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Leland R. Cooper
Hamline University

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A Preliminary Report on the Excavation of Two Late Middle Woodland Mounds in Northwestern Wisconsin¹

LELAND R. COOPER²

Hamline University

A preliminary report of the excavation of two mounds located in a group of 52 in Burnett County, Wisconsin. Analysis of the data demonstrates a close generic cultural relation to data gathered at Minnesota sites. Carbon 14 dates place the existence of this culture well within the chronological position of the Late Middle Woodland period.

Site

In the summer of 1961, while conducting site excavations and a field survey in northwestern Wisconsin, a village site and associated mounds were found in Burnett County, approximately 15 miles west of Spooner, close to where County Highway H crosses the Yellow River, in an area generally referred to as Benoit-Rice Lakes. The several sites of occupation are scattered over much of a peninsula that extends into Rice Lake on the

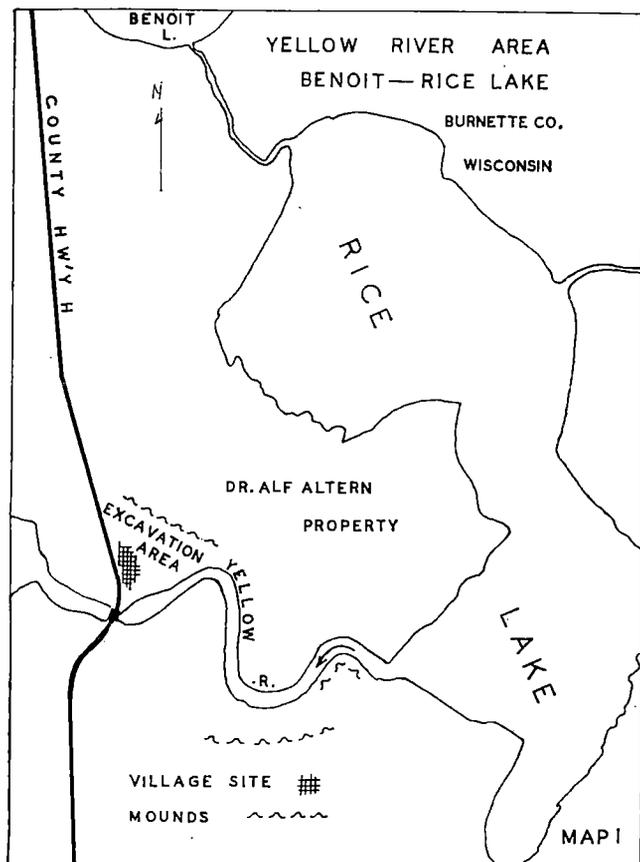
north and east sides and is bounded on the south and west by the Yellow River, a tributary of the St. Croix River. All of the occupation areas were located on the property of Dr. Alf Altern of Evanston, Illinois (Map 1).

During the months of August, September and part of October, 1961, 25 four-foot squares were excavated for stratigraphy in one area of the village site on a low terrace near the river and bordering the highway. On a high ridge back of the terrace was a series of burial mounds that followed the highest contour elevation and stretched for close to a quarter of a mile through dense jack pine and scrub oak woods. A total of 52 mounds were mapped by alidade and plane table. All but Mound 1 was of low elevation, varying in height from one foot to three feet. Thirty-nine were circular and ranged from 10 to 30 feet in diameter. Four were linear in shape and measured from 40 to 75 feet in length. Four others were ovoid in shape and four of the low mound type were elongated and problematical in form. The first of the latter category, Mound 3, (map 2) had a length of 372 feet and, with three exceptions, measured from 16 to 20 feet in width. The exceptions were a circular mound, 1.9 feet high conjoined with the main body at the west end, and a marked swelling some 90 feet distant along a straight line to the east. The elevation was 3.2 feet. The third was a much smaller expansion close to the east end of the mound. Between the last two enlargements the main body of the mound meandered in a line of three major waves in snake-like fashion.

Mound 4 is also long and low, measuring 470 feet in a straight line from tip to tip. For about half its length from the east end it is without curvature but from this point on it widens for some distance to approximately 30 feet and produces in effect a sweeping S curve to the western extremity where it again narrows to about 18 feet.

Mound 8, the third in the problematical series, makes a sweeping curve to its western end where it terminates in a circular structure. From one terminus to the other, measured in a straight line, it is 175 feet long. The main body has a consistent width of 20 feet with an average elevation of 20 inches, and the round mound on the western end, slightly higher in elevation, is 40 feet in diameter.

