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Orr, Ellison

[Madison, Wisconsin]: Society for American Archaeology and the
University of Wisconsin Press, 1963

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IOWA ARCHAEOLOGICAL REPORTS 1934 TO 1939

(TEN VOLUMES)

by Ellison Orr

Volume VI: Sundry Archaeological Papers
and Memoranda, 1937.

EDITORS OF THE SERIES

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SUNDRY
ARCHAEOLOGICAL PAPERS
AND
MEMORANDA

1937

The Following Papers are for the Most Part
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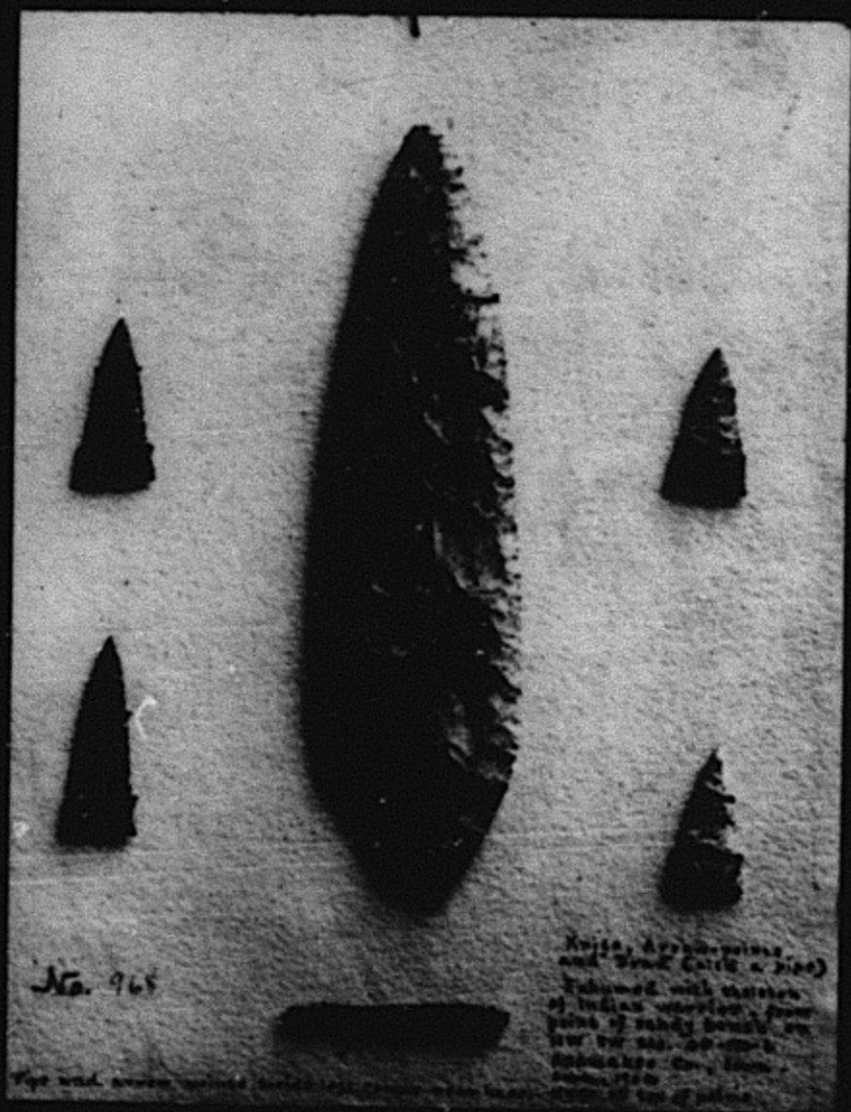
The Larger Part were written Years Ago.

In the Light of Discoveries made since, Some,
if rewritten, would be Changed Somewhat.

Waukon, Iowa, Dec. 5th, 1937.

Ellis. Orr

A



For complete account of Excavation of
Flint Artifacts shown in Photographs A and B
see page 24, this Vol.

B



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P

THE "HIGH BANK"

AN APPARENTLY VERY OLD PREHISTORIC CAMP SITE.

AN APPARENTLY VERY OLD PREHISTORIC CAMP SITE.

In the summer of 1924 the writer found along the Wisconsin shore of the Mississippi River, during a period of very low water, at a place about two miles south-east of Waukon Junction, Iowa, many small fragments of prehistoric Indian pottery, flint chips and a couple of arrow-heads.

These had been washed by current and wave action out of the matrix in which they had been imbedded. Only a few pieces were found apparently in situ in the clay. The current was of just the right strength to carry away the clay and fine sand leaving behind the slightly heavier material - the relics.

This locality, a strip of shore about four hundred feet long and six or eight wide, was carefully gone over in 1925 and 1926, resulting in the finding of considerable additional pottery sherds, a quart or more of the chips and flakes, nine additional arrow-heads, parts of what appear to be three small chipped flint celts, a well polished greenstone celt three inches long and one and one-half inches wide at the bitt, and a slightly oval hammer stone of pinkish quartzite.

The latter had an average diameter of four and one-half inches and was one and three-eighths inches thick, with central pits on each side three-eighths inches deep. The perimeter showed marks of hammering and had four sizeable pieces broken out, apparently from use in striking hard blows.

All the material so found, so far as can be determined, came from a stratum of blue, slightly sandy, alluvial clay in which were many ancient crawfish holes, the sides of which were some hardened by iron oxide, and which were entirely filled with clay of a lighter shade of blue.

Immediately over this relic bearing stratum lies seven feet of blue-black, slightly sandy clay; gradually changing to a granular, lighter, black alluvial soil in which no relics have been found. Over this lies an ash-colored soil, eighteen inches in thickness, the "made land" of the farmers, deposited by floods since the settlement of the country adjacent to the river by white men around seventy-five years ago. This would be at the rate of about one foot in fifty years.

If the entire thickness of soil over the relic-bearing stratum was deposited at the same rate, then four hundred and fifty years have passed since the material found was lost or left there.

However it is believed that the sediment laid down before the white man came was deposited very much slower. This belief has been reached by a long and careful study of the alluvial deposits laid down in the lateral valleys of the tributaries to the Mississippi in the driftless area.

In many of these valleys and for long distances, flood waters have cut ditches down through the alluvial soil and loess to the gravel bars and bed rock, exposing a great number of sections for study. In many places there is less than ten feet of alluvial soil between the recent "made land" and the loess below.

It is the possibility of a very considerable age for these relics that has prompted the writing of this paper.

Wherever the main channel of the Mississippi makes one of its numerous "crossings" of the wide flood plain, - over two miles wide at Waukon Junction, - the course is always in a curve diagonally down stream, the current impinging strongly on the down-stream bank and undercutting and washing it away.

This results in mostly vertical banks on that side known to rivermen as "High Banks".

This relic bearing stratum which we have described lies at the foot of a "High Bank" near the center of the flood plain, on the "crossing" from Charne, Wisconsin, to the forgotten steamboat landing of Johnsonport, just below Waukon Junction on the Iowa side, and three-fourths of a mile above the mouth of Harper's Channel.

It is quite likely an old camp site. A diligent search along the shore up and down the river for a half mile each way resulted in neither chips, flakes, pottery, arrow-heads or any other material being found.

The arrow-heads show only very ordinary workmanship as can be seen by an inspection of the photographs, and among the flakes are many with a cutting edge on which secondary chipping has been done.

The pottery sherds are tempered with crushed rotten granite and the pieces so far found show at least ten different patterns of decoration. On account of the smallness of the pieces the shape of the vessels can not even be conjectured, with one exception which is a piece of a straight vertical neck three inches high.

Future opportunities to collect will undoubtedly yield more material the study of which may enable some definite conclusion to be reached as to culture and age.

This is likely to be a long drawn out matter as during some summers not a single opportunity to collect may be afforded on account of too high water.

Waukon, Iowa, Mar. 26th, 1927.

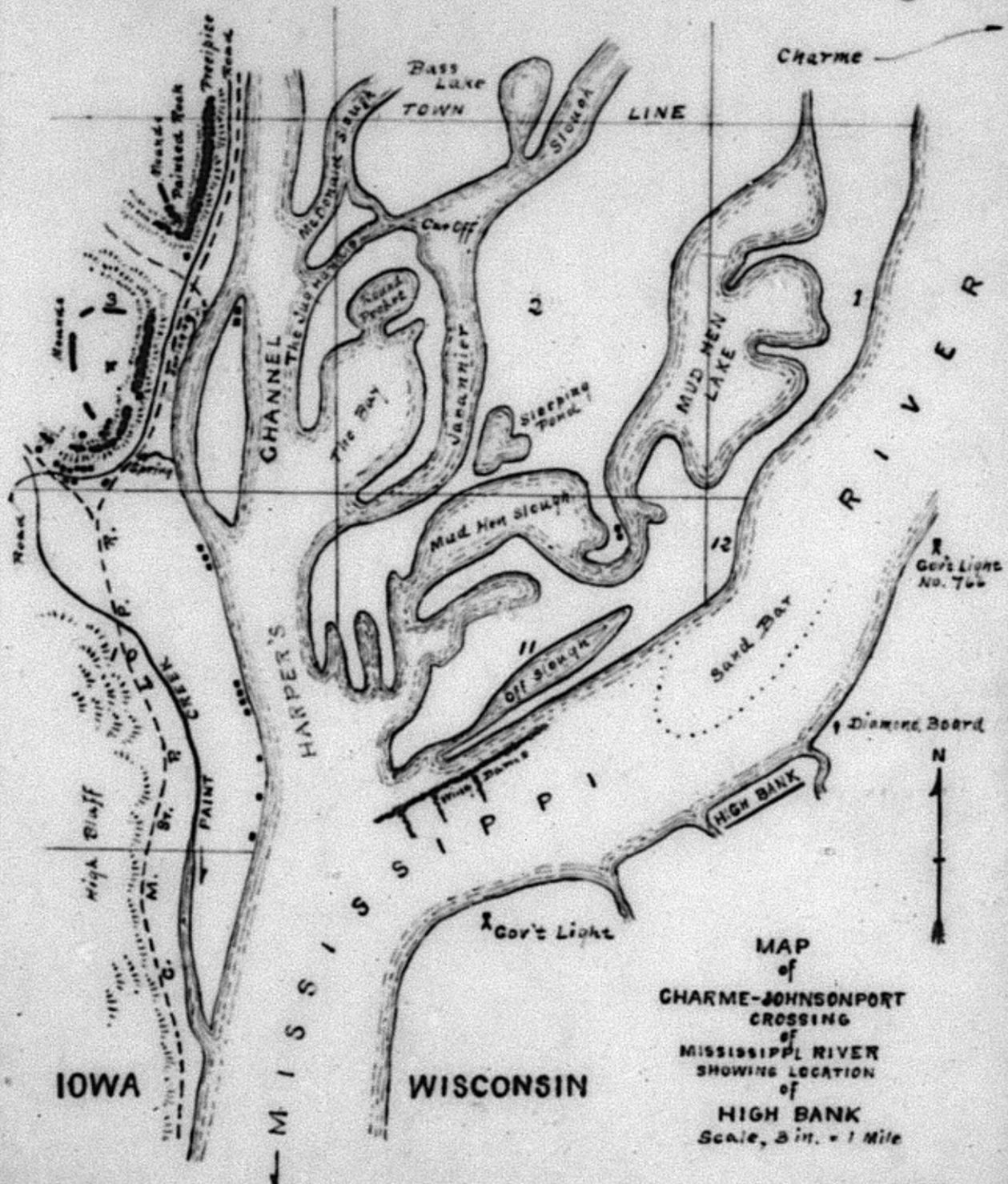
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Very much to our regret we must write "Finis" to our account of finds at the "High Bank". What we have written is probably the complete history of this old camping place of the Indian so far as it will ever be revealed to the student of this or any other age.

This for the reason that during the winter of 1926 - 27, and the early summer of 1927, the Government, in order to protect the down-stream high bank of the Charne - Johnsonport crossing, first, with a powerful steam shovel cut this bank to a uniform slope of about forty-five degrees, then covered it from below low water mark to the top, and for the entire distance from light #766 to the bend below Harper's Channel, with eighteen inches or more of rock rip-rap, thus effectually burying this very interesting hunting ground out of sight for all time.

And now when the great dams across the Mississippi, built to create a nine foot navigable channel, are completed, as they will be in a couple of years hence, and the water impounded above them, the dam at Guttenberg will raise the water at Waukon Junction, so we are informed, to a permanent level of five feet above the present low water mark, which, even if the rip-rap were not there, cover the relic bearing stratum at the "High Bank".

Waukon, Iowa, Dec. 8th, 1936.



MAP
of
CHARME-JOHNSONPORT
CROSSING
of
MISSISSIPPI RIVER
SHOWING LOCATION
of
HIGH BANK
Scale, 3 in. = 1 Mile

VERTICAL SECTION

of "HIGH BANK"

WISCONSIN SHORE OF MISSISSIPPI RIVER.

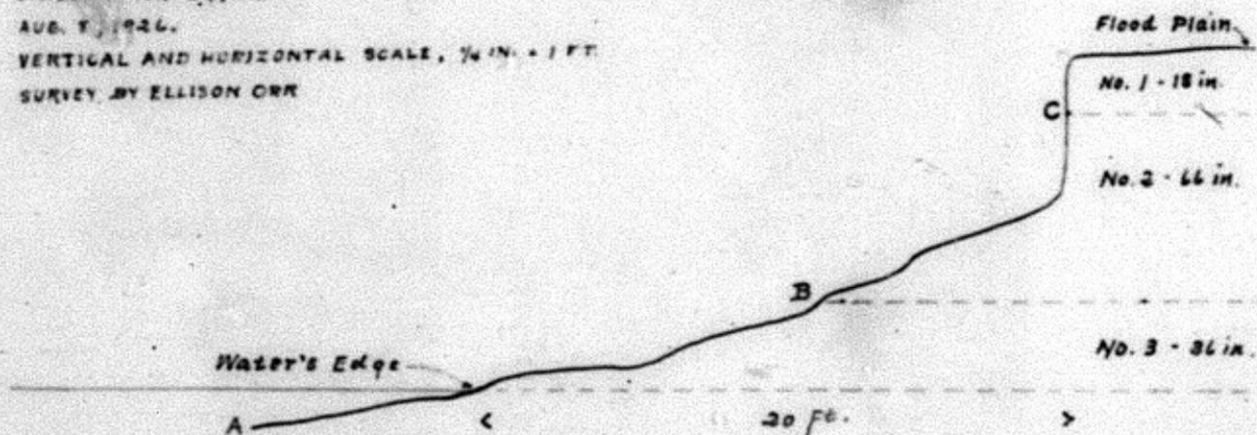
ONE MILE ABOVE MOUTH OF HARPER'S CHANNEL.

STAGE OF WATER, 1.4 FT.

AUG. 1, 1926.

VERTICAL AND HORIZONTAL SCALE, $\frac{1}{4}$ IN. = 1 FT.

SURVEY BY ELLISON ORR



No. 1 LIGHT ASH-COLORED ALLUVIAL SOIL - RECENT - "MADE LAND"

No. 2 ASHY-BLACK, GRANULAR, SANDY ALLUVIAL SOIL. NO CRAWFISH HOLES.

No. 3 ANCIENT BLUISH-BLACK, SLIGHTLY SANDY, ALLUVIAL SOIL WITH NUMEROUS LARGE (3 IN.) HOLES. FILLED WITH TENACIOUS BLUE CLAY.

INDIAN RELICS FOUND ON SHORE BETWEEN A AND B. HOLES OF BANK SWALLOWS AT C



Huestis Eddy and Harry Orr at "High Bank", looking east,
June 3d, 1924.

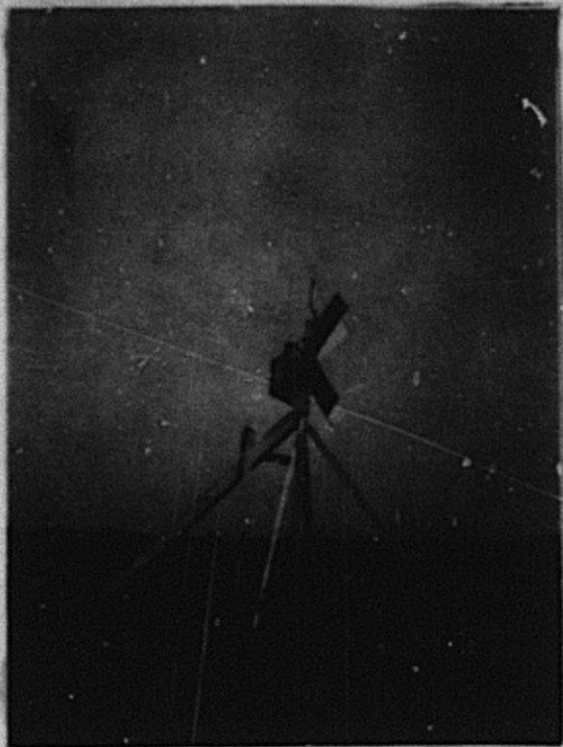


View of the "High Bank" from a point farther west than
above. Eddy standing, Orr sitting. Relic bearing
stratum at their feet. Looking east. Wisconsin bluffs
left background. June 3d, 1924.



"High Bank", looking east, Sept. 2d, 1926.
Relic bearing stratum along water's edge.

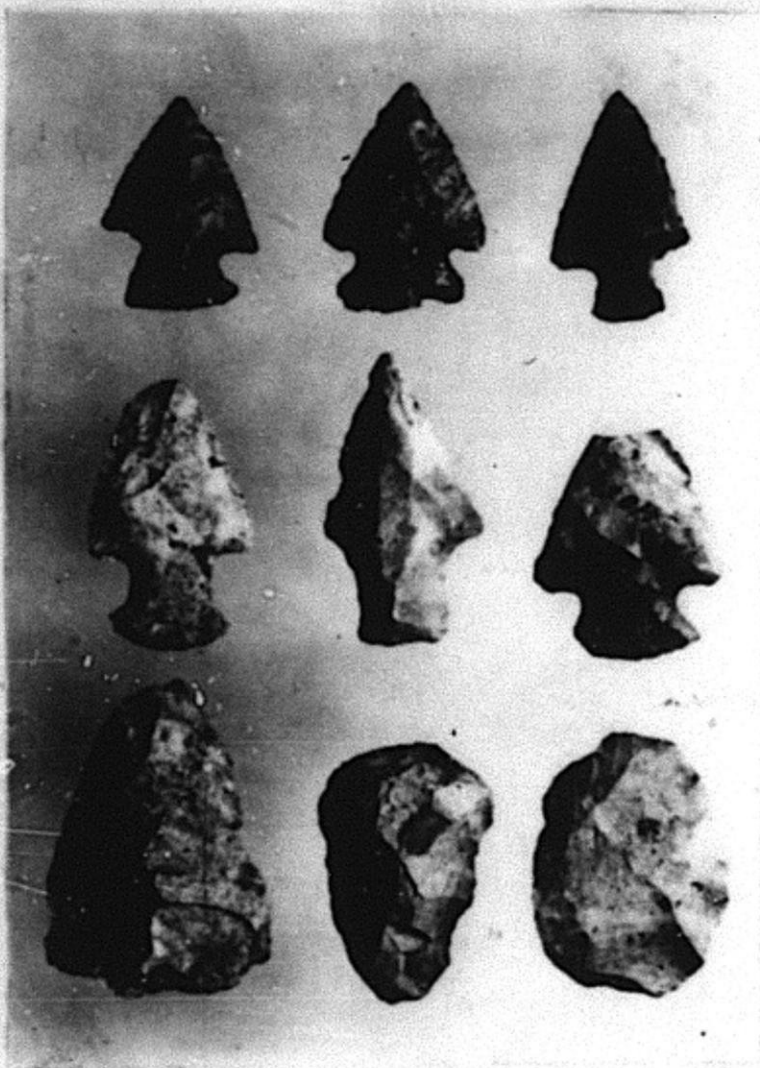
Upper part of "High Bank", showing holes of bank swallows
at bottom of "made land" stratum.
Looking west, July 5th, 1926.



