. 246-247) reports the type from southern Minnesota. Pottery, which from tentative observations seems very similar to this type, has been excavated by the Laboratory for Anthropology, University of Nebraska, from a series of low mounds on Eagle Creek, Holt County, Nebraska. It is not yet clear whether the presence of these sherds in Nebraska indicates trade relations only, or is due to the existence of as yet undiscovered or unreported occupational areas representing a third Woodland variant in the state.

We have already indicated that Woodland remains appear to antedate all other known Nebraska pottery-bearing archeological hori-

zons. There is no direct evidence that the Woodland peoples (at any rate those who lived at Vy-1 and elsewhere west of the immediate Missouri Valley) practised agriculture. Inferentially, hunting and gathering must have been the chief if not, indeed, the sole means of subsistence. The erection of burial mounds and earthworks, attributed to Woodland groups east of the Missouri (McKern, 1937, p. 141), (Keyes, 1934, pp. 347-348), (Wilford, 1941, pp. 235-247), (Cole and Deuel, 1937, pp. 139, 204-206), (Mott, 1938, pp. 227-314), seems not to be characteristic of the Nebraska Woodland peoples.

The authors are not prepared to comment on the perennially vexing question of Woodland-Hopewellian relationships. The rocker-roughened body sherds and cross-hatched rims with punctates from the Leahy site may not have been originally associated with the cord-roughened and other apparently Woodland-like sherds also found in the fill. At the same time it may be observed that Wedel (1938, p. 101 and pl. 3, G) found cord-roughened sherds with punched bosses at the Renner site near Kansas City, Missouri, along with other and far more abundant rocker-roughened fragments of apparent Hopewellian affinities. We are in accord with his observations (*ibid.*, p. 105) that "the relationship between these small widely distributed sites with their single distinctive (cord-roughened embossed) pottery type, and such large and comparatively rich manifestations as the Renner site, is still obscure."

Concerning the relationships of the Woodland to later archaeological horizons in Nebraska, Wedel (1940, p. 346) has noted the possibility of direct influences on the later Upper Republican pottery tradition. Both Upper Republican and Woodland wares are grit-tempered and cord-roughened. Over much of Nebraska the range of the two types coincides. Generally speaking, the Woodland sherds can be distinguished by their greater thickness, coarser paste and temper, heavier cord-impressions, and by the unthickened embossed or cord-wrapped-stick-impressed rims. The large pointed-base Woodland jars also contrast sharply with the round-bottomed Upper Republican vessels. The exact manner in which the postulated influence of Woodland on Upper Republican pottery took place is still obscure.

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