One earthwork remains to be described, Mound 1 (map 2). It lies on the eastern-most extremity of the



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²B. A. 1936, University of Wisconsin; M.A. 1947, University of Minnesota. In addition to conducting excavations in Wisconsin over a period of 35 years, the author directed the excavation of the Old Fort Crawford and the building of the Museum on the Villa Louis property at Prairie du Chien, Wisconsin. For the past 20 years he has taught Sociology and Anthropology at Hamline University in St. Paul, Minn.

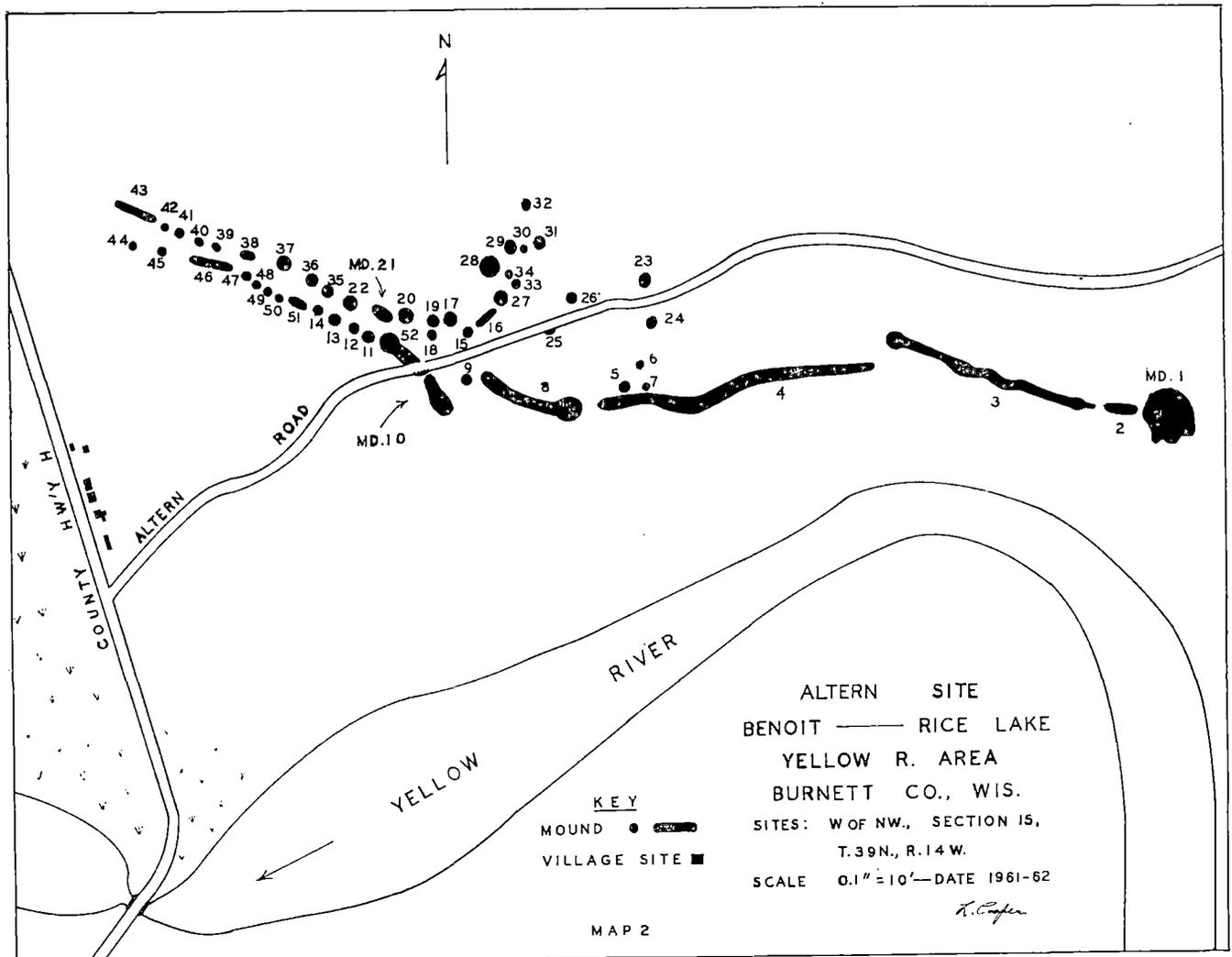
mound series and rises impressively in diameter and height so that it resembles a small hill. Its size and steep sides are reminiscent of other large mounds found throughout northwestern Wisconsin, two of which were excavated by McKern in Burnett County and from which he has established the Clam River Focus, a Late Woodland culture of the Wisconsin, St. Croix watershed region (McKern, 1963).