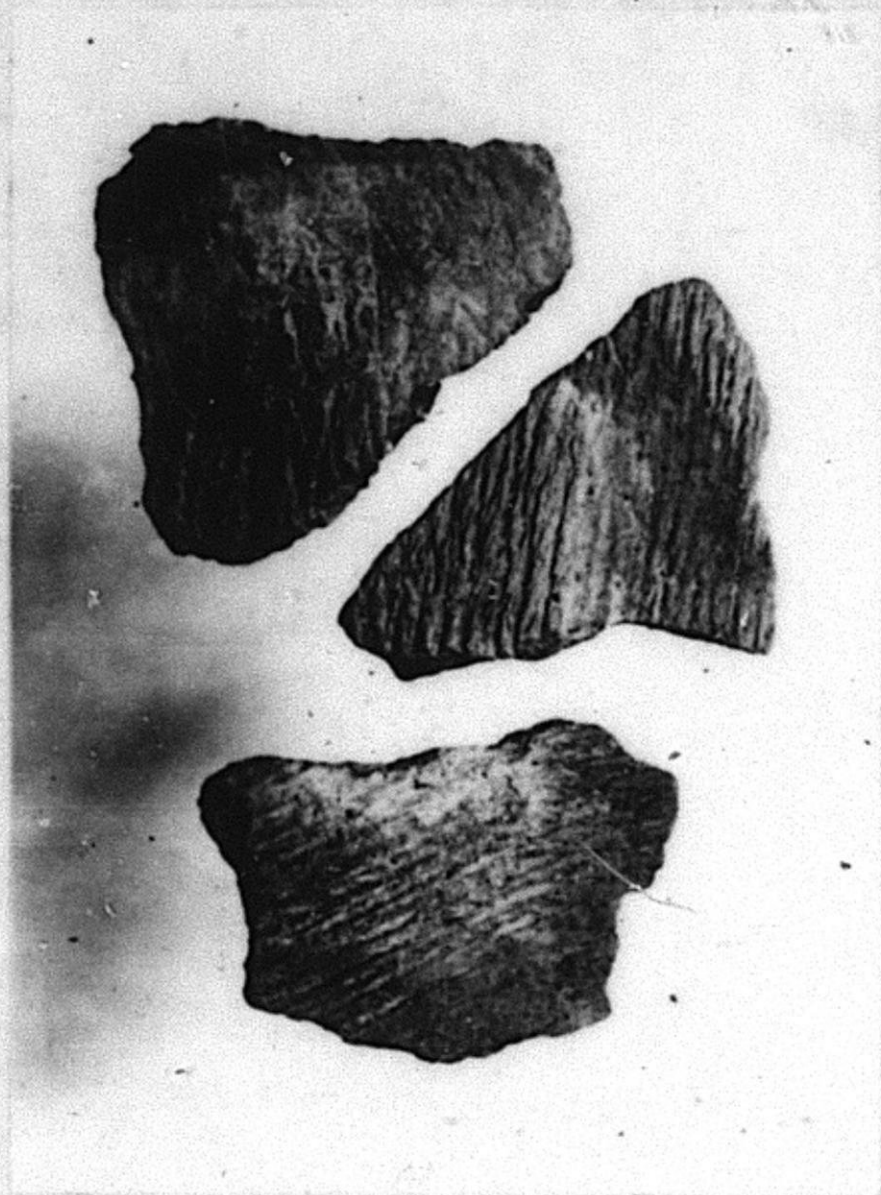
Government Light one and one-half miles above the "High Bank". No. 766.



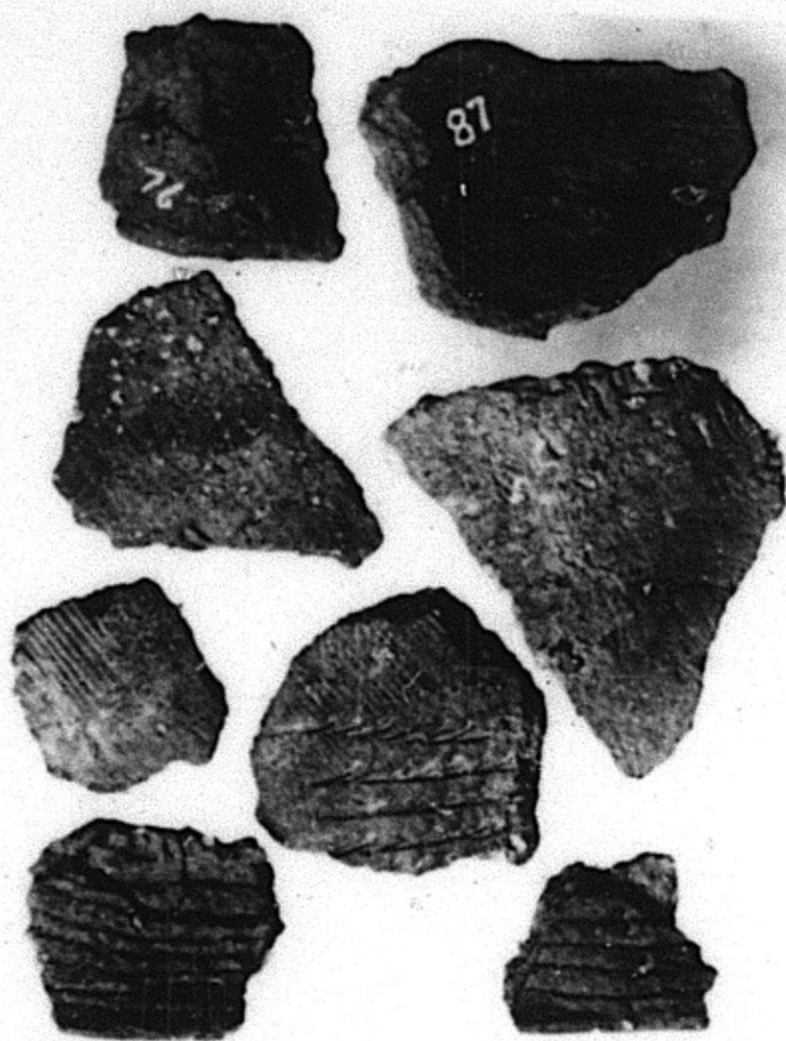
White elm tree growing on the flood plain twenty rods back of "High Bank". Shows small amount of accretion during life of this seventy-five year old tree.



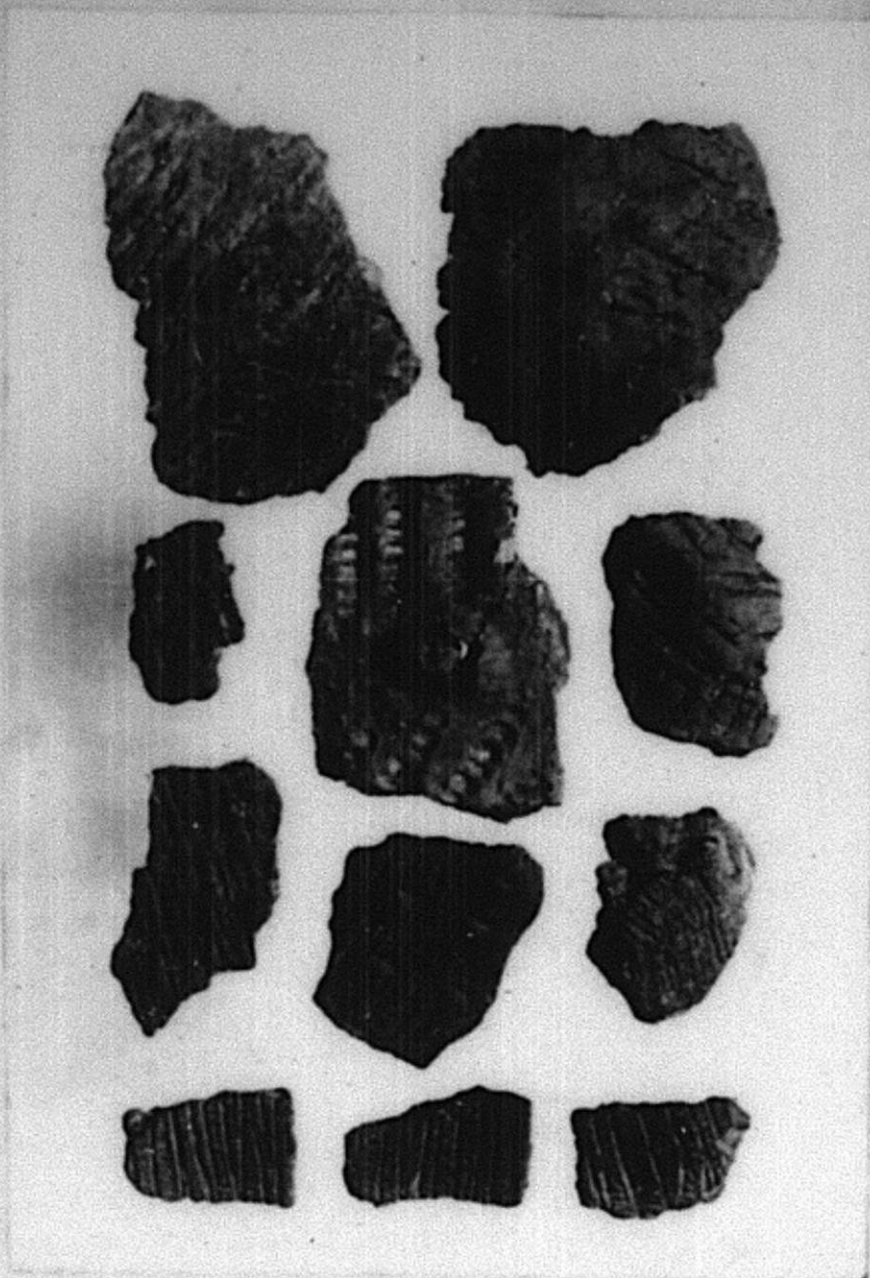
Six arrow-heads and three scrapers from the "High Bank".
Actual size.



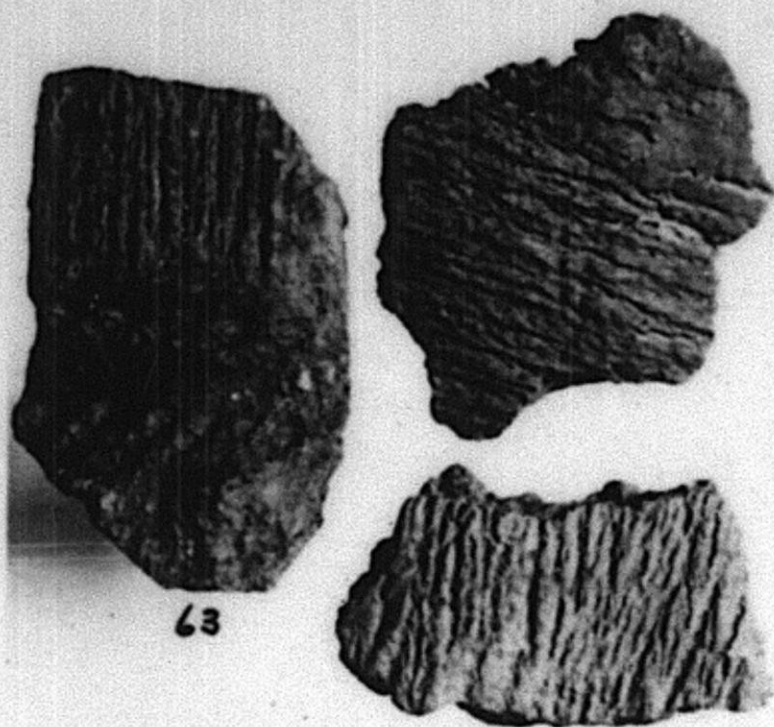
Fragments of pottery from "High Bank". Actual size.



Fragments of Pottery from "High Bank". Actual size.

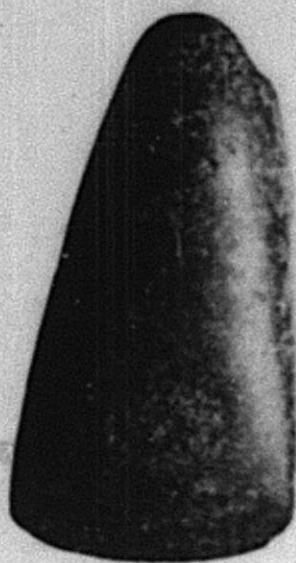


Fragments of pottery from the "High Bank". Actual size.

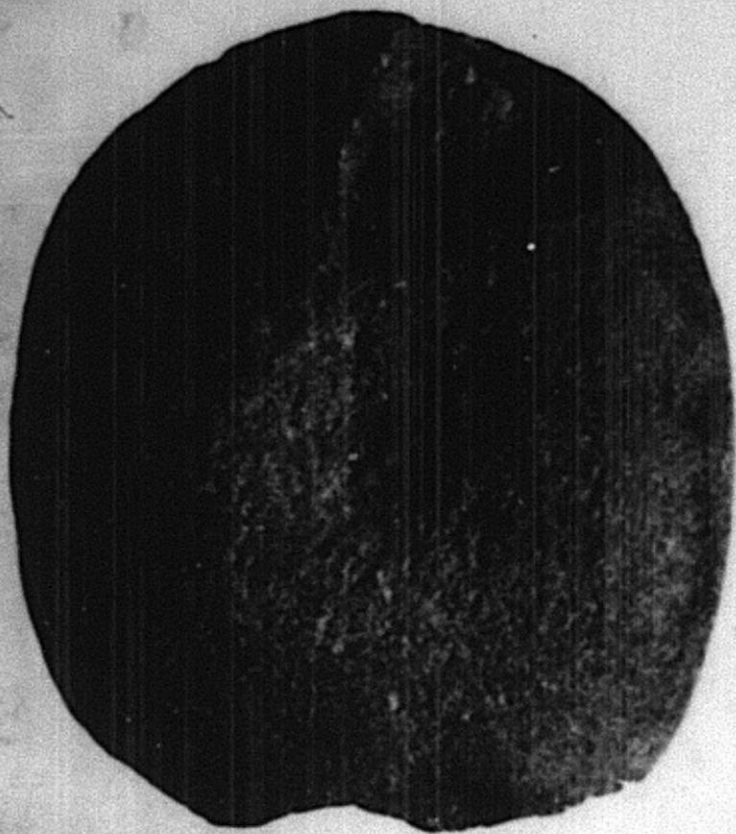


63

Fragments of pottery from the "High Bank". Actual size.
No. 63 is part of the rim or neck of a vessel.



Celt of greenstone from "High Bank". Actual size.



Hammer Stone of pinkish quartzite from "High Bank".
Actual size,

C

NEW ALBIN FLAT BASED MONITOR PIPE.

H

THE NEW ALBIN FLAT BASE MONITOR PIPE.

The terrace on which New Albin, the most north-easterly town in Iowa, stands, lying as it does just at the mouth of the Upper Iowa (Oneota) river, the valley of which has furnished such abundant proof of long continued prehistoric settlement, was undoubtedly much used in the by-gone days as a camping ground or village site.

In the way of proof of such use and occupancy are the many finds of weapons, implements, ornaments, etc., and among which there were at least three deserving of more than passing notice.

Besides the Catlinite Inscribed Tablet, and the cache of mauls, celts and arrow-shaft straighteners found by Mr. Thompson, there was a fine flat base monitor pipe found some years ago in digging a ditch in one of the streets.

This pipe is a well preserved specimen of a type rare in Iowa, is highly polished, very symmetrically made, and evidently of great age as the surface has undergone considerable change or patination.

This patina or changed material makes it difficult to determine of what kind of stone it is made. It may be soapstone or a metamorphic clay like catlinite. The color is ash or slate with a slightly pinkish tinge.

The base is straight and flat, and measured along the bottom is 9.5 inches long and 2.3 inches wide. The ends are square with rounded corners.

Except for the opening at the stem end the edge of the base has a uniform thickness for its entire perimeter.

The opening from the bowl to the end of the stem, - for drawing the smoke through, - has a diameter of .2 inches, and above it for the entire length, is a keel, gradually rising as it approaches the bowl. The pipe is complete as found and no wood stem was used.

The top of the base opposite the stem end has no keel.

The bowl rises 1.2 inches above the base part on the stem side and 1.5 inches above it on the opposite side; has a diameter of 1.5 inches where it leaves the base; swells out, barrel shape, to a diameter of 1.6 inches; then contracts to 1.5 inches.

Above this it flares out rapidly to a diameter of 2.5 inches at the top of the bowl. The top of the bowl is convex, the center being about .1 inch higher than at the edge.

The inside of the bowl is acorn shaped, having a depth of 1.4 inches. The opening which is not quite circular, has a diameter approximating .8 inches. The stem hole breaks in to it just above the bottom and on the left side.

The height over all is 2.0 inches.

On the top of the bowl are four nodules of some harder material which the maker seems not to have been able to rub down in polishing and which stick out like small warts. There is also one on the bottom of the base.

The right hand corner opposite the stem was broken off long ago, as the broken edge is covered with patina the same as the rest of the pipe.

A piece was broken off the rim of the bowl by being struck by a shovel at the time of finding, but this has been glued on again and no fresh surface can be seen for examination.

Except for the above this pipe is a perfect specimen.

The illustrations by photographs, and the natural size outline drawings which accompany this paper will no doubt aid very materially in conveying a correct idea of this, for Iowa, unique relic.

At the mouthpiece end there are fourteen tally marks on one side and eighteen on the other, some of which are very faintly incised. At the opposite end are thirteen.

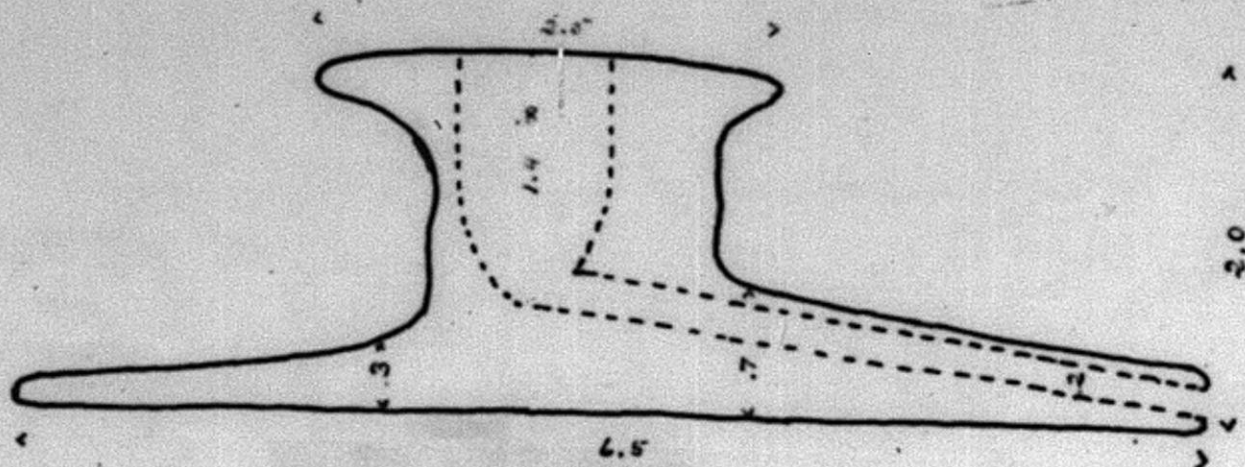
A Mr. Errickson, an eccentric character, who happened to be present when the workmen uncovered this pipe, secured it from them and kept it for years in a drawer in his store, until his death.

While in his possession we had to use considerable diplomacy to get a loan of it long enough to photograph it.

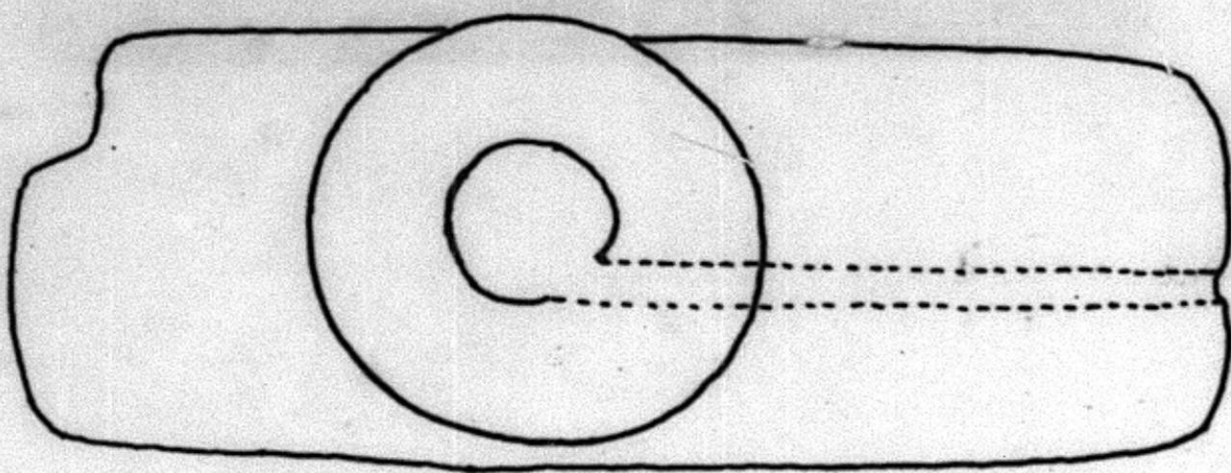
On his death in 1928 it was taken to Dakota by his brother, one of his heirs.

In Feb., 1930, Dr Henry Field, after correspondence, an interview, and further correspondence, finally secured it from this brother for us for \$10.00, and by us it was donated to the State Historical Society. Its collection number is P-28.

The exact locality where it was found is not known but is believed to have been near the methodist church, New Albin, April 23d, 1931.