The mound averages 85 feet in base diameter and 13 feet in elevation at present sod level. Several irregular protuberances extend a short distance from the base as a result, perhaps, of erosion when the mound was first erected. However, only excavation can determine whether they were the result of natural forces or human intention.

Preliminary Excavations

Before describing and attacking the problems of Mound 10, the center of our interest, a brief report should be made of the excavation of Mound 21 (map 2) that was carried out late in the season of 1961. This mound was a low ovoid-shaped structure that measured 40 feet in its long axis and 20 feet in width. Excavation proceeded by digging first a trench 5 feet wide through the short axis of the mound and progressing in

a series of 2.5 feet steps with vertical profiles mapped at the end of each stage. This excavation indicated that the floor of the mound had been cleared of humus to its boundary by its builders as a first step in construction. Approximately six feet from the mound's western border, on its short axis, a very hard matrix of sand and clay was encountered. After removing the overburden of the mound fill, a lens of this material, eight inches thick at the center, was noted to cover the whole central area of the mound with borders concentric to the outer boundaries of the earthwork. In the process of exposing this sand and clay mass, an intrusion into it was noted approximately two feet to the northeast of the mound center. Apparently, the lens of clay and sand was laid down before the pit was formed. The pit was slightly ovoid and basin-shaped, measuring close to four feet in diameter at the rim and eight inches in depth. at the center. This basin contained about four inches of dark, sandy material with a slightly reddish cast. Flecks of charcoal were observed in it. Somewhat off center and to the west side of the pit, a deposit of human bone, in small fragments, was found covered over with a mass of clam shells, numbers of which indicated that the valves had been closed when the deposit was made. A few frag-



ments of fired rock, four small body sherds of a vessel and a beaver incisor were intermixed. The general mound fill composed the covering of these remains.

How extensive the original deposit may have been in Mound 21 is impossible to determine; however, it is probable that it was larger. In this area of acidic soils and rapid seepage the deterioration of bone and other organic materials is accelerated, especially if they lie in poorly drained situations. From the deposition of the human bone fragments it may be assumed that the burial was one in which disarticulation had occurred previous to the interment. Identifiable bones were a fair sized fragment of the upper border of an iliac, and a piece of the cranium showing the sutures; others were too small to determine skeletal origin. The enamel surface of a beaver incisor in the matrix suggests an offering of some kind as does the presence of the quantities of clam shells and fragments of pottery. One of the latter appears from the curvature to come from the area of rim-body conjunction. A second sherd comes from lower on the body of the vessel and shows well-smoothed over cord impressions. Both are of medium thickness and medium grit-tempered. The remaining few are too small to interpret.

In general, this interment was made in a shallow pit in a prepared matrix of sand and clay placed on a cleared floor area, before a low ovoid mound was erected over it. The burial consisted of a few disarticulated human bones with associated objects related to food and its preparation plus the beaver incisor whose function remains undetermined.

In 1935, McKern not only explored the large multi-layered burial mound at Clam Lake but excavated at least one of a series of long, low lineal mounds on the same site. There has been no report on this mound as yet but the writer recalls clearly having viewed its opening at the time. As remembered, a rather deep pit was found in a section of the mound in which all that remained was a single whole vessel resting in an upright position. The vessel appeared to have a very different form from any that was recovered from the Clam River Focus mound on the site. It was medium-sized, conoidal based with rather straight upward sloping walls, an unpronounced shoulder area and an almost vertical rim. My recollection is that McKern remarked at the time that it was unrelated to the Clam River pottery and of a type that was unfamiliar to him. The decoration, if any, was not observed by the writer then or since.

Excavation of Mound 10

This earlier observation, in addition to the work on the Altern site with its series of low mounds, prompted the plan made in the winter of 1962 to excavate another of the low mounds with the hope of finding further evidence of their cultural origin and relationship. Consequently, in the month of May, 1963, after a brief period of excavating in the lower terrace village site, a crew of two local men was hired to help explore Mound 10 (Fig. 1). With the further assistance of Mrs. Cooper the work began May 20th. The area was staked out in

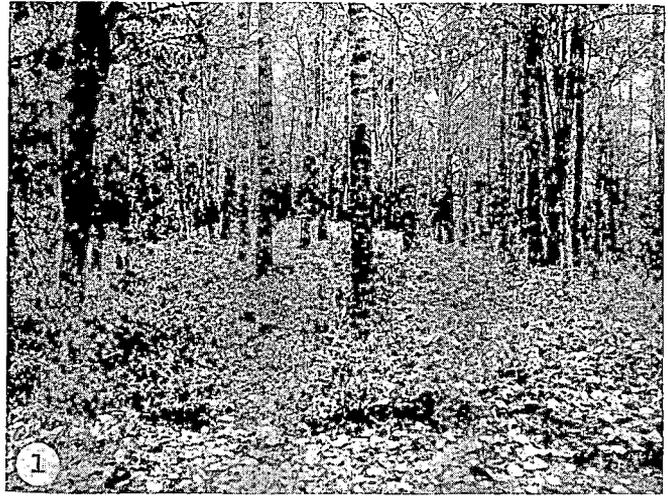


FIGURE 1. Mound 10 prior to opening.

grid form in four-foot intervals with one lineal series of squares lying central along the main axis of the mound. The four-foot wide trench was begun four feet from the south border of the earthwork and continued at four-foot intervals in the northwestward direction. The floor of the excavation was carried to one foot below the sod line on which the mound rested. When features were encountered the trench was widened sufficiently to fully expose them for mapping and photographing. At times the trench floor was deepened in the process of tabling a feature. Profiles of soil changes were made for all squares as the walls of the excavations were exposed. Unfortunately, almost daily rains and heavy wind hampered operations and brought the work to a halt when the mound had been excavated to only half its length. The writer is most curious to know what lies under the remaining half. At the close of the excavations the mound was restored to its original surface state.

Mound 10 is 72 feet in length and oriented in alignment with other mounds in the series. At its widest point, about 20 feet from its southern end, it measured 30 feet. From this point on it tapered northwestward to its narrowest width of 12 feet near the terminus. The height

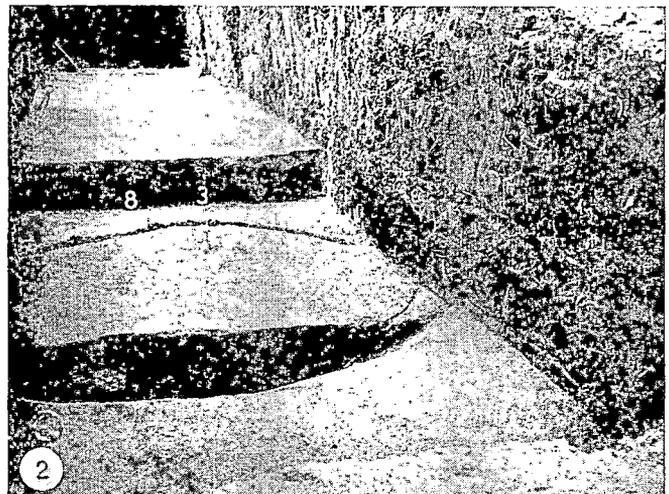


FIGURE 2. Outlined exposure of Burial Pit 1, Mound 10.

of the mound at its central elevation for much of its length was approximately 3 feet about the sod level. As the extremities were approached it tapered gradually to the surrounding ground level. The mound fill was probably taken from an area in the vicinity and was characteristically made up of coarse yellow to reddish sand, frequently mixed with humus. Occasional potsherds and stone artifacts turned up in the mound fill. Two serious collapses of the walls occurred as a result of the heavy rains.

Pit 1

Beginning with square 1, which lay outside the mound border, and continuing through squares 2 and 3 in the mound proper, excavation produced only a few potsherds in the fill. These will be discussed later. As square 4 was approached a change in soil was encountered at its border, suggesting the presence of an area in which fired material might be present. This was near the base line of the trench. Excavating downward from the surface of the mound in square 4, a layer of clear yellow sand was encountered which had a thickness averaging .3 foot to .4 foot. Directly below this stratum, charcoal, ash and occasional fragments of burned bone were found in a lens of material contrasting with the layer of clear sand above. This deposit, apparently intentional in the process of building the mound, was .2 foot to .3 foot in thickness. Both deposits extended from one side to the other of the four-foot trench. The side wall profiles indicated that they extended beyond the borders of the excavation. These were later explored to determine how far they extended (Fig. 2).