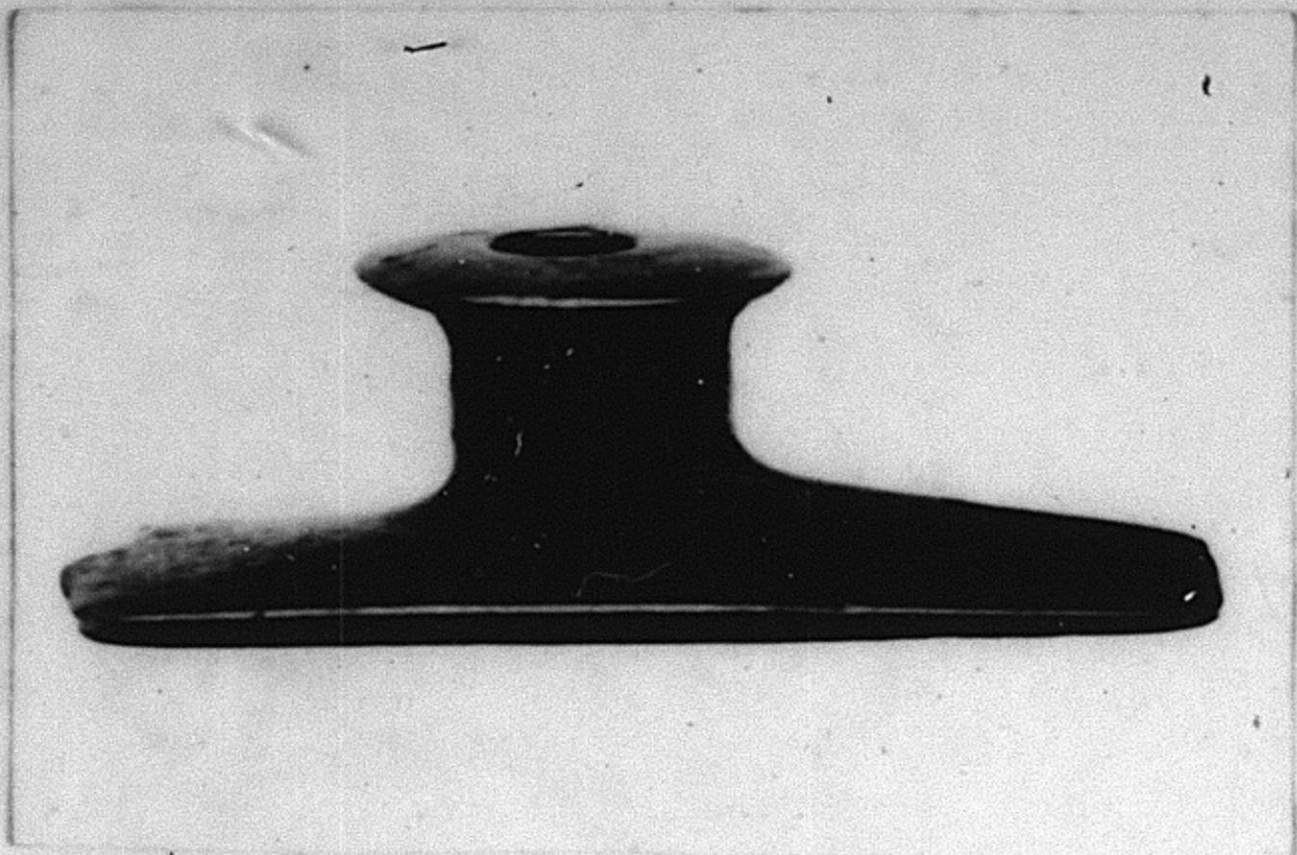
Vertical Section of New Albin Pipe, natural size. Side view.



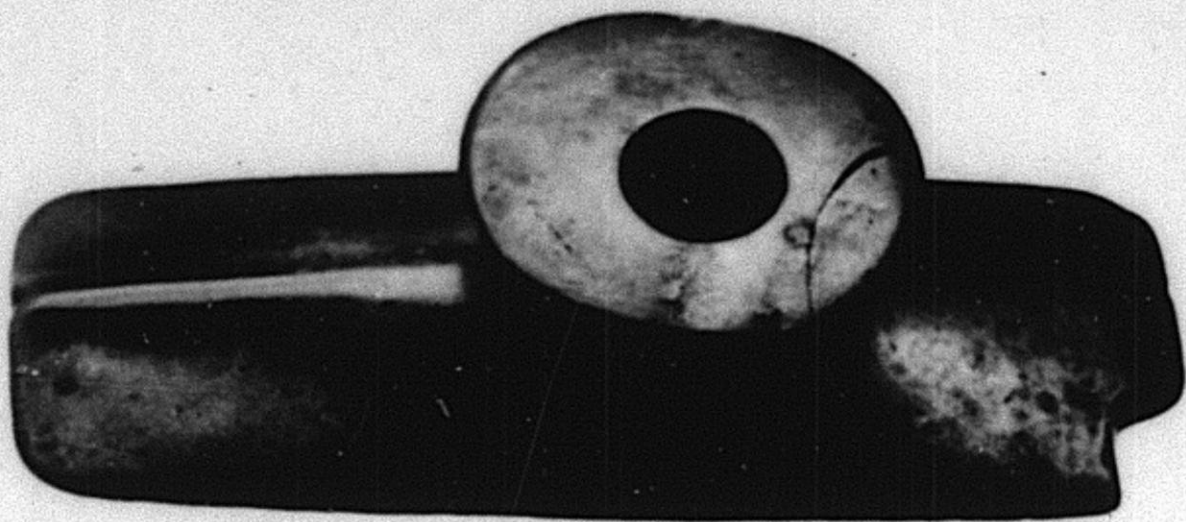
Outline, top view, of New Albin Pipe, natural size.



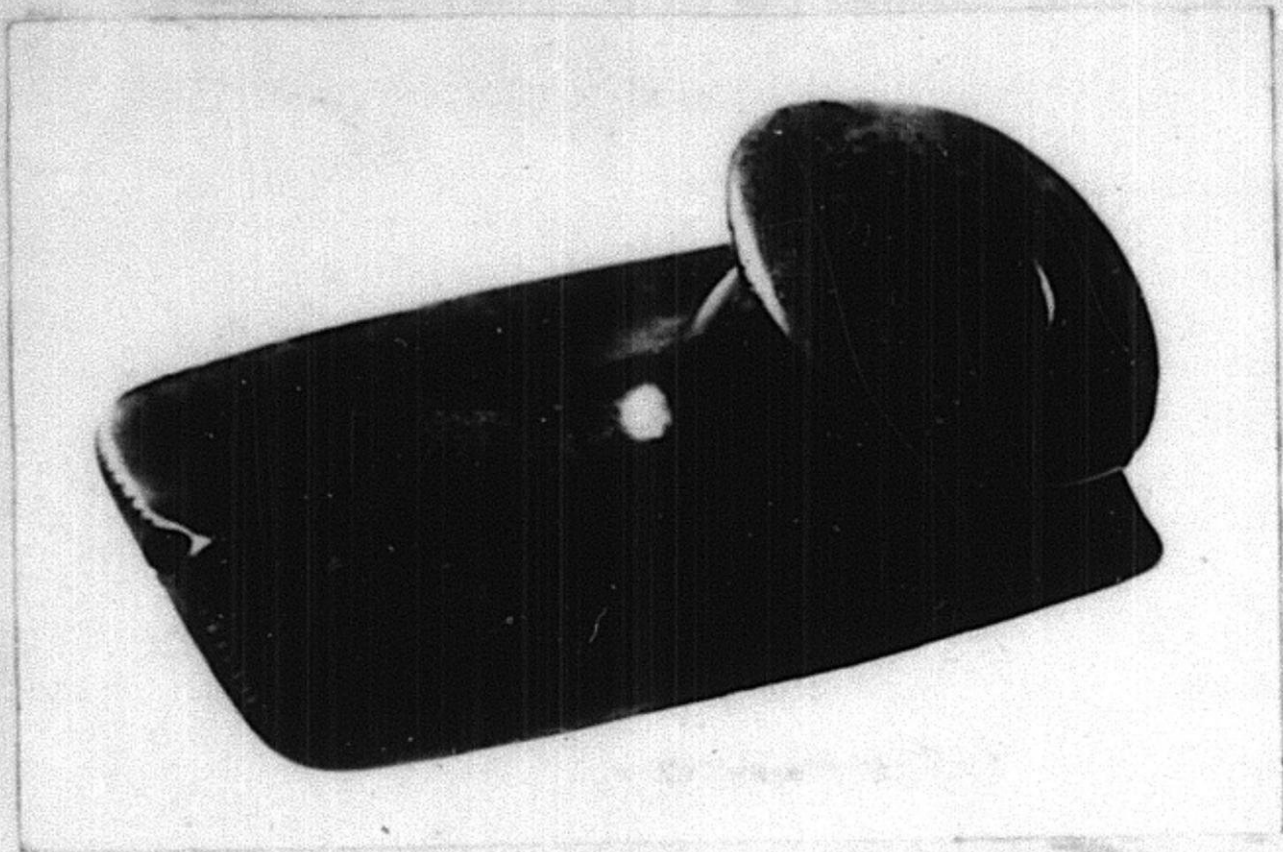
Section of Stem end, natural size.



Side View of New Albin Pipe, Natural Size.
Note old break of corner.



Diagonal Top View of New Albin Pipe. Natural Size.
Note recent break of rim of bowl.



Diagonal Top View of New Albin Pipe. Natural Size.

A Typical Oneota Family Burial.

o

In 1802, with Anton Larson, who discovered it, I excavated on the low sloping terrace on the east side of Waterloo Creek, on the NE SW Sec. 25, T. 100, R. 6, (Waterloo township, Allamakee county, Iowa, an Oneota family burial group consisting of the fully extended, fairly well preserved, skeleton of a man with head to the south from which the skull was missing.

On the left close beside the skeleton of the man was the fully extended, fairly well preserved, skeleton of a woman.

My field notes do not say, and I can not remember, whether or not there was a skull.

On the left of the woman there was the badly decayed bundle burial of a small child.

Beside the pelvis of the man - notes do not say which side - there was a finely wrought, thin, oval blade pointed at one end and rounded at the other, 10 mm long and 27 mm wide. Beside the left femur were four thin, finely wrought, triangular arrowheads, 20-24 mm long and 10 mm wide at base.

There was also a disk pipe of catlinite 44 mm long, the disk 40 mm wide, the location not given in the field notes, and a rolled copper bead, 30 mm long.

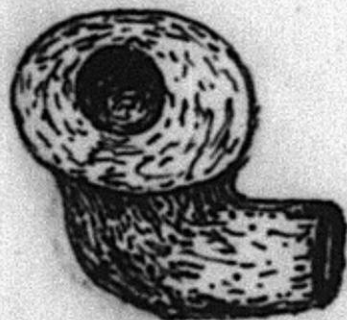
In the bones of the woman's left hand were ten good scrapers, three bone awls with expanded bases, and twenty-eight unworked chert flakes.

There was no pottery.

These burials and inclusions were in every way a typical Oneota burial.

(See frontispiece A and B - photographs of these inclusions.)

It is surmised that these graves had been excavated, in part, years before by relic hunters who found and carried off the mortuary vessel if there was one. The skull of the man may also have been taken, or possibly it was not buried with the remainder of the skeleton.



Sketch of Catlinite Pipe
found with the skeleton of
the Man.

Photographs 6/II actual size.

PREHISTORIC EARTHWORKS AT AND NEAR LANSING, IOWA.

Prehistoric Earthworks at and Near Lansing, Iowa.

It is not unlikely that at the time of its settlement by the whites, aboriginal earthworks might have been found on the terrace on which this city is built, but all traces of them have long since been obliterated.

Certain it is that there have been interments in the terrace of South Lansing, for at different times skeletons have been found when digging cellars and ditches for water mains. A number were found in excavating for the foundation of the Old Court House, and for that of the Old Mill.

In the summer of 1912 one was dug out of the gravel pit on the old mill site, just across the street from the R.R. depot.

This must have been a quite recent burial, - probably less than one-hundred years ago, - as there were thin copper plated bracelets, one and one-half inches wide, covered on the outside with what appears to be velvet cloth, about the wrist bones; two wheel-shaped ornaments, - four small circles within a larger one, their circumference touching at the center of the larger, - of the same material, the whole having a diameter of two and one-half inches; a number of cone-shaped copper bangles about one-half inch long, connected with rings of copper wire, and similar to some that were dug up on the Tarrt farm on Waterloo Creek; and a small bishops cross, one and three-eighth inches long.

Only portions of the larger bones, the lower jaw and part of the skull remained.

The edge of the gravel pit caving off exposed it to view when it was discovered by Fred Orr, foreman of the gang of telephone men working there.

The burial was very shallow being not over two feet deep.

The men working for him secured for me during the summer a number of arrow and spear heads, some of which they found.

One thin, notched triangular with curved base, of cloudy chert, one and seven-eighths by seven-eighths inches was picked up by them. It was very finely wrought.

A grooved greenstone axe, four by two and one-half by one and three-fourths, I also picked up in the sand in the center of Front street, some five blocks north of Main.

This was a well wrought piece but a large chunk had been broken out of the head. The whole surface including the place where the piece was gone, was very much changed by weathering, there being a decided patina. A small piece had recently been broken out of the cutting edge, showing the fresh rock, and there were a few abrasions made by wagon wheels.

On the point of the bluff top west of the old court house is a small group of circular mounds, and there is at least one small one on the top of Mount Homer. A flag pole was recently set in the latter but nothing was found in digging the hole in which to set it except three or four flat rocks.

On the first high point north of Mt. Homer is a group of two round mounds just at the edge of the very precipitous river bluff.

The north one of the two is crossed by the section line between sections 20 and 29, T. 99, R. 3 west of the 5th P.M. It is just above the Old Stone Mill. The larger of the two, the north one, is 50 ft. in diameter and four feet high, the smaller, 25 ft. to the south, is 25 ft. in diameter and 2 ft. high.

Both of these section line mounds were pretty thoroughly excavated by relic hunters in 1918.

One of the group on the bluff top above the Old Court House was excavated by Dr. Hayes about 1930. It contained remnants of skeletons, an adult and a child, enclosed by flat rocks set up edgewise and covered by flat rocks. There were no inclusions.

Lying three and one-half miles south-east of Lansing is the Kellar Group, the most notable earthworks in its vicinity. This group lies on a sloping terrace at the foot of a high promontory at the junction of the valley of a sizeable spring brook with that of the Mississippi River, near the center of Sec. 2, T. 98, R. 3 west of the 5th P.M.

The valley of the little brook lies nearly north and south, and for about half a mile back from the river it is cut down to its level. The stream runs along the terrace on its east, under the point of the bluff, on which the mounds are located, while on the west side is a strip of bottom land an eighth of a mile wide.

The terrace itself is probably composed largely of St. Croix shales and sandstone, with a surface covering of clay and sand.

Scattered irregularly over an area of a couple of acres of a little used highway and the adjoining grassy pasture land between that and the foot of the bluff on the south, away from which it slopes very gently, lies this group, consisting of two effigy, twenty-three circular, and five linear mounds.

When surveyed they were numbered as shown on the plat which follows. The largest circular mound was No. 2, having a diameter of 42 ft., The smallest were Nos 4 and 9 with diameters of 20 ft. and heights of 2 ft.

Effigy Mound No. 1 was remarkable for its low height, being not more than ten inches high at any point. So inconspicuous was it that at first it was not noticed, but all the others were well defined and at once attracted attention. Nos 3, 4 and 11 had been opened but we were unable to learn what had been found in them. None of the others had been molested.

Mounds No. 2 and 5 were opened by me Oct. 20th, 1912. They were found to be very similar in interior construction. First there was a foot of loess clay, free from stones or pebbles, the upper three or four inches of which was like the ordinary gray forest surface soil, containing and colored by humus.

Below the loess was a more or less continuous floor of flat limestone rocks, two to four inches in thickness, with a few large irregular pieces as large as a man could lift.

Under this floor was clay down to the bottom of the mound, that is, as deep as an excavation had been made when the mound was built. Below this was undisturbed, very yellow clay, (geest) mixed with small fragmentary pieces of rock, - the natural sub-soil. In No. 2, the larger mound, this sub-soil was found at 1 ft. below the natural surface.

Under the rock floor the clay was harder and drier than above it. This may have been due to the protection afforded by the covering of rocks which in a measure acted as a roof to turn the water, and may also have been due to its having been tramped when placed in the mound.

In Mound No. 5 the rocks formed an almost continuous floor. In Mound No. 2 an area in the south-east part, about 4 ft. square, was covered, and another similar area but not so large, in the north part.

A few fragments of what we thought might be human arm bones were found at one place on the top of the rocks in Mound No. 5. No other inclusions were found in this mound.

In Mound No. 2 a finely wrought arrow head of pinkish white flint, one and three-fourths inches long, was found just below the level of the rock floor in the center. A couple of small flakes also were found, one near the surface and one near the bottom of the pre-historic excavation. Near this latter was found a small pot of clay unmixed with either crushed shell or sand.

It was struck by the shovel in digging and part of the rim and one side sliced off, crumbling into small fragments. The remaining larger part was carefully removed but so fragile was it that it crumbled into small bits except three pieces, - a narrow piece of the neck and rim and two pieces forming most of the body below the swell, - which when dried and cemented together, fortunately were sufficient to enable the shape and size to be determined with considerable accuracy.

The diameter of the body at its widest part was two and three-fourths inches. The height, between three and three and one-half inches.

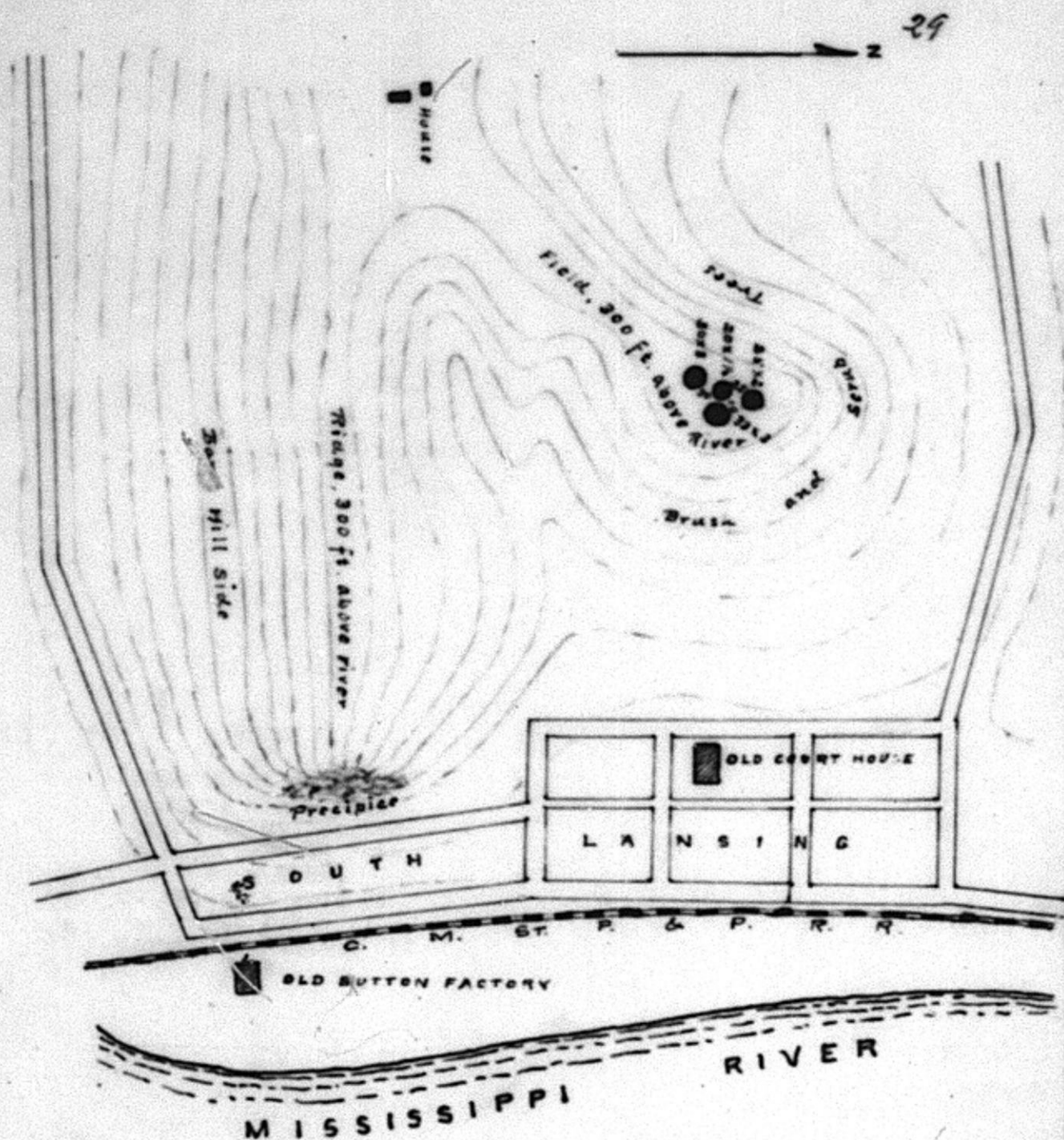
This vessel, crudely made of untempered clay not well mixed or kneaded, burned red. It was wholly without ornamentation but was quite symmetrical. In shape, tempering or ornamentation it differed from the pottery found in the graves of the Upper Iowa river valley. It rested right side up on the undisturbed yellow subsoil containing rock fragments and at the bottom of the excavation made by the builders.

Except for the small flint flakes near it, the arrowhead just under the rock floor, and the flake near the surface, not a fragment of bone, bit of charcoal, or relic of any kind was found in the mound, nor was there any discoloration of the clay which might indicate human remains, or an ash bed.

Silent they lie, these heaps of clay, - these monuments of a people of a by-gone age. No written page tells us the history of their building. No painting or sculpture reveals to us the appearance of the builders. What belief, what custom or what mysterious motive prompted the ancient race that erected them? How were they built and what ceremonies attended their building? How far back in that misty past into which they give us but a glimpse?

We may question and conjecture but nothing will lift that veil. Just a rift here and there - a piece of worked stone - a bit of broken pottery - a heap of earth. That is all.

Wauken, Ia., Dec. 1912.