At the base of this level a circular pit outline became apparent (Fig. 2). It was somewhat irregular on its border but averaged 6.2 feet in diameter, sloping rather abruptly downward and toward the center in a bowl-like shape. From the top of the pit, at the original sod level, to the bottom and center, it measured approximately 2 feet in depth. Immediately beneath the dark layer con-

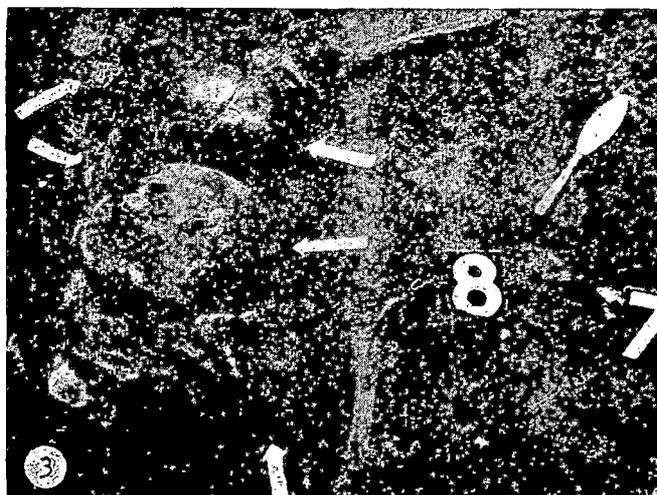


FIGURE 3. Bundled human bones in Burial Pit 1, Mound 10. Left arrows point to dog's teeth necklace. Upper arrows point to uncremated crania. Lowest arrow points to emerging trephined cranium.



FIGURE 4. Flexed burial in the flesh in Burial Pit 2, Mound 10.

taining small fragments of burned bone the earth was lensed with patches of dark charcoal stained sand in which occasional areas of reddish sand was mixed with wood ashes and small pieces of charcoal. At a level of 3.3 feet the mass became a consistently compact matrix of fine charcoal and sand containing increasing amounts of calcined human, animal, bird and fish bones, most so fragmented that identification of the species was impossible. Throughout the mass were about 18 grams of broken hazelnut shells, some whole, cherry pits, and what appeared to be thoroughly charred flesh although this last has not been demonstrated.

First Burial

Close to the surface of this deposit on the north side of the pit a human cranium and long bones were encountered which had been untouched by fire and were in a fair state of preservation. Continuing to remove the mass of fired material, all of which was sifted through a fine mesh screen, other bundles of human bones were found lying in a jumbled mass as though carelessly deposited, probably after removal from a burial platform (Fig. 3). The vertebral columns of two individuals showed clearly that ligamentation held the parts together at the time of interment. These, in addition to a few ribs, appeared to have been all that was in articulated position. As represented by the crania, the remains of five individuals had been interred in this way: four adults, including the one referred to above, and a child of perhaps seven years of age.

Trephined Cranium

One cranium is of particular interest. Well covered by a mass of other human bones this cranium had been well protected and was in a relatively good state of preservation. Its peculiarity, however, was not discovered until removal. Upon examination of the under side three circular holes were observed to have been purposely cut through the right side of the cranium. (See photograph on cover.) The first one had a diameter of 2 cm and involved the upper border of the squamous portion of the

temporal bone and the very low border of the parietal, cutting through the suture union. Its vertical position was almost directly above the auditory orifice. The second trephination was 2 cm above the first, border to border, and 1.5 cm in a posterior direction. The opening measured 1.7 cm. Its position was well up the wall of the parietal bone and slightly below its greatest point of convexity. A third opening had been made above the second, 5 mm distant from border to border, and measured 1.3 cm in diameter. It was positioned on the highest point of the parietal eminence. Close examination shows no healing over of the bone suggesting that death came during the trephining or shortly thereafter. Striations in the bone, partially encircling the trephining area, were made with some sharp object, probably a stone cutting tool used to lay the scalp back before the operation on the bone.

A fourth hole in the cranium is certainly of a different origin. It is ovoid or perhaps eye-shaped, and is 1.2 cm in the long axis by 9 mm in its short axis at the center. The borders are clean and sharp on the outer surface and give evidence that a pointed club had made the opening. The inner surface of the cranium shows a concoidal fracture of bone encircling the hole about 2 cm in length and 1.5 cm in width. It is clear, then, that the individual had suffered a blow from a sharp object, probably intentional. The position is two thirds of the way back on the right parietal and 2 cm from the saggital suture. This places it relatively close to the third of the trephined openings. It is probable that they were related *but why*, must remain in the realm of speculation.

Broken Femur

An adult right femur should be considered because of its unusual condition. Examination shows it to have been fractured about three inches above the knee joint, and the fractured ends displaced about two inches in an overlap. Apparently the break was a compound one resulting in a serious infection that produced a heavy growth of porous bone while healing. The bone shows numerous canals and protuberances for half its length involving the area close to the distal joint. The individual must have lived for some time for such a massive accumulation of new bone to have developed.

Most of the bone material from this deposit has not been examined thoroughly enough to report on it. Approximately 40 pounds of calcined human, animal, bird and fish bone fragments were recovered from the pit aside from the unburned bones of the bundle burials.

Necklace Teeth

Included in the matrix and closely associated with the bundle burials was found the 33 elements of a necklace, four of which were cleaned and removed intact. These have been tentatively identified as the canine teeth of dogs, each drilled on its proximal end for assembling on a cord. The lateral surfaces on both sides had been abraded down to flatness and each tooth showed a polished condition. The distal ends of the teeth have retained most of the enamelled surfaces. The area that

produced these artifacts was about 1.6 feet in diameter and located on the western side of the pit among the bundle burials, where they were deeply buried in the fired matrix of charcoal, sand and bone.

Other Artifacts of Pit 1

All other artifacts found in Pit 1 had been deposited with the fired material and from their condition indicated subjection to more or less intense heat.

Projectile Points

There were 30 projectile points represented: twelve whole and the remainder tips or with parts missing. All were triangular (Fig. 6). Nineteen showed straight to slightly concave bases and all but a few indicated a tendency toward pronounced convexity on the descending borders. Those few were almost straight sided triangles and one was exceptionally long for its base breadth. This specimen had small notchings near the

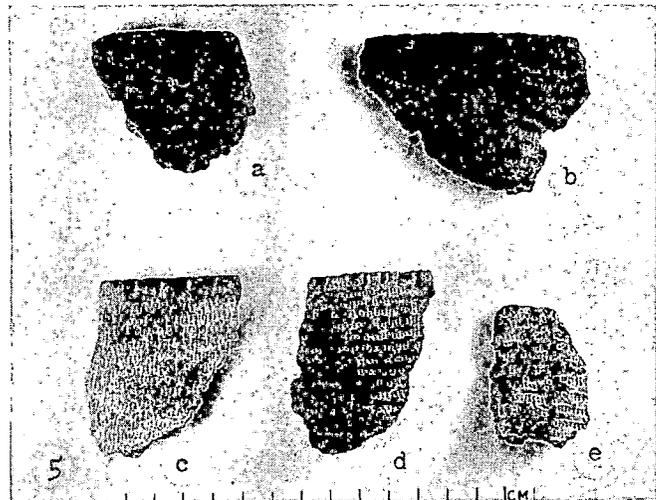


FIGURE 5. Potsherds from Wisconsin and Minnesota sites. (a) Rim sherd from Johnson site, Rice Lake, Barron Co., Wis. (b) and (e) Rim sherds from Mound 10, Altern site, Burnett Co. Wis. (c) and (d) Rim sherds from Pine City area, Pine Co. Minn.

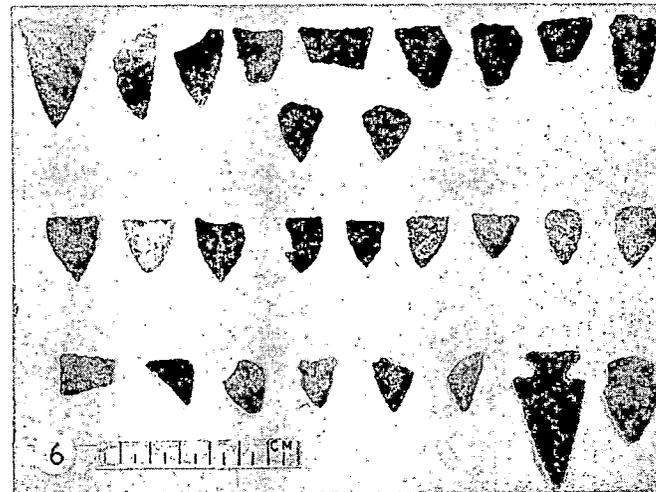


FIGURE 6. With the exception of the two in the lower right hand corner which came from the mound fill, all other points were located in the matrix of Burial Pit 2, Mound 10.