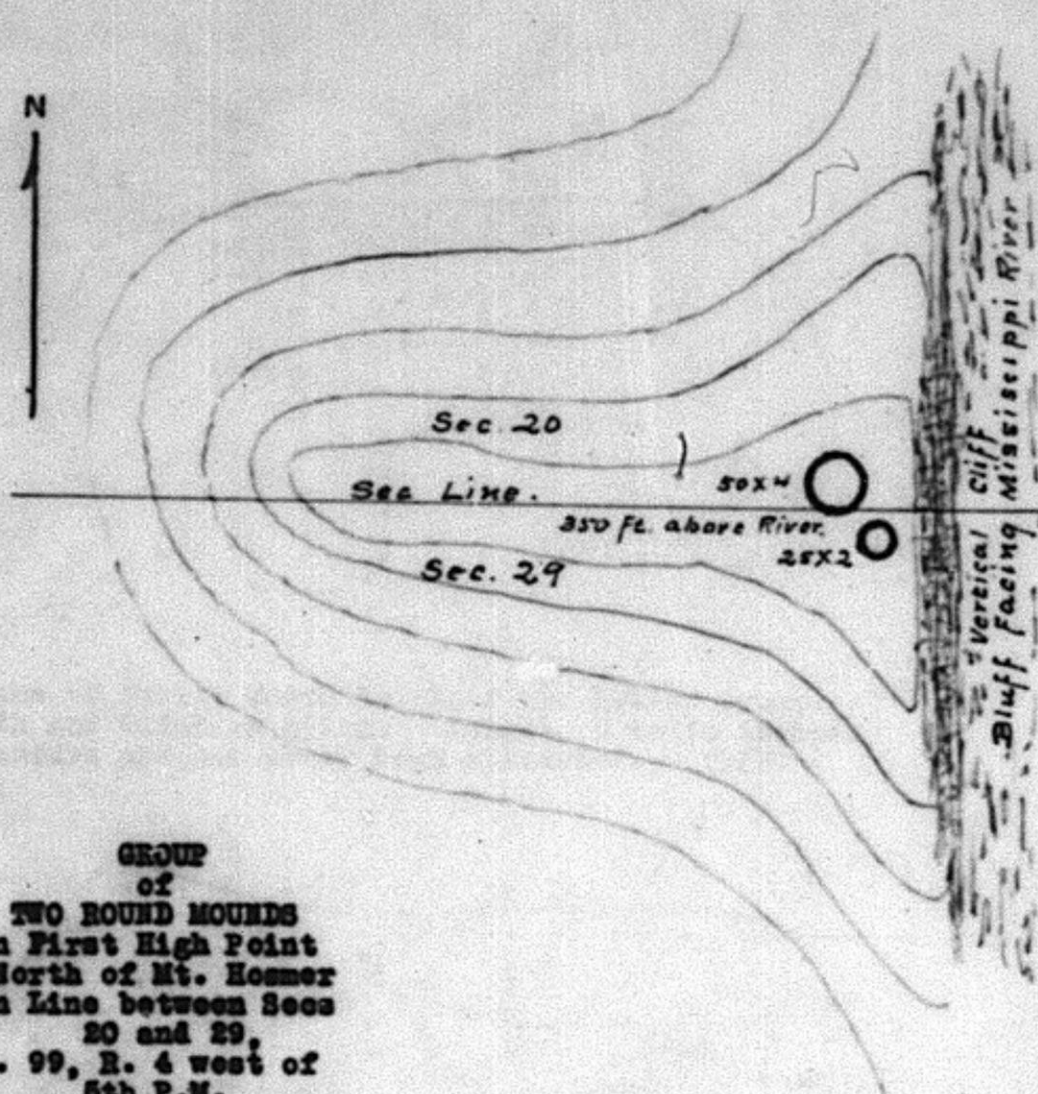


MOUND GROUP on BLUFF, WEST of SOUTH LANSING.

Survey by Ellison Orr, 1910.

Deep, narrow, tributary Valley -
Parallels Canyon of River.

N

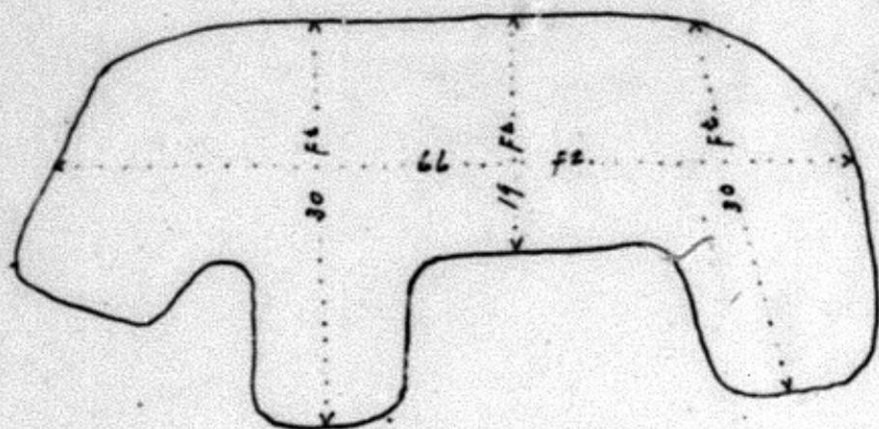


GROUP
of
TWO ROUND MOUNDS
On First High Point
North of Mt. Hosmer
On Line between Secs
20 and 29,
T. 99, R. 4 west of
5th P.M.
Survey by Ellison Orr,
1912.

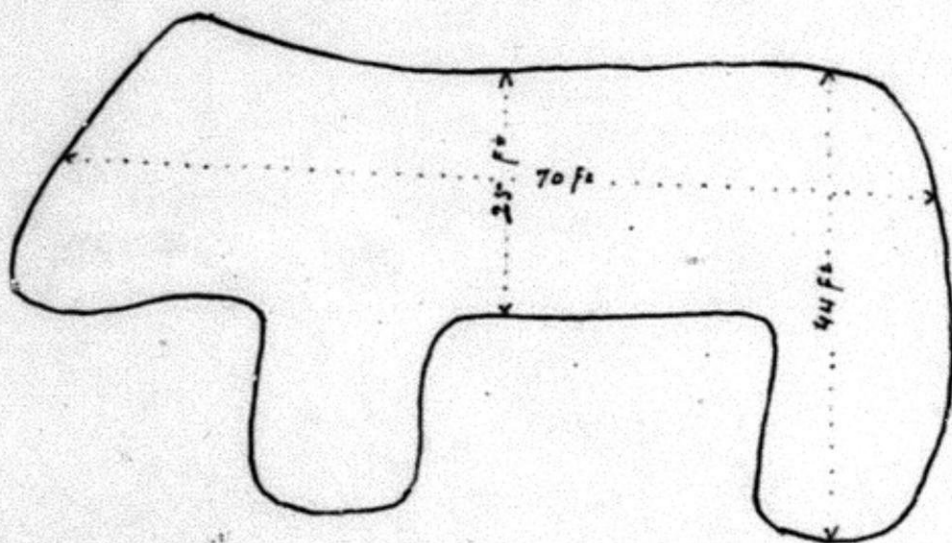


No. 2055 A

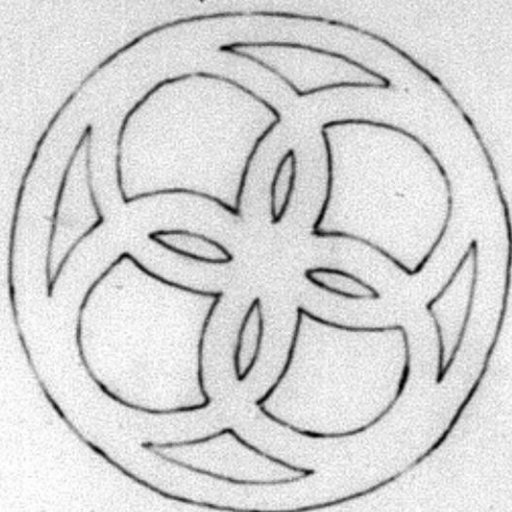
ARROW-HEAD from MOUND No. 2
of KELLER GROUP.



Outline of Effigy Mound No. 1 of the Keller Group.
Length and Width as given. Height, 8 to 10 inches.
In Pasture and has never been Disturbed. 1912.

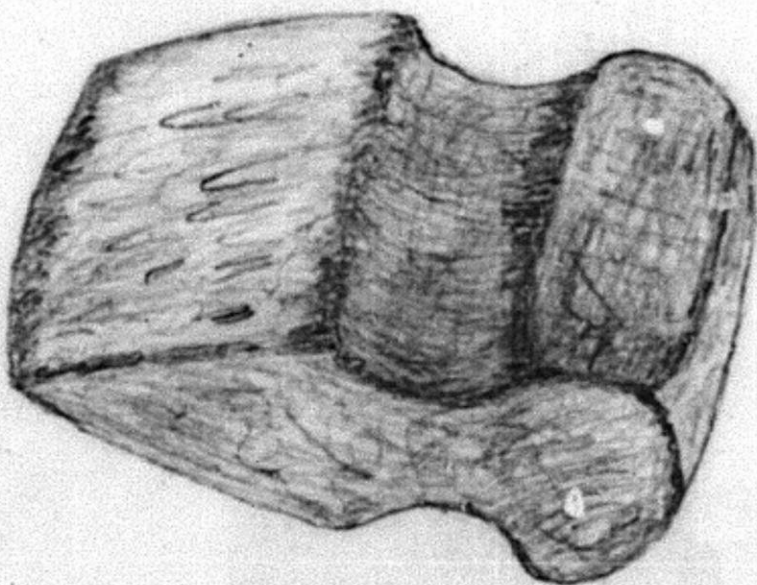


Outline of Effigy Mound No. 2 of the Keller Group.
Length and Width as given. Height, 2 ft.
This Effigy lies north-east of Effigy No. 1 and both face
easterly and lie on right side.



Bishop's Cross and "Wheel" Ornament of thin sheet copper. Found with skeleton in Gravel Pit west of Depot Lansing, Iowa. July, 1912. Indian burial but ornaments of white man's make. *Found by Fred Orr.*

Grooved Axe of Greenstone. Picked up on Front St., Lansing, Iowa, five blocks north of Main. Oct., 1912. Dimensions, 4 X 2.5 X 1.75 inches.



Finely wrought Arrow-head of whitish Chert clouded with a darker shade. Notched, with a curved base. Dimensions, 1.9 X .9 X .12 inches. Picked up on river bank at Lansing, Iowa., 1912.



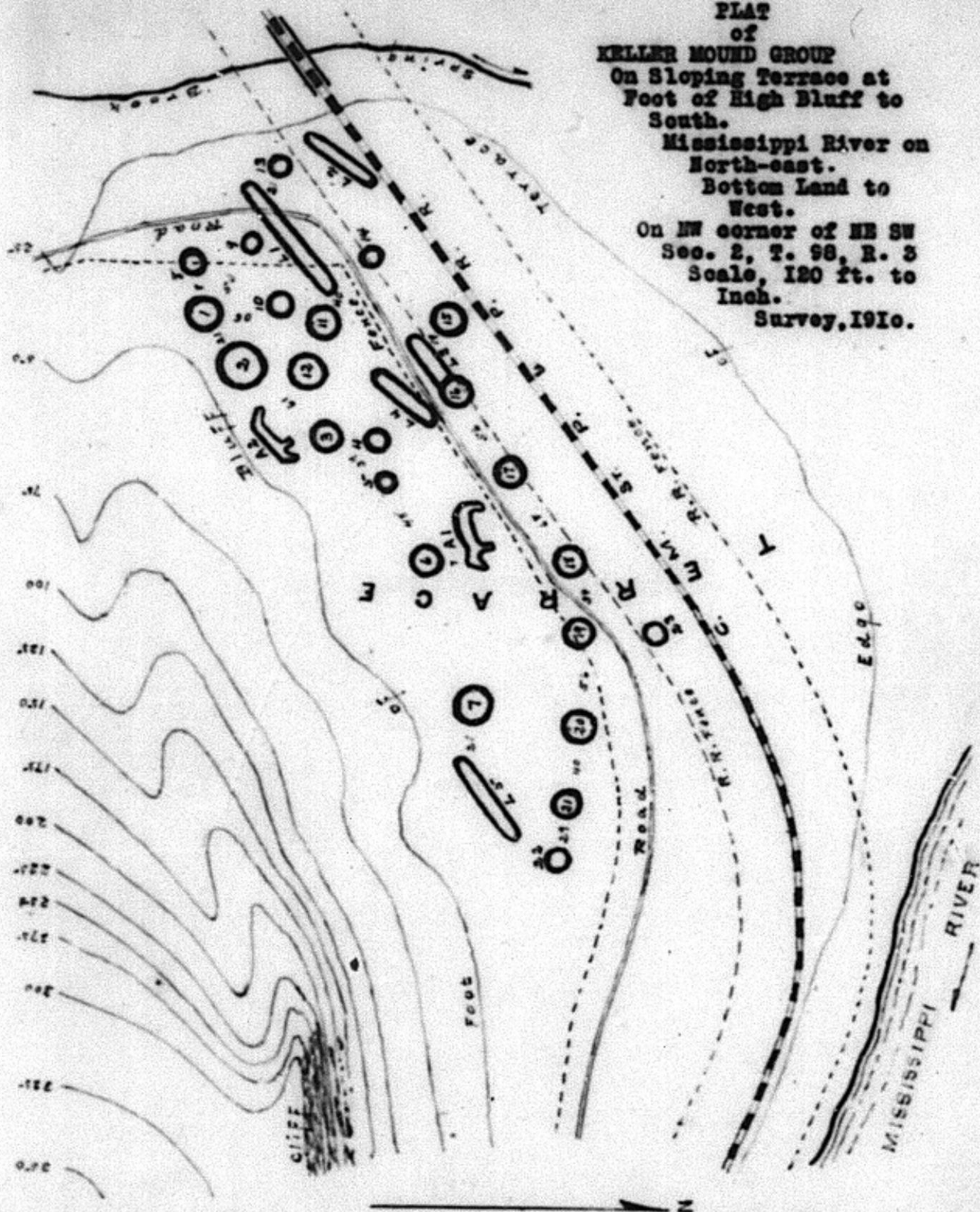
Photograph of Funeral Pot,
Actual size.
From Mound No. 2 of Kel-
ler Group of Mounds.

Photograph of same Pot,
from opposite side.

No. 98 of E.O. collection.



PLAT
of
KELLER MOUND GROUP
On Sloping Terrace at
Foot of High Bluff to
South.
Mississippi River on
North-east.
Bottom Land to
West.
On NW corner of NE SW
Sec. 2, T. 98, R. 3
Scale, 120 ft. to
Inch.
Survey, 1910.



ARROW SHAFT REDUCERS OR SMOOTHERS.

ARROW SHAFT REDUCERS OR SMOOTHERS.

Some years ago I purchased from a farmer living on the Upper Iowa (Oneota) River, among other things, an arrow shaft reducer or smoother, roughly quadrangular in its cross section of 2 X 1 and 1/4 inches and measuring 6 and 1/2 inches in length.

The back is slightly convex, the face flat.

Running lengthwise of the middle of the face is a groove 5/16 inch wide and 2/16 inch deep. Adhering to the sides and bottom of this groove are small patches of some substance that appears to have been used in the smoothing process which shows under the magnifying glass the marks of longitudinal rubbing.

The implement is of a rusty brown color and consists of quartz sand, with now and then a speck of mica, cemented by what appears to be a coat of dirty lime spread over the individual grains, filling the interstices and causing them to adhere very firmly.

So well cemented is the sand that grains can not be rubbed off by hard pressure of the thumb.

There may be some iron oxide mixed with the lime.

The exact locality where this field find was picked up is not known except that it was on the terrace or bottoms of the Oneota.

Later I found one of these smoothers in the cave in the escarpment of the Oneota limestone running along the bluff tops in the SE of Sec. 36, T. 100, R. 6, and just to the west of the old May Stone House.

I have also a piece two inches long broken off the end of a somewhat larger implement than the first described above.

This last is unfinished as there is no groove. It was a field find of the Oneota valley but the exact locality where found is unknown.

Several years ago Mr. R. H. Thompson, of New Albin, had a horse suddenly taken sick while driving along the road just west of where the State Line and Iowa River roads fork.

Before any help could be gotten the horse died and in digging a pit by the roadside in which to bury it he discovered a cache of mortars, mullers or grinding stones, mauls, spades, etc.

This was about one-half mile south-west of New Albin and on the New Albin terrace.

Among the material recovered were two pairs of arrow shaft smoothers of an unusually large size.

These were roughly half-round pieces of sandstone consisting of rather sharp grains of fine quartz sand cemented together by what appears to be lime.

Both pairs have a length of ten inches. Each of the larger pair is two and one-half inches wide and one and three-fourths inches thick. Each of the smaller pair is two and one-fourth inches wide and one and three-fourths inches thick. On the flat side of each piece of both pairs, running lengthwise in the center is a half-round groove 5/16 inches wide and 2/16 inches deep.

The flat faces are not exactly flat, the one being slightly concave, the other convex to fit it. The one fitting the other perfectly. This condition evidently has been brought about by rubbing the two pieces together, the contacting parts being fresher looking than the rounded sides, ends or backs, and also smoother.

We have seen in the hands of other local collectors, some three or four small or broken specimens of this type of implement and of the same material, all from the valley of the Oneota.

Small flat pieces of sandstone, around three inches across, having small shallow grooves irregularly across the flat sides, and which were probably used as smoothers, are picked up occasionally on the old camp sites.

On page 314 of the Stone Age in North America, by Moorhead, is an illustration of a pair of smoothers of the type first above described, about four inches long, from a mound in North Dakota.

July 30, 1928.

① Sinew reducers

In our work excavating the Burke's Mound and Woolstrom prehistoric cemeteries, and the "Old Fort" on the Lane Farm Terrace, on the SW Sec. 36, T. 100, R. 5 west of the 5th P.M., during the summer of 1936, under project 962 of the Iowa State Planning Board, we found several pieces of not very well shaped smoothers of both types, none of the first exceeding 3 in. in length.

Also in the collection of Mr. M. E. Hill who lives on the upland at the confluence of Waterman Creek and the Little Sioux, in O'Brien county, which we examined in 1934, there is a small piece of the first type, a surface find, which may be either Siouan or Mill Creek, - probably Siouan.

Dec. 15th, 1936.

1937

With muller, shoulder-blade digging implement, fragment of the so-called "cell-tempered" pottery, and a fine, - almost curved, - flat base monitor pipe, found in different places in Mound No. 26 of the New Galena Mound Group, at the natural level of the terrace, was a 2.8 in. long, 1.5 in. wide and .6 in. thick piece of the end of a sandstone arrow-shaft smoother.

The groove on the flat face is .2 in. deep and .2 in. wide and instead of being "half round" is V-shaped.

Because of this shape it could hardly have been used for smoothing and rounding arrow shafts but might have been used for work on sinews.

No. 352, 1.5 X 1.5 X .8 in., also a piece of the end of an arrow shaft smoother, with a "half round" groove .3 in. wide and .1 in. deep is a field find from the terraces of the Upper Iowa River.

Francis LaFlesche, himself an Omaha Indian, in the Annual Report of the Smithsonian Institution for the year 1926, describes in an excellently written article, the making of a bow and arrows by that tribe, when, before the coming of the white man, these were the chief weapons used in war and the chase.

Bows were made of ash, white elm and ironwood, arrows of ash and dogwood.

Different parts of the work were done by different ones, one person making the bow, another the string from "the sinew taken from the muscles lying on either side of the spine of the buffalo."

In making the arrow two or three experts might be employed. One roughing out the shaft and with the arrow shaft smoother making it uniformly cylindrical and straightening it, after heating it by the fire, with a deer's horn through which a hole had been drilled.

Another made the three irregular grooved lines whose purpose was to keep the shaft from warping.

Then followed the feathering and fastening on of the head.

In describing the use of the smoothers he says:

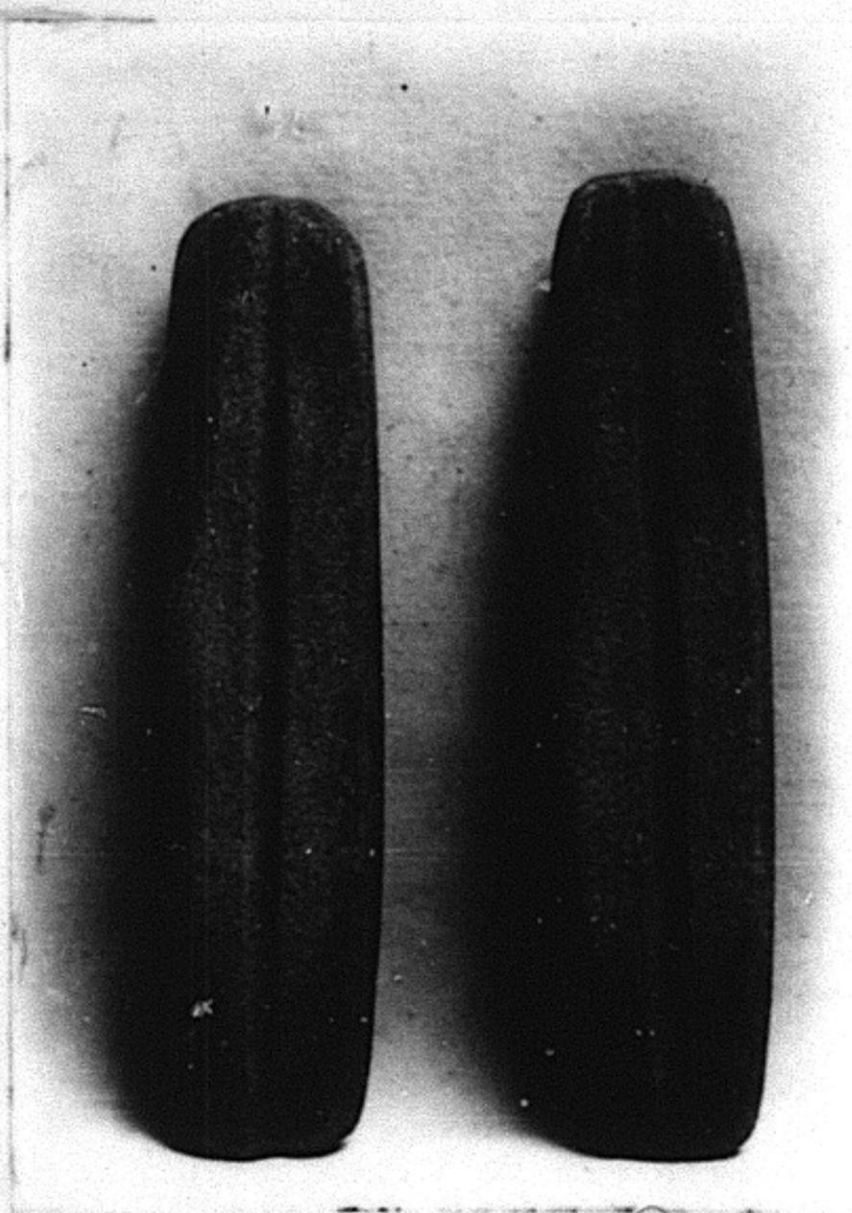
"A good arrow maker aims to make the shaft as nearly cylindrical as possible. To accomplish this he holds the shaft in the left hand between the sandstone polishers, each piece of which is grooved lengthwise, and gives the stick a whirling motion by rolling the end of it back and forth on his thigh with the palm of his right hand. He shifts the polishers along the shaft in order to keep it uniform in size. When one is polished he works in the same manner on the other end, until the full length of the shaft is round, smooth and uniform."

Facing page 884 of "Arrowpoints, Spearheads and Knives" by Thomas Wilson, one of the papers in the U.S. National Museum Report for 1897, is a picture of two arrow-shaft smoothers.

One of these is narrower and shorter than the other. They are from Cherokee, Iowa. Wilson says, "Similar ones have been found in other localities".

On page 46 of No. 1, Vol. XVIII of the Nebraska History Magazine, is a photo. of an arrow-shaft smoother. The writer of the article on the Leary Indian Village excavation, where the piece was found, calls it a "grooved sandstone abraider."

This site, in Richardson, the SE county of the state of Nebraska, shows a culture very closely related to the Oneota aspect of the Upper Mississippi culture as found in the typical locality, the valley of the Upper Iowa (Oneota) river.



Photograph of the grooved sides of the two pieces forming one pair, Nos 330 and 331, of the large arrow shaft smoothers from cache found by Mr. R.H. Thompson near New Albin, Iowa.
One-half actual size.



Photograph of the back sides of the two pieces forming one pair, Nos 330 and 331, of the large arrow shaft smoothers from cache found by Mr. R.H. Thompson near New Albin, Iowa.
One-half actual size.

Finding of a Cache of Arrow-shaft Smoothers.

Some days ago, Allan Bublitz, a fox hunter this winter when jobs for the unemployed are hard to get, came to me for information about a curious find which he had made. Like Othere, the old sea captain, he held in his hands the proof of the strange discovery.

With the help of his hounds, he told me, he had secured twenty-three fox pelts so far this winter, - sixteen gray and seven red.

This was in Feb. and since then he undoubtedly has gotten others.

One of his quarry, tired out by the long run, when chased by the dogs, had "holed up" in a narrow crevice in a ledge down on Silver Creek in French Creek, of this - Allamakee - county.

When a fox takes refuge from his pursuers in a place where he can not be gotten at by the dogs or hunter, he is secured by placing many traps so arranged that he can not come out without getting caught.

While Bublitz was scratching around in the earth and leaves at the entrance, setting his traps, he uncovered a pair of perfect sandstone arrow-shaft smoothers. He did not know what they were and concluded that he would "show them to someone that did know."

He had never seen anything like them before. For that matter there are many archaeologists who have not either.

The two pieces, # 2123 of the Collection, are each 9.0 in. long, 2.0 in. wide midway between the ends and 1.5 in. at either end, and 1.3 in. thick. One side - the face - is flat with shallow longitudinal grooves .15 in. wide and .05 deep running the whole length of each. The remaining three sides make an approximate "half round".

The original light brown color of the pieces is changed on the outside to almost black and there are lichens on the end of one that has been exposed to the weather. On the surface the cementing matter holding the grains of sand together has been considerably dissolved away.

The last Indian occupants of the Upper Iowa valley were the Winnebago who were there from 1840 to 1848. As this tribe was then well supplied with the weapons and utensils of the white man, and the use of bows and arrows well on the decline, it is hardly likely that these smoothers were cached by some older member of that tribe in a crevice a mile away from their camp sites on the bottoms of the Upper Iowa, and who for some reason never returned for them.

Since it is quite well settled that the people of the Oneota culture, who preceded the Winnebago, contacted the white traders about the beginning of the 17th century and left the valley of the Upper Iowa not long after, it is more than likely that one of those people cached the pieces.

If not, and they were left by one of the Algonquins who preceded the Oneota, then they would be much older.

The Bureau of American Ethnology, in Bulletin No. 30, on page 92, figures a pair of arrow-shaft smoothers from a grave in British Columbia. The dimensions are not given, but as in the Allamakee specimens the groove is about one-seventh of the width of the face, and on the one illustrated it is about one-sixth, the other dimensions - the length and width - are probably about 7.5 - 8.0 X 1.75 X 2.0 in.

These British Columbia pieces differ from the Iowa in having the groove diagonally across the face. The Bureau calls these arrowshaft rubbers.

Moorehead, on page 314, Vol. II of his Stone Age in North America, figures a pair from near the surface of a mound in North Dakota. These judging from the width of the groove were about 7.5 in. long by 2.5 in. wide.

This pair differ from the Allamakee county examples in having the face noticeably oval - being twice as wide at the center as at the ends.

As this last Allamakee county pair and the second pair found by Thompson in the New Albin cache, together with one smaller single but whole piece, and several broken pieces, will become a part of the collections of the State Historical Society, they, with the pair from the Thompson New Albin cache, already in the Society's collections, will make a fine display of this type of implement.

Waukon, Iowa, April 15th, 1937.

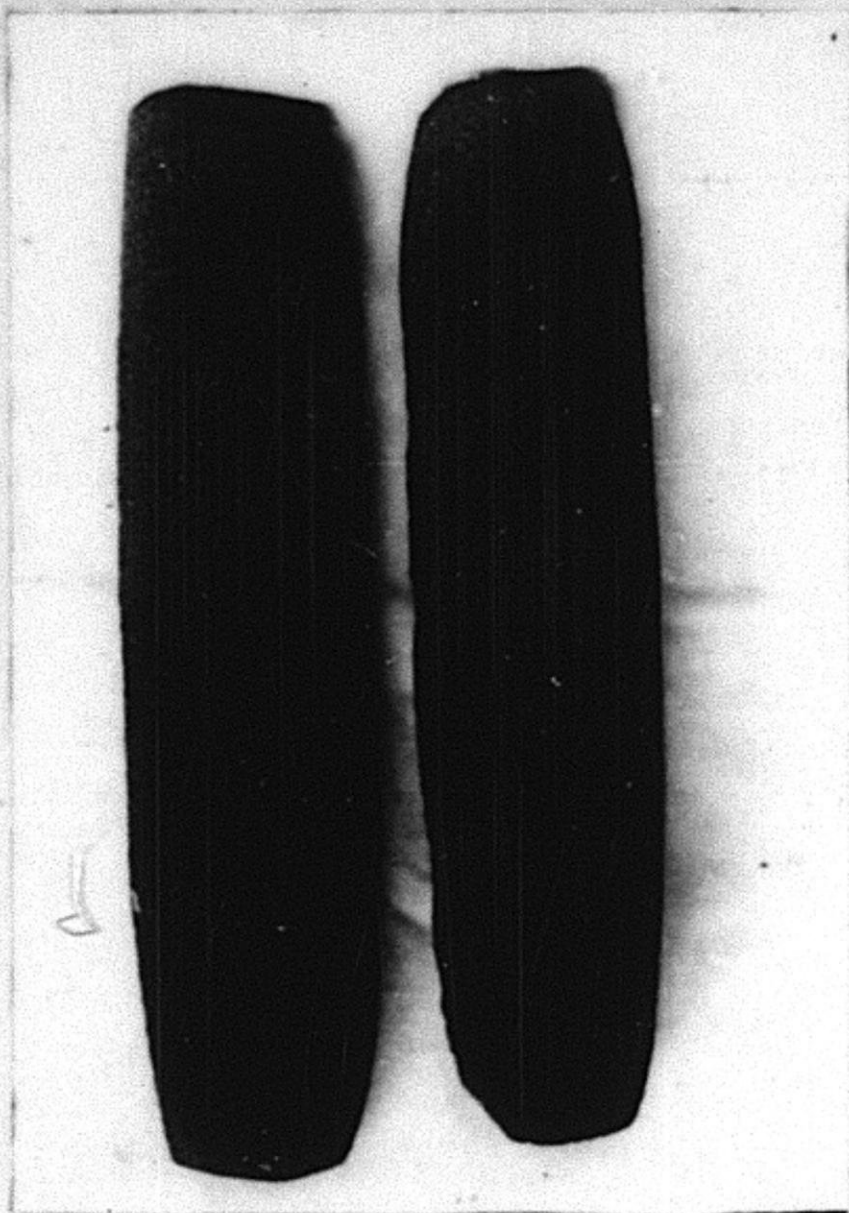
In the refuse pits encountered in the trenches excavated in the "Old Fort" on the Lane Farm Terrace on the SW of Sec. 36, T. 100, R. 5 west, during our work there in the fall of 1936, we found occasional pieces of broken smoothers of the regular type, 2 - 4 inches long, but running about two-thirds the regular size in width and thickness.

One complete one having a length of four, width of two and one-half and thickness of one and one-half inches - an apparent anomaly - was found.



Face of Pair of Arrow-shaft Smoothers found by Allan Publitz
cached in crevice in ledge at foot of Bluff on east side of
Silver Creek in French Creek township, Allamakee county, Iowa.

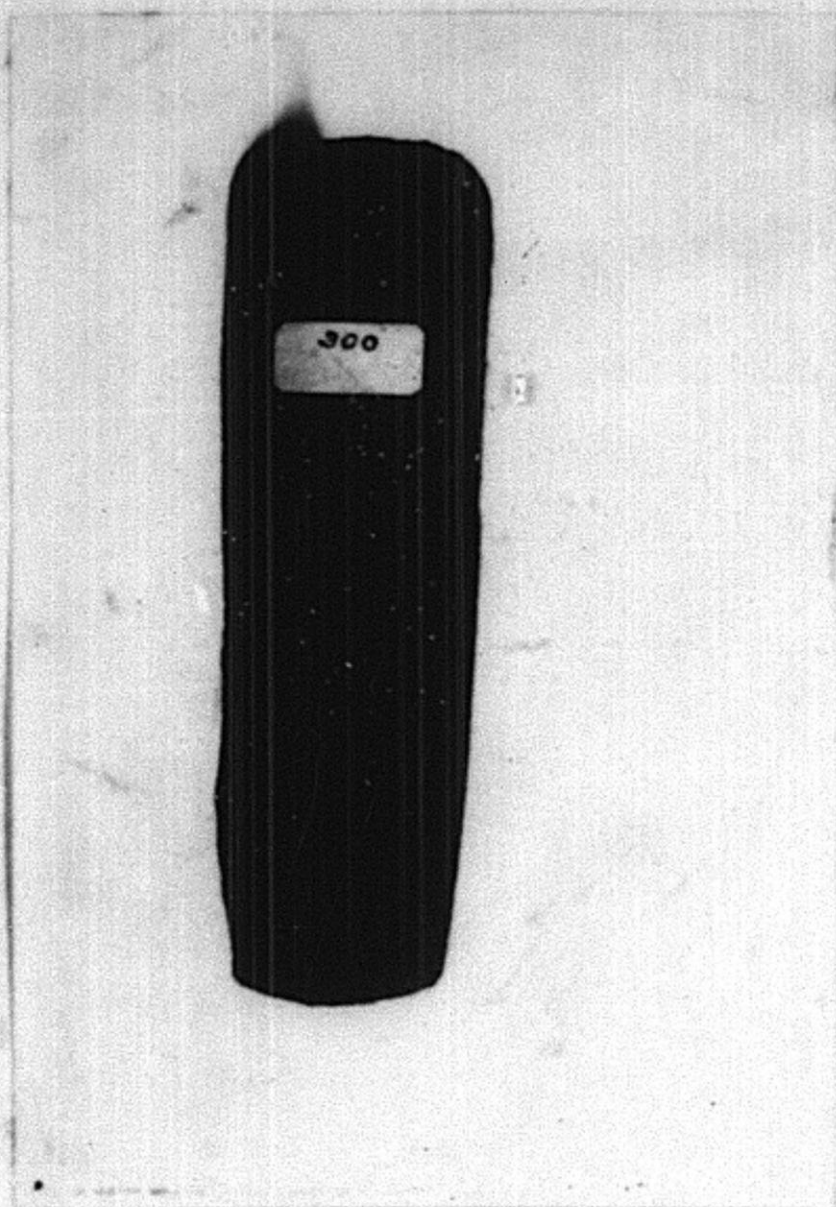
Mr. B's hounds had chased a fox into the crevice beyond reach.
In setting traps for it he uncovered, in the loose ^{parts} of the floor,
the smoothers. Eight in. long, 2 in. wide and 1.4 in. thick.
Groove, $\frac{1}{4}$ in. wide and .1 in. deep.



Reverse (back) side of Pair of Arrow-shaft Smoothers shown on
Preceding Page.

300

Photograph of grooved side of small arrow shaft smoother
No. 300, first described in this paper, field find.
Oneota River valley. Three-fourths actual size.



Photograph of back side of small arrow shaft smoother.
No. 300, field find, Oneota River valley.
Three-fourths actual size.

ENCLOSED AREAS.

A Paper Covering Work Done on Earthworks of this Type up to the Year 1928. Descriptive Text and Plats prepared from Surveys and Investigations made by the Writer covering a period of over Fifty Years.

Waukon, Iowa, July 30th, 1928.

By Ellison Orr.

ENCLOSED AREAS.

Archaeologically speaking an Enclosed Area is essentially a piece of ground surrounded, or nearly so, by an embankment of earth, with usually a ditch either on the inside or outside of the same.

There may be or may not be, one or more gates or openings in the embankment with corresponding breaks in the ditch.

The amount of land enclosed may be all the way from a few square rods to over one hundred acres, and may be artificially leveled, as is usual with the smaller areas, or may be the undisturbed natural surface.

The embankment may have a height of from one foot, or even less, to twenty or more, with a proportional width at the base usually of about twice the height.

In outline Enclosed Areas may be very regularly circular, oval or rectangular, or they may be very irregular, conforming to the natural inequalities of the surface on which they are located, such as the edges of plateaus or terraces. Or they may be irregular for no apparent reason.

The embankments enclosing rectangles, regular or irregular, or large many sided areas, may have a direction at any angle to the cardinal points.

Those on the bluff tops, large and irregular, are believed to have been real forts or fortified camps.

The smaller and more regular works, usually found on the river terraces, - rarely on the flood plains or bluff tops, - are believed to have been erected for ceremonial purposes.

The works at Marietta, Ohio, are of the latter type, those at Ft. Ancient, Warren county, same state, of the former.

Ft. Ancient has not far from four miles of embankment, a part of which is from eighteen to twenty feet high.

Ohio appears to have been the center of the culture whose chief characteristic, as we know it, was the erection of this type of earthwork. The bordering states of West Virginia, Kentucky and Indiana afford examples but in much less abundance.

In other states they are very rare and crude.

Maps of over 7700 earthworks in Minnesota show only twenty-two enclosed areas of all types. surveys

So little has been done in Iowa in the way of making and publishing reports, that it is impossible to say to what extent they are found in it.

Along the Oneota or Upper Iowa River, in Allamakee county, nine have been found. It is our purpose in this paper to briefly describe these so far as can now be done, with maps of those which have not been destroyed by cultivation.

In doing this we have stressed somewhat the surrounding topography and their location with reference to other evidences of aboriginal occupation,

Following is a list of these Oneota valley Enclosed Areas, so far as known, beginning with the one located farthest up stream, and thence in their regular order towards the river's mouth;

Simonson's Ford	NW NE Sec. 20, T. 99, R. 6
Lyons	SE NW Sec. 3, T. 99, R. 6
New Galena	SW SE Sec. 2, T. 99, R. 6
Bulman	SE SE Sec. 31, T. 100, R. 5
Kumph	SE NW Sec. 5, T. 99, R. 5
Ratcliffe	SE NE Sec. 4, T. 99, R. 5
Lane	SE SW and SW SE Sec. 36, T. 100, R. 5
Hartley (Rectangular)	NE NW Sec. 1, T. 99, R. 5
Hayes (?)	SE NW Sec. 15, T. 100, R. 4

SIMONSON'S FORD ENCLOSED AREA.

The Simonson's Ford Enclosed Area is located on a terrace on the right bank, and inner side of a great westerly curve of the Oneota River, on the NW NE of Sec. 20, T. 99, R. 6 west of the 5th P.M.

The surface of this terrace is very level with an area approximating one-half acre, and back of it to the east the bluff slopes with a not difficult grade up to the general level of the Oneota peneplain and general level of the upland country.

Across the forty rods or so of bottom land to the west, the very precipitous, picturesque bluff in the form of a great semi-circle, rises to a height of three hundred feet with vertical escarpments of Oneota limestone at the top, and against the foot of which the river flows.

A private but well used road comes down the east bluff back of the terrace and crosses the river about one-fourth mile up stream from the earthworks.

The surface of the terrace is covered with a species of black or yellow oak, - scraggly second growth timber. Under this there is no brush of any sort and very little vegetation except mosses and lichens.

The Enclosure consists of an almost exactly circular embankment, twelve feet wide and eight to ten inches high.

In this there are no openings and no ditches either inside or out.

Neither are there any pits or elevations within the circle which encloses a perfectly flat area thirty-six feet in diameter.

Forty feet to the north-west lies a bird effigy with head to the north-east. The head and body of this have a total length of fifty-four feet, and from tip to tip of the expanded curved wings is seventy-eight feet. The body part has an elevation of three feet above the natural level, and the tips of the wings, one foot.

For a better understanding see general and detail maps.

Waterloo Twp

THE NEW GALENA ENCLOSED AREA.

On the SE SE of Sec. 35, T. 100, R. 6 west of the 5th P.M., Hanover township, on a high and narrow divide between Waterloo and Bear Creeks, is located the aboriginal earthwork which we have named after the forgotten pioneer town that once stood on the river bottoms below.

As the land on the bluff top has never been cleared of trees and consequently not cultivated, this earthwork is still in a good state of preservation and probably has changed but little in appearance since it was constructed.

Flowing south through the east tier of sections in Waterloo township, Waterloo Creek, at the quarter section corner between Sec. 35 and 36, makes an abrupt turn to the west, flows in that direction for half a mile, then bending again abruptly to the south and south-east, in a quarter of a mile empties into Bear Creek, which stream continuing in the same direction, empties into the Oneota river one mile distant from the junction of the smaller stream.

The high divide or promontory lying between the two creeks rises to an elevation of three hundred feet above the bottom land, its crest being at the general level of the Oneota limestone peneplain. At its top it is about a half a mile long, and but a few rods wide where it joins the main body of the upland lying to the east and directly north of the bridge across Bear creek on the Dorchester Road (Primary Road No. 13) and gradually tapers to a point at its western extremity, with sides sloping steeply down to the bottom lands of the two creeks.

The north side is now , and seems always to have been well timbered, while the south side is bare.

At one thousand feet from the western end, and at a point where the flattened crest of the divide is scarce ten rods wide, occurs the earthwork which is irregularly oval in outline, being approximately one hundred and forty feet in its greatest or east and west, - outside to outside, - diameter, and one hundred and twenty-five feet in its least or north and south, - outside to outside, - diameter.

It is an earth embankment about ten feet wide and from one to two feet high, with a ditch of about the same width as the embankment, on the inside, and about as deep as the same is high, from which the earth which forms the embankment was evidently taken. At the east and west ends opposite to each other are gaps in the embankment, eighteen feet wide at the east end twenty-eight feet wide at the west end.

Where these gaps occur no ditch was excavated. With the exception of these gaps the embankment and ditch were continuous and quite uniform as to height, width and depth, and enclose a comparatively level, irregularly oval, piece of ground one hundred by ninety feet.

Outside of the embankment is no ditch.

From this earthwork a section of the country that has been found very rich in archaeological material is to be seen.