base corners. One other very small point showed similar notching. Eleven points were fashioned from white to pinkish chert, 10 from colorless quartzite, 2 from hematite, one from a dark chert and 6 from quartz. The retouching on some was exceptionally fine, showing long basal and transverse flakes, particularly those manufactured from the white chert. The quality of craftsmanship on these points, in general, is superior to that observed for the small equal sided triangular points usually found in this area.

Bone and Shell Objects

Three artifacts produced from bone are one nearly complete awl and the points of two others. All are well charred from firing and came from the matrix of fired material. Also, numerous fragments of clam shell were found scattered about in the pit contents.

Pottery

Fortunately, in addition to the foregoing items, 56 potsherds turned up in the mass of fired bone and wood in Pit 1 (Fig. 5, b and e). Twenty-three were rim pieces, and after all possible matching of sherds had been completed, represented parts of nine different vessels. Others were near rim, shoulder and lower body sherds. Two large fragments when matched clearly indicated basal parts of a vessel. The rim pieces ranged from a thin to a medium degree of thickness and showed outward flare and constriction of neck to be moderate. Two of the rim pieces were almost straight. The fragments from the base of the rims suggested a somewhat abrupt curve outward over the shoulders from the point of greatest constriction of the neck. The body sherds give the impression of mild curvature inward toward the base. Those only near the base and basal sherds indicate a semi-conoidal form for at least one vessel.

The patterns of decoration consisted of vertical columns of horizontal, relatively short, stamp impressions made by an implement apparently with teeth similar to those of a pocket comb and applied at an angle. The spaces between the columns varied in width from 4.3 cm to 1 cm; in sherds from three vessels, the areas were filled with vertical comb marks from the lip downward. In one vessel the stamped columns were alternate horizontal impressions and chevron impressions with combed vertical lines between. A single fair sized rim sherd was stamped with the same kind of implement but the lines gave the impression of single horizontal, parallel lines from the lip downward.

The lip of the vessel is treated on the inside and outside with impressions obviously made with the same implement described above. In most instances the implement was lightly applied but in one, more heavily. The impressions were so made that they produced an effect of pie crust crimping, i.e., a wavy line when viewed from above. Apparently, the stamp was applied alternately first on the inside and then on the outside as the process proceeded around the lip. The effect was pronounced on the rim parts of four vessels. In one section of a rim, the

implement had been applied on the inside making sharp horizontal striations.

A single row of short, shallow vertical dentate stamps had been made on the lower border of the rim in two instances. In two sherds, probably of the same vessel, shallow round punctates, 3 mm in diameter and closely spaced, constituted the lower border of decoration.

The tempering is medium sized crushed granite although some sand appears to be present in the paste. The hardness is close to 4 on the Mohs scale. The original color is impossible to determine because of extra-fired condition.

Burial Pit 2

Approximately 8 feet to the northwest along the trench and 1 foot from the border of square 7, a change in the nature of the soil was noted which suggested that a second intrusion into the subsoil had occurred. By downward scaling, a circular pit 4.6 feet in diameter was clearly outlined at the top at the old sod level. The earth of the pit was mottled like that found throughout the mound fill but sufficiently distinctive to show the intrusion. Three and five-tenths feet below the mound floor level, bone was encountered. The area of the burial lay to the west side of the trench and a two-foot section to the west of square 8 had to be removed to provide proper access to the feature.

This burial in the flesh was that of a young man, probably in his early twenties, lying on his right side with legs and arms flexed and facing south (Fig. 4). Red ochre had apparently been sprinkled over the body. A little distance from the cranium, in one corner of the pit, the lower part of a dog skull with jaw articulated was located. Near the knee position was a fragment of a human iliac. To the west, at a somewhat higher elevation, were a humerus and ulna bone in articulated position. These two bones and the iliac were the result of an intrusive burial made at some later date. A few associated fragments of teeth were found suggesting that most of the burial had decomposed.

The only associated articles were a natural, triangular shaped, dioritic rock artificially smoothed on two edges and a four-inch section of a deer antler tip that was possibly a flaking tool.

Artifacts

Objects collected from the mound fill were 51 potsherds, 4 of them rim pieces. Another 8 matched and constituted a good sized section from near the base of a vessel. The surface shows no cord marks. The pottery is very thick averaging 1 cm and is buff colored and heavily tempered with fine to coarse sand. Two of the rim sherds are smoothed on the outside, inside and on the lip. Two others are cord-marked to the lip. Two show small round punctates encircling the rim 1.3 cm below the lip; the third shows square punctates.

Two stone artifacts should be mentioned, both projectile points. One is made of clear, brown chalcedony. It measures 4.5 cm in length and, at its widest point, 2.4 cm. It is deeply corner-notched and has a straight base.

The borders down to the point are straight lines. The second point is of a different type. It is 2.9 cm long and at its widest point 1.9 cm wide. The notching is probably more side-notched than corner-notched and the base is convex. It is made of white to pinkish quartzite and, under the microscope, appears to have had its surfaces and edges abraded down and seems to be some archaic or Early Woodland type. The chalcedony point is most likely of Middle Woodland origin as is also the pottery just described.

Conclusions

With the exception of the recent publication by McKern on the Clam River Focus, no other reporting has been done for this area of the St. Croix water shed, either on the Wisconsin or Minnesota sides, thus this paper must remain largely descriptive. Some relationships, however, may be suggested but must remain tentative until further work is carried out.

Without question McKern is correct in his conclusions that the Clam River Focus peoples were the last to occupy the area (McKern, 1963). Mound structures, pottery and other artifacts of this Focus are identified and justify the assertion that they are a distinctive culture manifestation, related to the Minnesota variants of Mille Lacs Aspect and Headwaters Lakes Aspect of Late Woodland Culture. The archeological remains are the result of occupation by some branch or branches of the Santee Dakota who lived in the region in late historic and protohistoric times, according to McKern.

The stratigraphy of Clam River sites has been studied in two locations by Cooper and reports are now in preparation. One site is on Upper Clam Lake and a second, the Altern II site, is located on the Yellow River on the terrace just below the mounds described in this paper. Both show Clam River Focus pottery and other artifacts to be the last deposits of traditional village site materials before the entry of trade goods. Some detritus lies so close to the surface that not much time has elapsed since their deposit. The Neubauer site on the Pine River in Pine County, Minnesota, excavated in the summer of 1963, has produced pottery and other materials identical to those on the Wisconsin side of the St. Croix. Carbon 14 dating of the charcoal found in a firehole with this material gives an age of 179 years \pm 95.

The mound 10 structure and the cultural materials from it that we have reported here are quite distinctive and separable from those of the Clam River Focus; also they are well separated in time. Stratigraphy on the site

places this complex at a much earlier period, without question in the Late Middle Woodland. Charred hazelnut shells taken from pit 1 have been recently tested and the results show the time of deposit as AD 340 or 1,624 years ago \pm 135.

The Snake River area in Pine County, Minnesota, has produced quantities of potsherds and other artifacts that are identical to those of the Altern sites in Wisconsin (Fig. 5, c and d). Both locales have been stratigraphically examined and in each instance type materials have been confined to a horizon below the Clam River material. There is little question but that they are of the same cultural tradition. The Johnson site at Rice Lake, Barron County, Wisconsin, produced some of the same pottery in a horizon below Late Woodland material (Fig. 5, a). More distant from the Altern sites in Wisconsin are those of the Aquipaguetin Island site in the Mille Lacs area in Minnesota and the De Spiegler site at the end of Lake Traverse, in Roberts County, South Dakota. These were excavated by Lloyd Wilford. The pottery from them has been named Onamia Dentate Stamped by Elden Johnson (University of Minnesota). This designation will be applied to the pottery found at the Altern sites.

One other site should be recognized which produced an almost whole vessel that the excavator, Vern Helmen (St. Paul Science Museum) has recognized as Onamia Dentate Stamped. This Site was located on Little Birch Lake, Todd County, Minnesota. An almost complete vessel like the one above was found on the bottom of Lake Phalen, St. Paul, by a skin diver and is now in the St. Paul Institute Science Museum.

In general, this complex probably follows most closely after the Anderson-Sorg tradition rather than the Laurel manifestations of northern Minnesota. Tentatively, the widest cultural connections appear to be with those of the central Mississippi Valley to the southeast.

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