Directly south, across the valley of Bear Creek, is the "Hog Back" between that creek and the Oneota,

three-quarters of a mile long east and west, and at many places scarcely wide enough at the top for a wagon track. At the south side this long divide pitches steep and grass-covered to the Onyota, on the north nearly as steeply, but timbered, to Bear creek. Under its east end a seventy feet high terrace, thirty rods long, has many graves and fire pits, while at points along the crest where it is not too rocky, notably at the "angle" and on the eastern slope, skeletons with pottery, flints, beads and pipes have been unearthed.

Looking south-west, half a mile away, where the valleys of Waterloo and Bear creek meet, is Burke's Mound, an oblong conical natural mound of clay and sand, rising sixty-five feet above the bottoms, from which flints, and pipes have been dug, while in the same direction a mile farther away can be seen the west end of the plateau on which is located the Lyons Enclosed Area.

To the west, just across Waterloo creek, is the narrow clay "bench", from which, in an area of not more than a dozen square rods, nearly that many perfect specimens of pottery were disinterred.

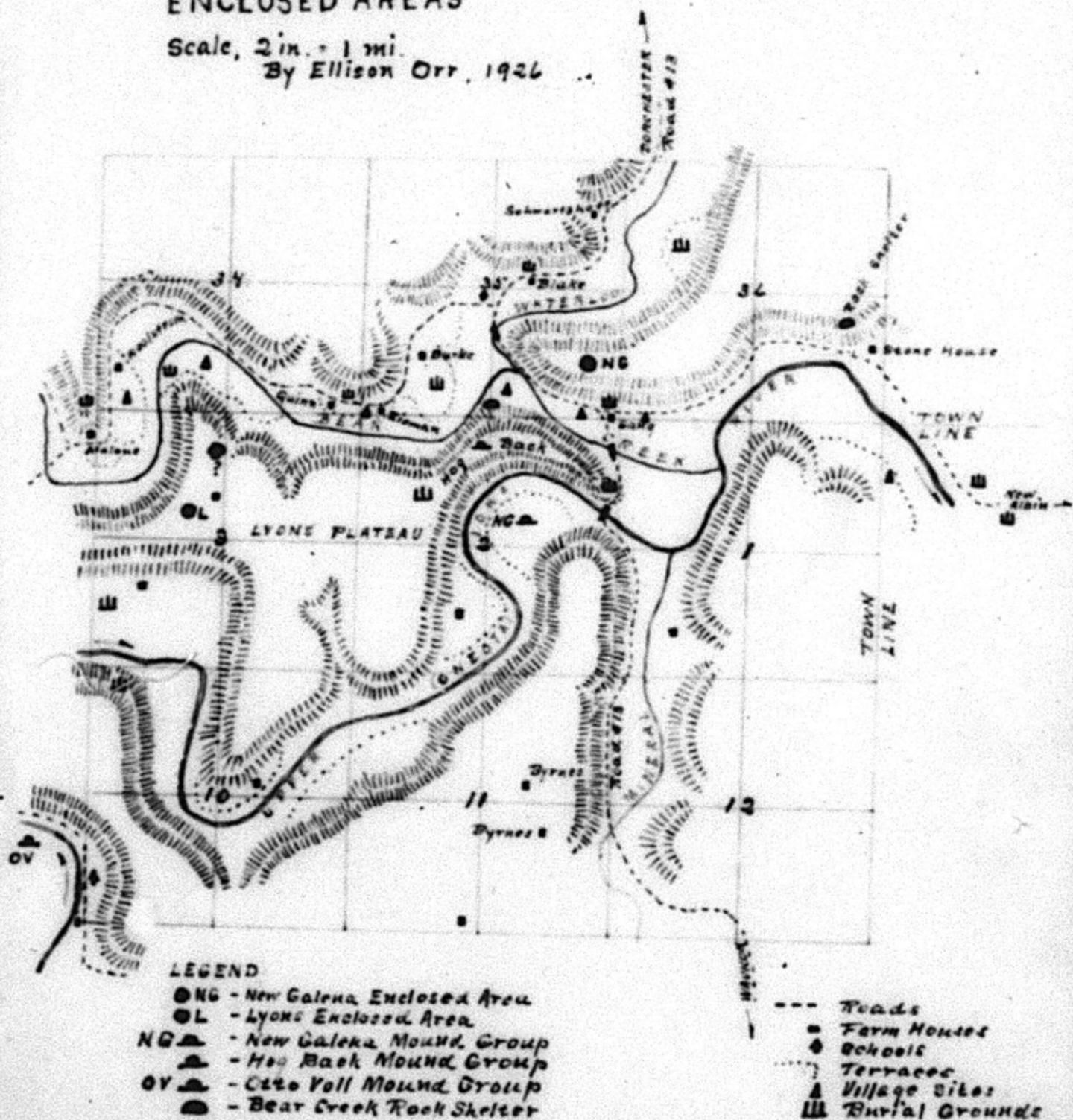
While to the north, up Waterloo creek, could be seen were it not for the timber on the north slope, the terrace remnants found so prolific of burial places and relics by the Tarrt brothers.

For a better understanding of this cartwork and others described see general and detail maps on following pages.

LOCATION MAP NEW GALENA and LYONS ENCLOSED AREAS

Scale, 2 in. = 1 mi.

By Ellison Orr, 1926



DETAIL
OF
SIMONSON'S FORD
ENCLOSED AREA
ON
TERRACE
RIGHT BANK
ONEOTA RIVER

1/4 MI. NW OF FORD

NW NE Sec. 20,
T. 99, R. 6

Scale, 1 in. = 50 Ft.
Elevations - inches
in circles



River
Bottoms

T
E
R
R
A
C
E



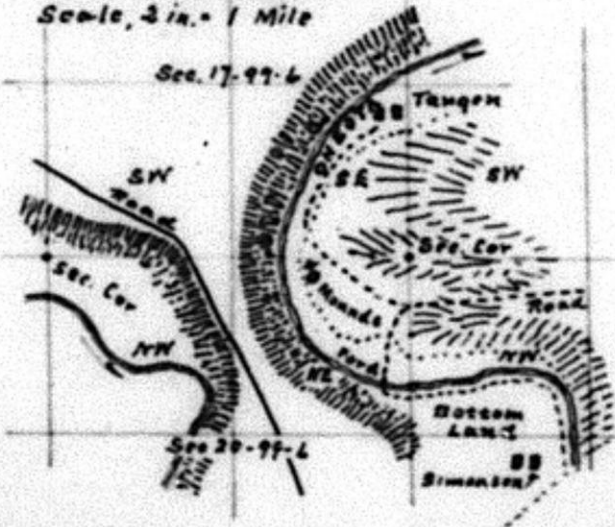
Scale 1 in. = 50 Ft.
Trees

Fence

1/8 Sec. Line

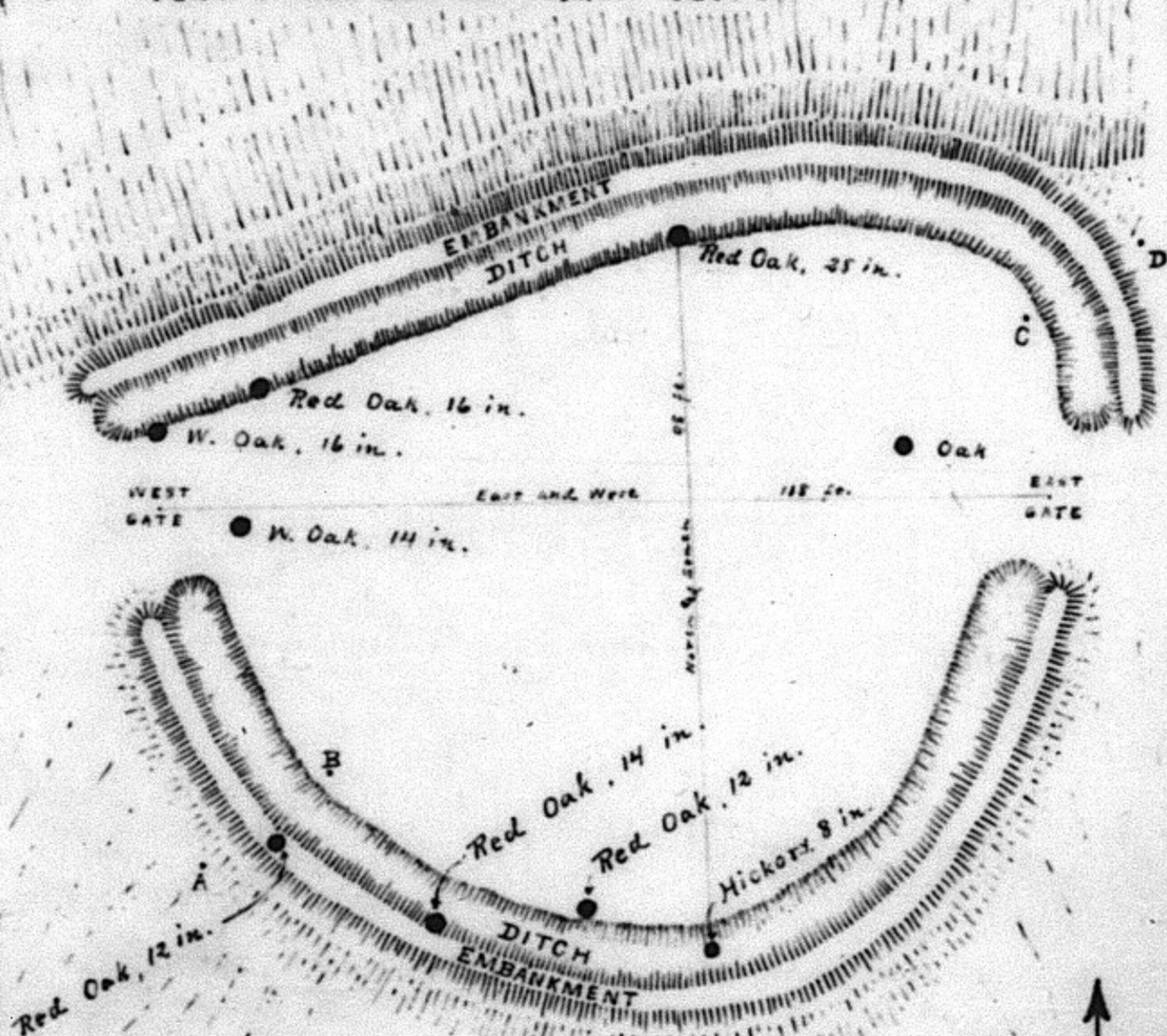
600 Ft. N. 60 1/8 Sec. Cor. 1

LOCATION MAP
Scale, 2 in. = 1 Mile



Survey by
Ellison Orr
1909

VERY STEEP WOODED NORTH SLOPE



DETAIL MAP
of
NEW GALENA

ENCLOSED AREA.

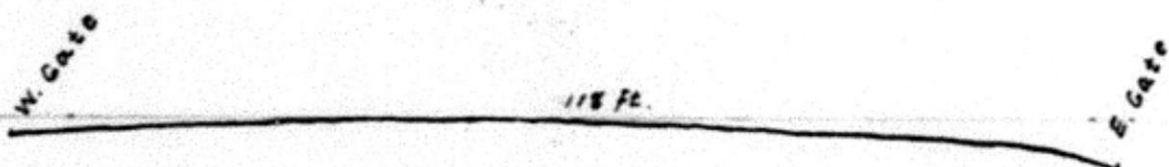
NE SE Sec. 35, T.100, R.6.

Survey by E. Orr
Sept 9 1924
Scale 1 in. = 20 ft.

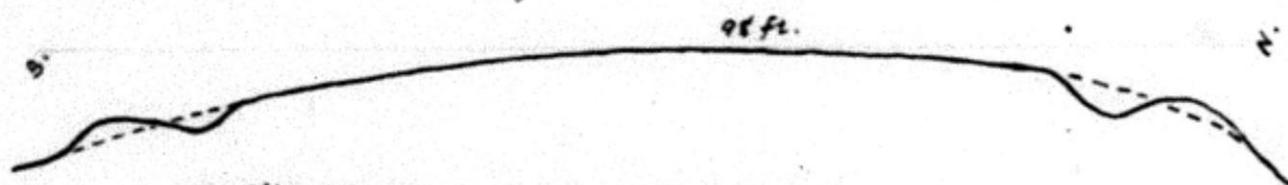
PROFILES OF NEW GALENA ENCLOSED AREA

Survey by Ellison Orr

Sept. 9, 1924



Profile center of West to Center of East gate.
1 in. = 20 ft.

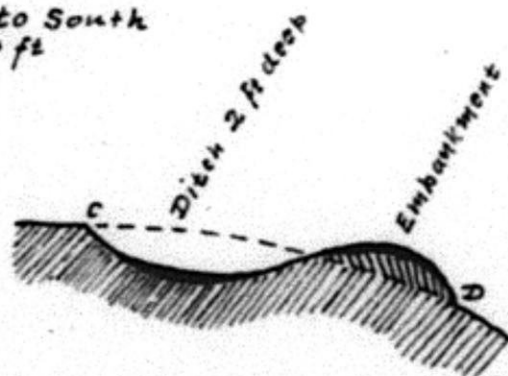


Profile across center, North to South
1 in. = 20 ft.



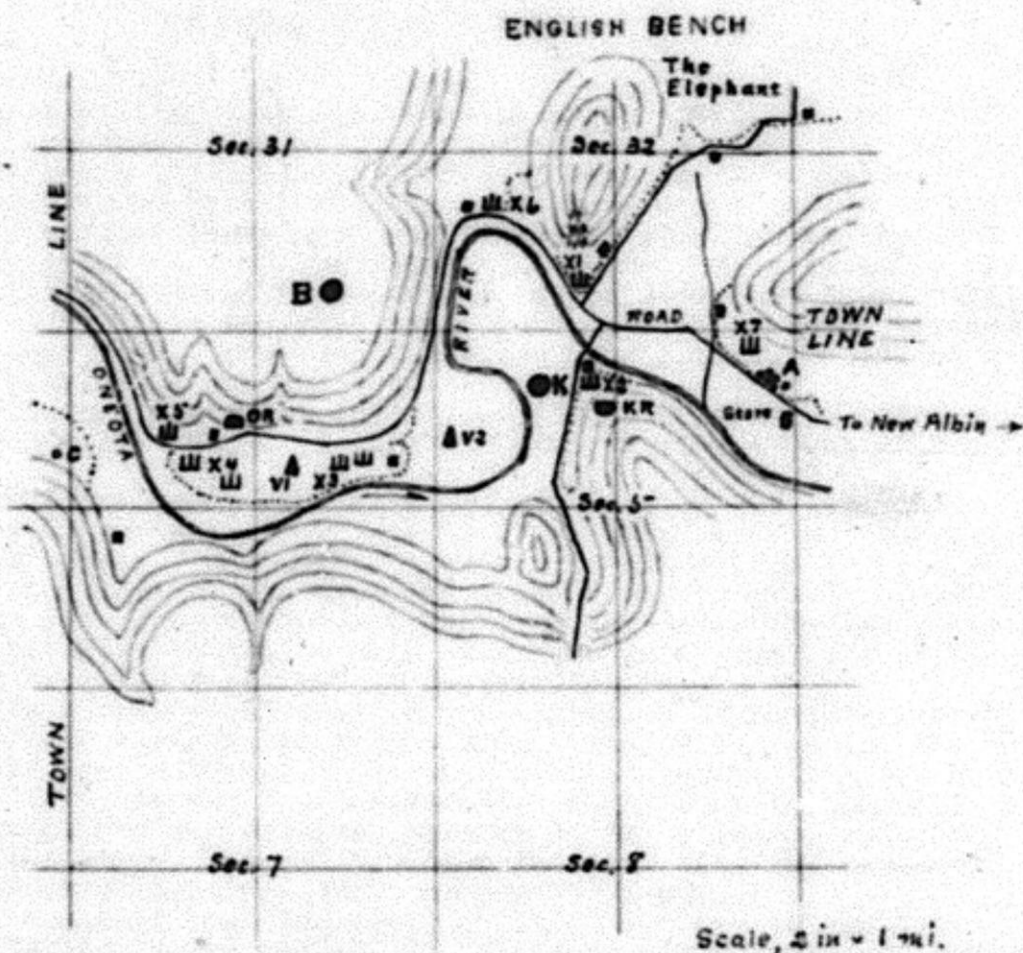
Vertical and Horizontal Scale
1 in. = 10 ft.

See Map preceding page.







Vertical and Horizontal Scale
1 in. = 10 ft.

See Map preceding page.



LEGEND:

- BO Bulman Enclosed Area, SW SE Sec. 31, T. 100, R. 5
 OK Kumph Enclosed Area, NE NW Sec. 5, T. 99, R. 5
 Saddler Cemetery Mound Group.
 Town Line Mound.
 Oregon Bench Petroglyphs on Ledge.
 Kumph Rock Shelter - Petroglyphs.
 X1 Elephant Burial Group - where Dragon Pipe was found.
 X2 Kumph Burial Group.
 X3 Oregon Bench Burial Group.
 X4 Oregon Bench Burial Group.
 X5 Gravel Pit Burial Group.
 X6 Bulman Burial Group.
 X7 Saddler Burial Group.
 VI, V2 Oregon Terrace Village Site.

THE LYONS ENCLOSED AREA.

We first visited this Enclosure about the year 1896 at which time the embankment was still easily traceable, that part on the west side being still a couple of feet high on the outside.

We can not now recall whether we noticed any evidence of a ditch or not or whether there were any traces of openings in the bank.

If the ditch were at that time at all noticeable we could hardly have failed to see and remember it. It is more than likely that the ditch, if there was one, was already filled in by cultivation. The openings might have been there too but these we would not have been so likely to have noticed.

We revisited this work again about the year 1910 in midsummer when the field in which it lies was covered with a crop of "tall corn."

It would have been difficult to have located the embankment at that time and we made no effort to do so as we were not intending to make a survey. We made a search for relics, and in hunting about in the corn on the site, we found a broken muller of greenstone and a roughly flaked out knife of micaceous western quartzite, apparently identical with some samples in our collection from the "Spanish Diggings" in Eastern Wyoming.

In 1924 we revisited it with the intention of making a survey but the field was covered with a heavy crop of clover and the outline could not be traced. At this time we talked with Mr. Lyons who then lived in the farm house about forty rods to the east, and whose father was the original settler on the plateau, and after whom it was named, and who had been familiar with the earthwork from boyhood when it was still covered by forest.

Mr. Lyons said that there was a ditch but that he could not remember whether it was outside or inside of the embankment, and could not remember whether there were openings or gateways or not. Again in 1927 we went back to make if possible a survey.

The field had just been planted to corn and was smooth and bare of vegetation but we found that no part of the earthwork could be traced, although we knew within twenty-five or fifty feet of where the entire embankment had been.

This work was irregularly oval. Its shortest diameter was around two hundred feet and the longest between two hundred and fifty and three hundred feet.

It lay within a few rods of the most westerly part of the plateau which contains around a section of land, quite level, and with precipitous sides down to the valleys of the Upper Iowa River on the south and of Bear and Waterloo Creeks on the north, and is joined to the main upland peneplain on the west by a narrow "hog back" isthmus.

At its north-east end it terminates in a cliff at the one-eighth section corner on the south line of the NW 1/4 of Sec. 2, T. 99, R. 6 west of the 5th P.M. From there THE "HOG BACK" runs north-east and then east to the New Galena bridge across the Upper Iowa River.

THE BULMAN ENCLOSED AREA.

This Enclosure like the Lyons and New Galena, was located on the bluff top, and from it as from the others, there was a fine and wide outlook.

The exact location of this earthwork can not now be determined, - even it is not certain just which "fort" it was on.

It was most probably on the most elevated part of the upland between Waterloo Creek and the Upper Iowa, on the SW SE of Sec. 31, T. 100, R. 5 west of the 5th P.M.

James T. Bulman, a former sheriff of Allamakee county, and whose boyhood home was the old Bulman homestead down on the river a half mile to the east, told me that when a boy out hunting the cows that ranged over the wild unfenced land on the hills, he would often pass this earthwork, and that he could never resist the temptation to race his pony round and round in the ditch inside the embankment.

It was he said, "Like a circus ring and he was a circus rider."

He thought that it was probably between one-hundred and fifty and two hundred feet in diameter, was circular and the banks a couple of feet high.

This "fort", as he called it, is now cultivated out of existence.

We tramped all over the field, on some part of which it located, in 1927, and could find no trace of it.

*and again in 1927.
No trace.*

THE KUMPH ENCLOSED AREA.

This was on the flood plain of the Upper Iowa River, on the right bank of that stream and near the center of the NW of Sec. 5, T. 99, R. 5 west of the 5th P.M.

Mr James T. Bulman, from whom I also got what information I have concerning this "fort", said that it was just on the river bank and was larger than the one on the bluff top (the Bulman Enclosure) to the north-west.

He said that the embankment was so high that it was difficult to drive a lumber wagon over it and through the ditch on the inside. That the embankment was probably around three feet high, that the whole earthwork was "round", and, may be, two hundred feet in diameter.

He could not recall whether or not there were any openings in the embankment.

Along here the river has for a long time been cutting away its right bank and adding to its low, willow covered left.

In 1927 we looked this location over very carefully, examining the river bank for any trace of it, but could find no indications of its site.

It may have been farther back from the river bank than Mr. B. remembered, and because of the plowing down by the farmer and the silting up by the river when in flood, (from eighteen inches to two feet in depth has been added to the soil of the bottoms in this way since the white man came,) it has been obliterated, or its site may have been entirely washed away by the river.

We searched the raw, nearly vertical bank, but could find no place where the pre-white-man black loam bulged upwards into the lighter colored recent silt, indicating an old embankment, and no pottery shards or camp refuse.

THE RATOLIFFE ENCLOSED AREA.

This earthwork was situated on the left bank of the Upper Iowa River, and according to Dr. W.T.Gilchrist who helped to "turn" the sod the year after it was broken up, on the NE NE Sec. 4, T. 99, R. 5 west of the 5th P.M.

It was he said a "perfectly round" embankment about one-hundred feet in diameter and a little over two feet high, and there was no ditch.

The bottom land here was prairie and the wild grass sod was broken up by J.G.Ratoliffe about the year 1867.

A relative of Dr. Gilchrist cropped this new land the next season and the Dr. then a boy, helped him, as stated above, to do the turning of the sod as the second plowing was called.

He said there was "lots of broken pottery inside the 'fort'" including many handles.

He does not remember that they plowed out any other "relics" in or about the "fort", as he calls it, but says that mortars, "grinding stones", axes, celts and flints were common finds anywhere on the bottom.

We visited the site of this earthwork the present (1936) summer but the river has cut into its bank here and the "old Fort" is gone.

There is a tradition that about one-fourth of a mile north of the Lyons Enclosed Area there was still another one, but of it we have been unable to get any definite information.

THE HARTLEY FARM ENCLOSED AREA.

That part of the terrace between Brown's Hill on the north and the Owl's Head on the south, and between the flood plain of the Upper Iowa on the west and the little valley and its lakelet on the east, resembles a low ridge connecting the two big, isolated hills, - they would be called buttes out west.

At about half way between these hills this ridge is crossed by the town line between Union City and French Creek townships, and just up against this line on the south side, in the NE NW Sec. 1, T. 99, R. 5 west of the 5th P.M., on uncultivated pasture land covered with scattering oak and birch trees, is the Hartley Farm Enclosed Area.

Inside the Enclosure are but two trees.

The embankment forming the sides of this Area are not well defined except on the east and south sides, where it has a width of about 15 ft., and a height of from 6 in. to 1 ft.

At the south-east corner about 50 ft. of the south end of the embankment on the east was not built. The east end of the embankment on the south and the south end of the embankment on the east, feather out on each side of this gap.

On the west side the embankment is so obscure that it is hardly discernable. In fact Ratcliffe did not see it and speaks of the area as being "three cornered".

The sides lie at an angle of 14 degrees to the cardinal points, the north and south sides having a NW and SE direction, and the east and west sides a NE and SW.

This lying diagonally to the world throws the north-west corner across the town line into Sec. 36, where cultivation has entirely obliterated it.

There is no ditch either inside or out.

Outside of the north-east corner is a shallow pit, 20 X 30 ft., and south of the embankment on the south side are two, and east of the east embankment, a third one, all of which are a foot deep in the center, and 15 ft. in diameter.

The earth from these pits was probably used in building the embankments.

A mound 15 ft. in diameter and 18 in. high lies in the north-east part of the enclosure. Forty feet to the south of this is what may have been an oblong, or possibly two mounds touching each other. Morris says that there were three mounds in the enclosure, which he excavated. In one he found human bones under a pile of rocks, and in the other, human bones but no rocks.

Two other mounds, 15 ft. in diameter, lie in the embankment forming the south side. They are a little higher and both have been excavated.

DETAIL MAP of
SQUARE ENCLOSED AREA.
HARTLEY FARM.

NE NW Sec. 1 T. 98 R. 5 West 5th 1200

SCALE, 1 IN. = 50 FT.



HEAVY SECOND GROWTH
TIMBER
ON STEEP SLOPE
OF TERRACE

FIELD

TOWN

Теное 204 ft.

LINE
Pie
20x20fe

Real Date 25 in.

ОБЪЕКТ
БИБЛИОТЕКА
№ 45, 164 А.
до 7 мес.

Around 15 in. high
20-22 in diam.
65 ft.

Red Oak, 12 in.

Embankment
S.W. 170 ft.
6 in. to 1 ft. high,
10 ft. wide.

Burr Oak, 5 in

7 ft. 1 ft. deep
12 ft. in diam.

Red Oak 24in.

Almond, 18 in. high
10 ft. in diam.

Alcornoque, 2 ft. high
15' x 6" in diam.

Pit. 1 ft. deep
15 ft. in diam.

Pic. 1 1/2. deep
18 ft. in diam

SCATTERING
SCRUB OAK

WOODED PASTURE

Survey by E. Orr
Nov. 21, 1925

THE LANE FARM CIRCULAR ENCLOSED AREA.

On that part of the Lane Farm Terrace lying north and north-east of Brown's Hill, at about eighty rods north-west of the Lane Farm Mound Group, and touching the east edge of that part of the Lane Farm Terrace, is the Lane Farm Circular Enclosed Area, or rather it was there, on the NE SW Sec. 36, T. 100, R. 5 west of the 5th P.M.

This was an embankment 25 to 27 ft. in width and 4 ft. in height, according to Col. Morris, who surveyed it in 1882, at the same time that he made the survey of the mound group, forming an oblong circle, except for about 100 ft. of the most easterly part which lies along the edge of the terrace, and which part was straight or slightly re-entrant.

Morris gives the north and south diameter, from outside foot of embankment to outside foot, as 277 ft., and 235 as the east and west from outside foot to outside foot.

At the south end of the straight or re-entrant part of the embankment it turns and continues south-westerly inside of the main circular part which here ends at the edge of the terrace, forming a curved entry-way between the two embankments, having a width of around 4 ft.

Except for the one-hundred feet along the edge of the terrace, there was, according to Morris, a ditch 5 or 6 ft. wide and 3 ft. deep, just inside the embankment and extending entirely around the enclosure.

Apparently the earth to form the embankment was taken, at least in part, from this ditch. There was also an excavation north of the circle and just outside the embankment, having the form of the new moon, and fitting against it, about 120 ft. from tip to tip of the horns, and 15 ft. wide at the widest part. This was probably a "borrow pit" from which earth was taken for a part of the embankment.

Col. Morris cross-sectioned the embankment in several places, he says, and found that on top of the original earth of which it was composed, there was a superincumbent foot or two of earth mixed with much camp refuse consisting of broken bones, pieces of shells, fragments of pottery and chips of chert and other material.

Over this was a foot of sand, evidently washed or blown down from the sand (Brown's) hill to the south-west, making the total thickness of the embankment, as given above, 4 ft.

With the exception of the camp refuse mentioned above, Col. Morris found nothing worth noting in or about this Enclosed Area.

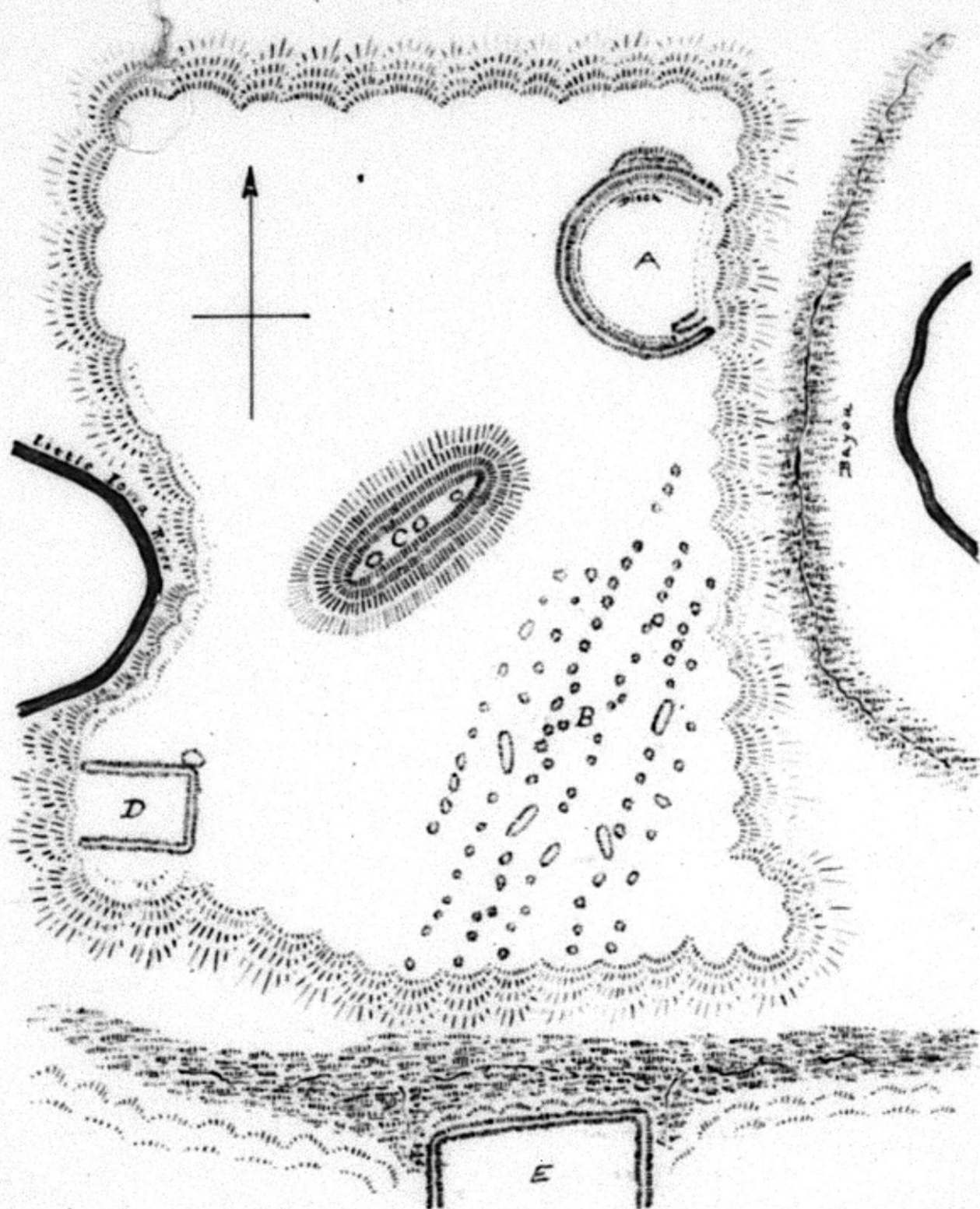
When we first examined this earthwork in 1910, twenty-eight years after Morris, the embankment could still be easily traced.

Now, in 1924, it is almost wholly obliterated by cultivation.

On the occasions of our different visits we have found many burned stones, 4 to 6 in. in diameter, a few chert and other flakes, and shards of characteristic Oneota culture pottery.

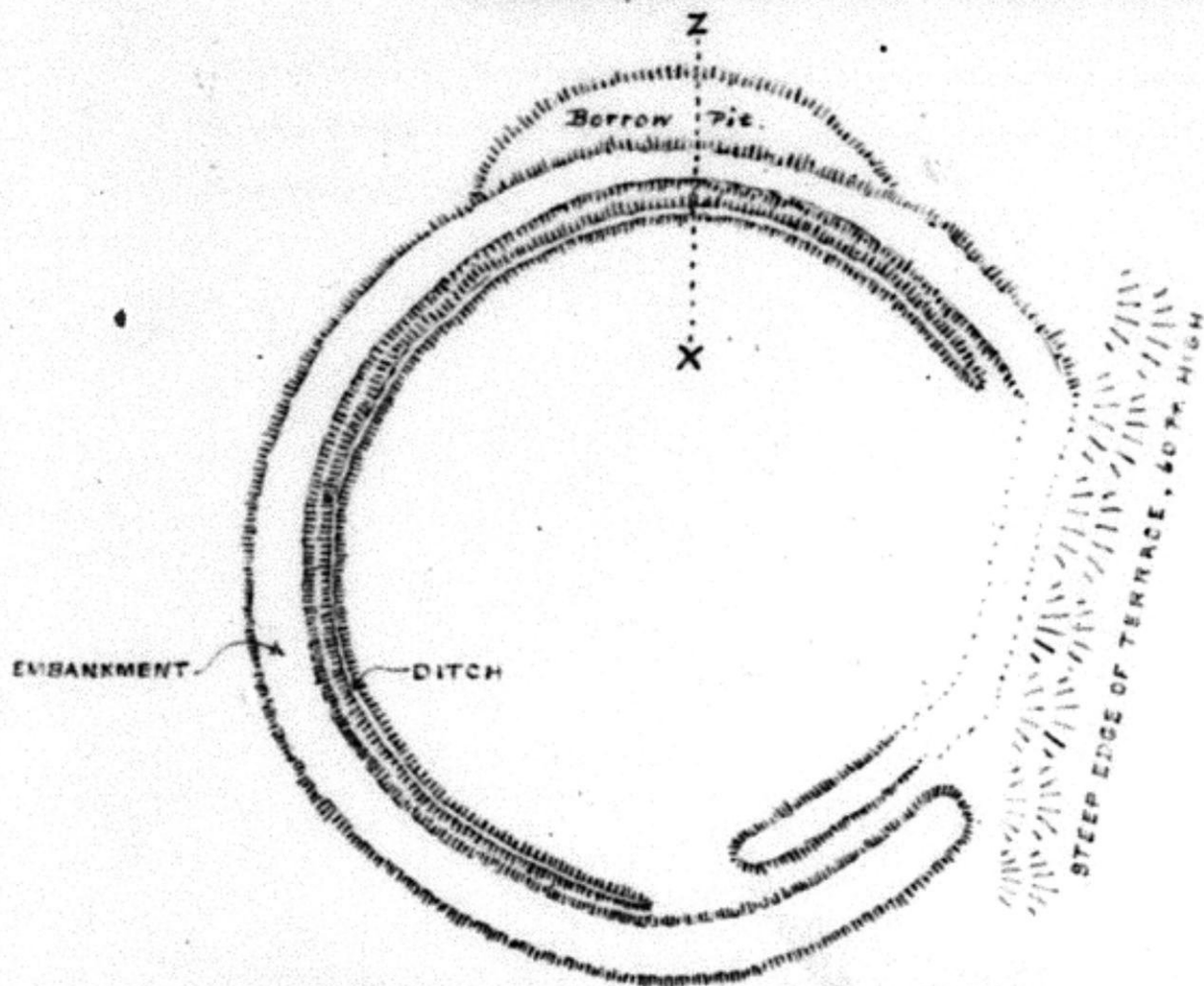
Altogether a very meager showing of surface finds for a village site.

A copy of Col. Morris' detail map and cross section of this earthwork follows.

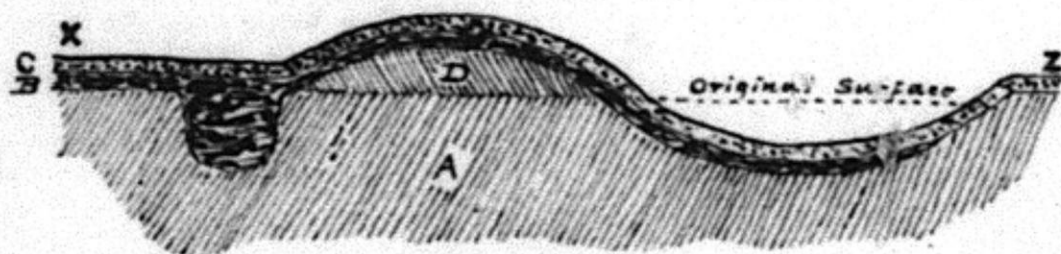


Copy of Map of "Group of Earthworks, Allamakee County, Iowa",
 opposite page 26, Fifth Annual Report of The Bureau of Ethnology.
 Survey by Col. Norris, 1882.
 This is the Lane Farm Mound Group.

COPY OF PLAT OF CIRCULAR EARTHWORK DESCRIBED BY PROF. CYRUS THOMAS IN THE FIFTH ANNUAL REPORT OF THE BUREAU OF ETHNOLOGY, 43
1883 - 1884.
From Survey by Col. Morris.
On Lane Farm, 7 mi. west of New Albin, Iowa.



N and S diameter from outside to outside, 277 ft.
 Width of Embankment, 25 to 27 ft.
 Height of Embankment, 4 ft.
 Inside Ditch, 5 to 6 ft. wide.
 Scale, 1 in. 60 ft.



CROSS SECTION FROM X TO Z.

- A - Natural Soil.
- B - Accumulation of Refuse Matter, 1 to 2 ft.
- C - Sand - 1 ft.
- D - Original Clay Embankment, 2 ft. High.

Copy by E. Orr, 1924.

In 1875, Judge Murdock of Garnaville, and Dr. Ranney of Lansing, Iowa, made some excavations in the Lane Farm Enclosed Area, and we glean the following from their published article describing their work and findings:

They "found a circle, the circumference of which is 700 ft. The ridge or elevation (embankment) averages about 25 ft. in width, leaving a circular enclosure 210 ft. in diameter. The height is 3 or 4 ft. from the surface of the ground."

"On opening it (the embankment) we discovered pieces of broken pottery made of bluish clay and and partly pulverized mussel shells; stones used for hearths; fish scales, bones of buffalo, deer, badger, bear, fish and birds, but no evidence of human bones. The long or marrow bones were found broken or split.

One peculiarity noticed was that "each digging in different localities found the ornamentation of the pottery dissimilar." One type had zig-zag lines with dots at the angles, another had horizontal circular rings, and a third had "perpendicular lines like a muskmelon."

"These vessels were quite capacious, the diameter of one having been 14 inches at the mouth. At about 1 and 3/4 inches below the mouth they abruptly widened out about 6 inches all around, making the largest diameter about 26 inches."

"The vessels were provided with handles on opposite sides similar to our jug handles."

"A strip of copper 2 in. long by 3.4 inches wide, and a triangular form of the same material, 1 in. wide at the base and 1 and 1/2 inches from base to apex, the center and apex being perforated," were found.

These gentlemen say that there were 83 tumuli in the mound group some 40 rods to the south, (The Lane Farm Mound Group) in which they found only parts of human skeletons.

Mr. J.G. Rateliffe, whose father was a pioneer settler in the Upper Iowa River valley, and who himself lived there for many years as boy and man, in the History of Winnesheik and Allamakee Counties, published in 1882, pages 357 to 359, says:

"The embankments being now, (about 1880) about 25 ft. in width and 2 or 3 in height, were, I think, originally much higher, ---- serving the purpose of a support for a stockade, and high enough for their tent poles to rest on, while inside were their kitchen hearths.

In exploring these embankments we found in addition to pottery, bones, fish scales, etc., mentioned as found by the Murdock party; large stone mortars 14 in. in diameter and 5 in. in thickness, hollowed out like a soup plate, made of syenite or sometimes of common sandstone; biscuit shaped pestles for grinding corn; two or three kinds of stone axes; celts and skinning stones." These latter were probably chert chipped hoes or spades.

[Editor's note: The statement copied below was inserted as an attachment to page 64 and has reference to the ceramic material found in the Lane Farm Enclosed Area.]

The pottery which these gentlemen found was beyond question, Oneota. Of the dissimilar ornamentation which they mention, one was the common type, - irregular incised or trailed lines from the neck outward to the shoulder.

Another pattern was of trailed lines forming a belt of connected triangles, - base of one up, of the next on either side down, - entirely around the vessel on the shoulder. The space within these triangles was usually covered with lines of punctures made with a blunt pointed instrument. See photo on page 35 of Vol. IV.

I have never seen the type of ornamentation which they speak of as, "circular rings," unless it may be like that on the four-handled pot, Photograph of which see on page 24, Vol. IV. I have never seen but the one shown of this type.

THE HAYS ENCLOSED AREA (?)

New Albin is located on an extensive terrace of the Mississippi River, extending from the mouth of the Winnebago Creek, at the state line, down to the mouth of the Upper Iowa River.

There has been a tradition current that, on the south-west corner of this terrace there was at the time of the settlement by whites, and for some years after, an earthwork believed to have been built by Indians.

Mr. Frank May, who was raised in New Albin, has no recollection of either seeing or hearing of this earthwork, nor has Mr. J.W. Yeoman who as boy and man hunted over all the country round.

However Mr. Hayes, and his sister Mrs Housman, whose father owned the land when it was cleared of the growth of timber growing on it, says that there was a thirty red long crescentic ditch on the south-west corner where tradition places the prehistoric earthwork, dug about six feet wide and four feet deep, lined with logs held in place by cross pieces driven back into the bank. The curve was towards the river.

The earth thrown out formed a bank on each side of the ditch, two feet highmaking the total depth, six feet.

Mr. Hayes plowed and scraped the earth of the embankment back into the ditch and now no traces of it can be seen.

On Page 44 of "Pike's Explorations to the Source of the Mississippi River, 1805", a republication, by Lawrence & Co., Denver, 1889, of the publication in London, 1811, of his report, we find the following:

"On this prairie, (where is now LaCrosse) Mr Frazer showed me some holes dug by the Sioux when in expectation of an attack, into which they first put their women and children, and then crawled in themselves; they were generally round, about ten feet in diameter, but some were half moons and formed quite a breastwork.

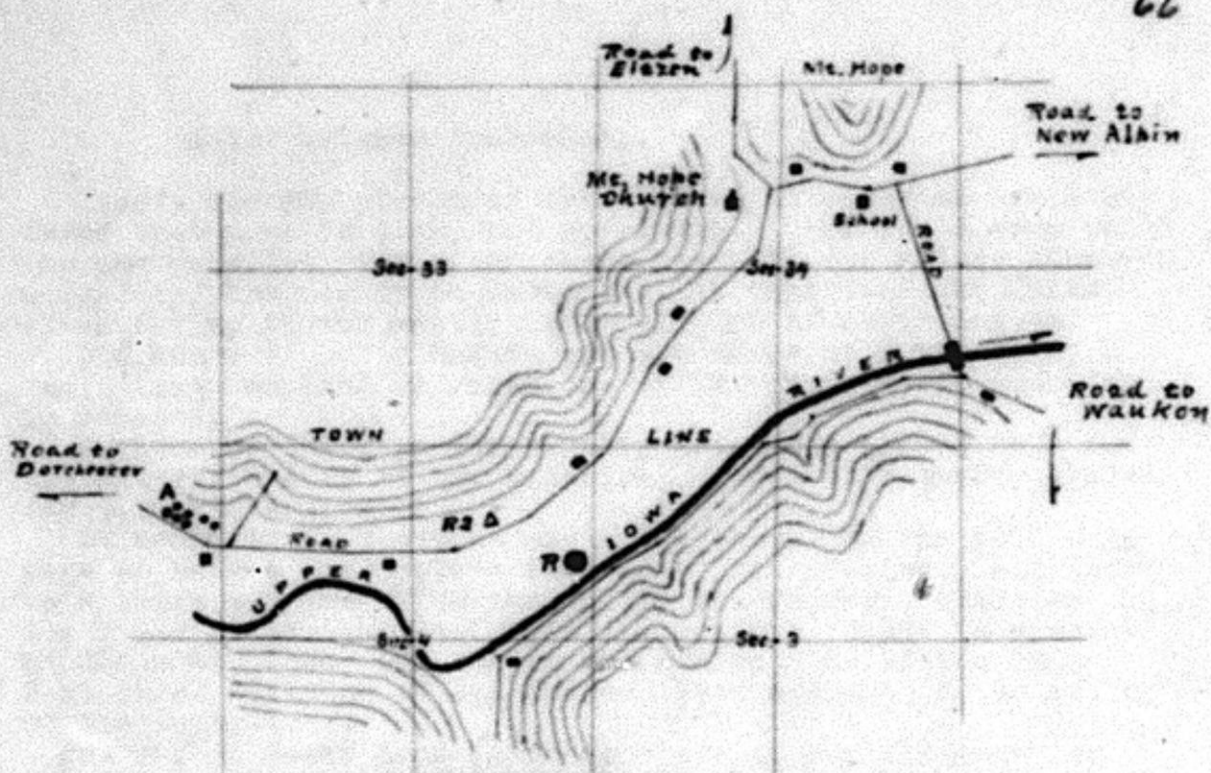
This, (the half moon work) I understand, was the chief's work, which was the principal redoubt, -----

They (the enemy) have no idea of taking these subterranean redoubts by storm, as they would probably loose a great number of men in the attack; and though they might be successful in the event, it would be considered (by the attackers) as a very imprudent action."

May not the earthwork on the New Albin Terrace have also been made by the Sioux, who except for the Winnebago from 1843 to 1848, were the last to occupy the valley of the Upper Iowa.

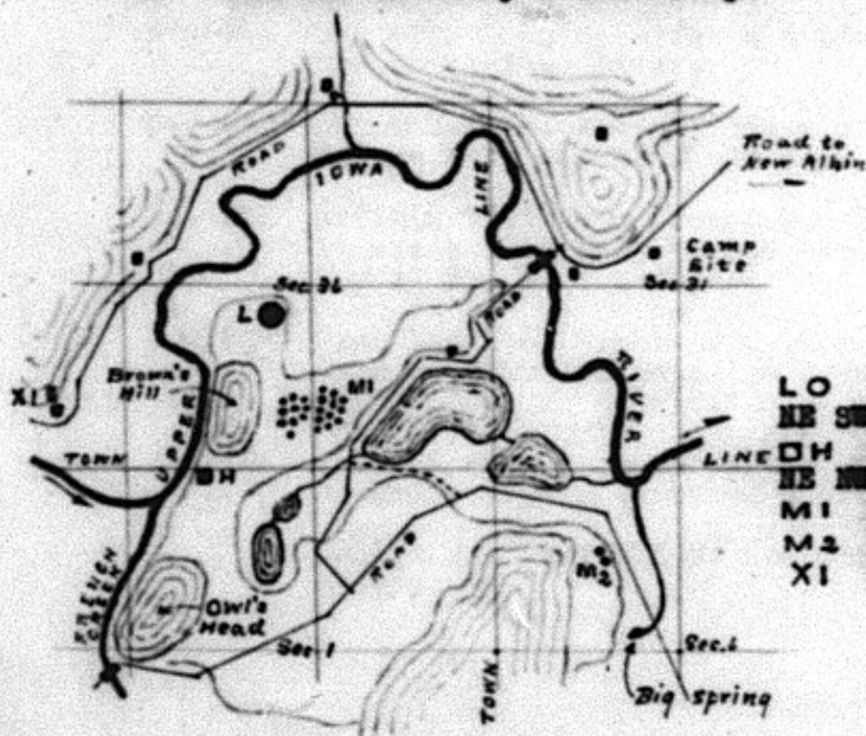
Wabisha's village was located at the mouth of this river in 1805. This sub-division hunted on both sides of the Mississippi and its confluent streams from Prairie des Chiens to Buffalo River.

Dec. 17th, 1937.



LOCATION MAP.

- RO Rateliffe Enclosed Area, NE NE Sec. 4, T. 99, R. 5
 ΔR2 Rateliffe Enclosed Area Sacred Rock. (Petroglyph)
 .:. Saddler Cemetery Mound Group.



LOCATION MAP.

- LO Lane Farm Enclosed Area
 NE SW Sec. 36, T. 100, R. 5
 □H Hartley Farm Enclosed Area
 NE NE Sec. 1, T. 99, R. 5
 M1 Lane Farm Mound Group
 M2 Collins' Pond Mound Group
 XI Donovan Family Burials

By Ellison Orr

Amber colored Chalcedony.

Finely wrought pieces of this beautiful material are scattered over most of Iowa, but sparingly. The place from which the raw material from which these are made for a long time was a mystery, but now it is known that it came from the Knife river valley in the western central part of North Dakota.

The state of North Dakota has set aside as a preserve, a small tract of land on which one of the prehistoric quarries is located.

Because of the fine workmanship which the pieces show and the natural beauty of the material, it was undoubtedly traded far from its source.

In addition to those shown in the photo. on the following page we have a small piece from Lake Itaska, Minn., and there is a large and very fine one in the Dr. Becker collection in the State Historical Society's collections, found in a mound at Clermont, Iowa, and one in the collections of the State Historical Building at Des Moines, from a grave in the valley of the Upper Iowa.

- No. 901 A Spear Head found in grave on Burke's Mound on the SW SW Sec. 35, T. 100 N. R. 6 west. This grave contained besides the skeleton and Spear Head, 2 arrow heads, 1 scraper, 1 bone awl and a whetstone
- No. 910 Two arrow heads, - field finds from the valley of the Upper Iowa River.
- No. 948 Spear Head plowed up with skeleton on the Dennis Malone Farm on the NW NW Sec. 3, T. 99, R. 6 west.
- No. 325 A field find from French Creek valley near where it opens into that of the Upper Iowa, on Sec. 1 or 12, T. 99, R. 5 west.
- No. 327 From the Bear Creek camp site south of the confluence of Bear and Waterloo Creeks on the SE SE Sec. 35, T. 100, R. 6 west.
- No. 2048 A field find from Cassville, Wis. Purchased from Dr Schirmer, landlord of a hotel at Guttenberg, Ia.

Except the last all of the above are from Allamakee county.



Blades, Spear heads and Arrow-heads of translucent chalcedony from a stratum in a ledge of shaley limestone (?) outcropping in the valley of Spring Brook, a tributary of Knife River, near Dodge, Dunn county, North Dakota.

The State has set aside a small Preserve on which this formation is located.

No. 901 was found with a burial in an exposure of Jordan sandstone on the east side of the Hog Back between Bear Creek and the Upper Iowa river on Sec. 2, T. 99, R. 6, Hanover township, Allamakee county, Iowa. by W. F. Dresser about 1885.

The remaining six pieces are field finds of trade goods from the terraces in the valley of the Upper Iowa river.

In photograph all are 6/11 actual size.

Generalized
A Folsom Flint from Allamakee county, Ia.

In checking up the flints in my collection with the record, before sending them to the State Historical Society, I found 55 pieces out of the more than 1000, without a number. (1)

Among these was a good specimen of the "Folsom Point" which has lately attracted considerable attention because of its having been found in the SW U.S. associated with the bones of extinct prehistoric animals.

Now that this specimen "comes to the top" again I can remember in a dim way that it has been in my collection for some time.

As the Folsom Point is a discovery of recent years, when I acquired it I could have known nothing of the type and it would not especially have attracted my attention except as a neat, symmetrical and perfect point.

I had many other much finer specimens of Indian skill in chipping, and of finer material.

I had never fully checked over my flints and may not have particularly noticed it for years.

Try as I may I can not now recall where or how I got it.

By far the largest part of my collection came from Allamakee county, with perhaps five per-cent from Clayton county and enough from Winneshiek and Fayette, in Iowa, and from Houston and Fillmore counties in Minnesota, and from across the Mississippi river in Wisconsin, to make another five per-cent.

There were a few scattering pieces from other states, purchased for comparison, and given me by friends, all of which I can remember receiving.

After a careful consideration of the matter I am satisfied that this Folsom Point is a local find. I have probably had it for many years. Just why it fails now to have a number I can not say. Perhaps a number may have been pasted on and lost off, - one that was common to a number of specimens acquired at the same time from some local party.

It is of mottled gray chert and with the characteristic concave base and the scar of the long flake struck off from the base toward the point, very distinct on both sides.

On the following page are photographs of both sides very near natural size, which is .9 X 2.7 inches and .25 inches thick. The chipping is somewhat obscure, - edges sharp and somewhat wavy. There appears to be no patination.

Before sending this point to Iowa City it was stolen.

A Yuma (?) Lance Point, the Photo. of which with the one described above, is shown on next page, was given me by Mr. Book of Paulina, O'Brien county, Iowa. He said that he got it with others purchased of a dealer. Thought it came from Kentucky.

45-08

1 Generalized Folsom

Generalized
The Folsom - ~~see page~~ - point, of which see photographs of both sides on the following page, was stolen by a girl, a schoolmate of my wife's granddaughter whose home was with us, who was exhibiting a calf at the 4H competition at the fair and who was given permission to use a room in which to change from her work clothes which she wore when caring for the calf to ordinary girl's attire.

The house was left unlocked that she might do this at any time. She took advantage of this to steal a purse containing a small amount of money, and the Folsom point which lay on the desk in my den. Under threat of arrest the purse and money was returned but I never got back the flint.



See insert preceeding
this page



Above, both sides of a generalized Folsom Point.

So far as I am able now to determine this point was a local field find from the vicinity of Postville, Iowa.

To the left, a ~~Generalized Folsom~~ Generalized Folsom Point given me by Mr. Book of Paulina, OBrien county, Iowa. He said that he got it with a lot bought of a dealer. Thought it was from Kentucky.

Above photographs about actual size.

**PREHISTORIC
PETROGLYPHS IN ALLAMAKEE COUNTY.
1926.**

The American Indian of the Upper Mississippi River Valley, as we know, had no written language, but was able to a limited extent to convey information about ordinary happenings by means of crude pictures and signs.

These were cut in the bark of trees; were painted or stained on skins; drawn on pieces of birch bark; and cut or painted on rocks. When cut on rocks such signs or characters were called petroglyphs.

Then they left signs of different kinds in places, the meaning of which was understood by those who saw them. For instance a stick or broken twig placed beside a trail or in a place to call attention to any matter, would indicate by the way it was placed, to those who saw it, the information which it was intended to convey.

In the exposures of Jordan Sandstone outcropping along the cliffs of the Mississippi River and in the valley of the Upper Iowa, in Allamakee County, as far up the latter river as New Galena, in wide but not deep crevices and where overhanging rocks formed shelter of some sort from inclement weather, petroglyphs cut in the walls are found.

Occasionally they occur on the vertical cliff walls of prominent points where there is no shelter, and on isolated boulder-like rocks.

Such petroglyphs consist of crude, conventional figures made by cutting half-round grooves, one-half to one inch wide, and one-eighth to one-half inch deep, to form them in outline.

Apparently most of them are intended to represent a mythical personage; a man; or some animal, bird, snake, fish or turtle.

Aside from man rarely can what these are intended to represent be determined, and even those that appear to be of man may be intended to represent the maker's conception of some spirit or mythical being.

A few of the others, as a buffalo by its general shape, hump and horns, or the rattlesnake by its rattles, are certainly identifiable.

Certain symbols, as the "turkey track" (A) and horizontal cross (+) occur not only in the valleys of the two rivers in Allamakee county but elsewhere. Turkey tracks are found cut on the top of the great Sioux Quartzite "Pilot Rock" on the bluff top south of Cherokee, Iowa.



PAINT ROCK FROM THE SOUTH.

PICTOGRAPHS AT X.

Note also the Hour-glass shaped Battress of Jordan Sandstone at the Base of the Cliff, under the Pictographs.

This photograph was taken by Nichols in 1905.

From the South.

"PAINT ROCK" PETROGLYPHS AND ROCK PAINTINGS.

About one-half mile above Wankon Junction at the mouth of Paint Creek, on the NW Sec. 3, T. 97, R. 3 west of the 5th P.M., a wide and deep dry ravine, after running south almost parallel to the canyon of the Mississippi River for a mile and one-half, opens into it.

On the river side of the point of the bluff separating the two valleys is the three-hundred feet high cliff of Paint Rock, or as the old voyageurs called it, "The Painted Rock".

Most of the river face of the bluffs along here is almost sheer vertical walls of rock, sometimes over two hundred feet in height. At the foot of these precipices is another hundred feet of talus of earth and rock debris sloping down to the shore of the river.

At the point of bluff where the small lateral one meets the larger one, at a height of thirty to forty feet above the foot of the precipice, a narrow shelf runs along the face of it for a distance of one hundred feet or more, and which may, with some effort, be reached from either end.

Just above this shelf the calcareous rock is smeared and stained with patches of mineral red, all that is left of pictographs of animals or other objects that gave the place its name. Owing to the slow disintegration of the rock and the washing away of the stain by rain, the figures, with two exceptions, can not now (1905) be made out.

The two that remain represent, apparently, the heads of an animal with horns, some demon, or the head-dress of a medicine man.

The figure to the north is one foot wide and eighteen inches high while the one the farthest to the south is eighteen inches high and twenty wide. On the smaller north figure the horns run straight up but curve slightly towards each other on the larger south one. The north one is the most deeply stained.

On a following page is a sketch of these two, one-sixth actual size, in color. The two are about four feet apart and at about three feet above the rock shelf on which the painter stood when he made them.

(Now in 1937, after a lapse of thirty-two years, these figures are noticeably dimmer than when we made copies of them in 1905. At the rate of disappearance for the period it is doubtful if any sign of them will be left in another hundred years. This rapid fading out or washing away by rain indicates that they are of no great age. They at least may be considered as proto-historic.)

At the bottom of the cliff, under these painted figures, some twenty feet of the rock face is Jordan sandstone, and just at the point and for some distance along it to the north, and for ten feet up from where the slope of loose earth and rock begins, are hundreds of vertical or nearly vertical slashes or grooves, such as might be made by rubbing the edge of a celt or stone, with that edge held vertically, up and down up and down in the sand rock till a V-shaped furrow or crease was made, from six to ten inches long and from a half to an inch deep, many of which are all but obliterated.

Along with these are a few other well preserved figures, one of which may have been intended to represent a bear, What the

others are intended to represent can not be determined except the triangular figure supposed to represent a female organ.

As usual there are a few initials and names certainly made by the whites.

The name "Painted Rock" is quite likely of Indian origin but not certainly. That the Rock had some mystical significance or meaning to the Indian can hardly be doubted.

Early white voyageurs mention it and the conduct and observances of the Indians when passing it.

It was the starting point for the southern boundary line of the "Neutral Ground."

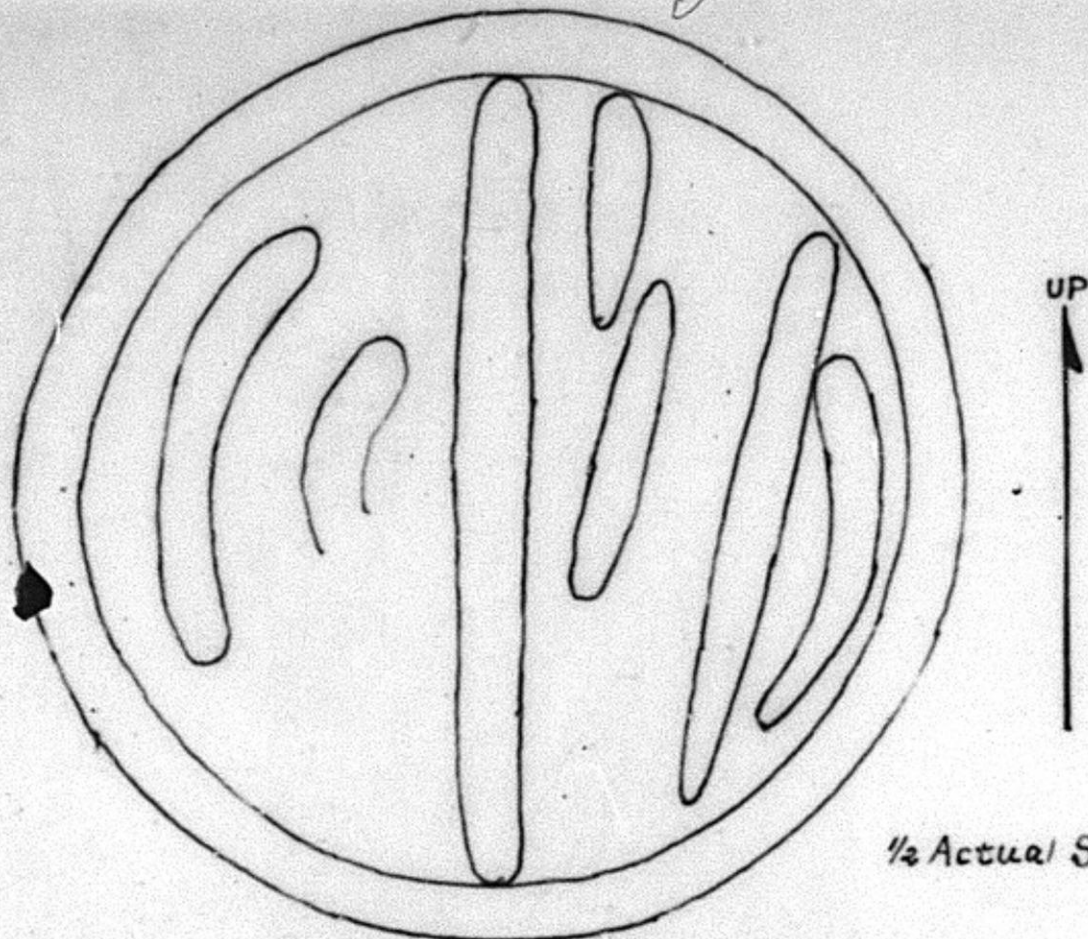
This Neutral Ground was a strip twenty miles wide on each side of the boundary line fixed between the Sacs and Foxes on the south, and the Sioux on the north, by the treaty of 1825 made at Prairie du Chien.

This boundary or dividing line commenced at the mouth of the Upper Iowa River and followed this stream to its "left hand fork"; thence up the latter to its source; thence in a direct line across the Cedar and other intervening streams to the upper forks of the Des Moines in Humboldt county, not far above Ft. Dodge; thence in a direct line to the lower forks of the Sioux.

Early maps showed the "left hand fork" as emptying into the main stream at its farthest south point, which is just east of Decorah, and was probably the stream now called Trout Run.

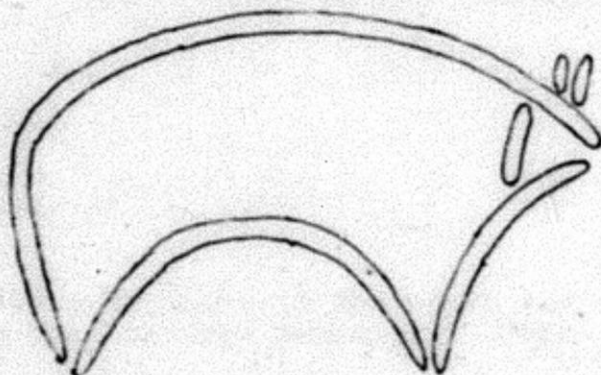
As this dividing line did not always keep, the hostile tribes from encroaching on each other's territory, a twenty mile wide strip was purchased from each of them on their respective sides, by the treaty of 1830, also made at Prairie du Chien, and the forty mile wide strip thus acquired was made a neutral ground on which both tribes were permitted to hunt so long as they did not molest each other.

It was the south boundary line of this strip that commenced at the Painted Rock. Although this point was twenty miles by a surveyed line down the right bank of the Mississippi river from the mouth of the Upper Iowa, it doubtless had a greater significance with the Indians concerned because of its long standing mystic meaning to them.



1/2 Actual Size

Outline of Petroglyph on Jordan sandstone at Foot of Painted Rock.



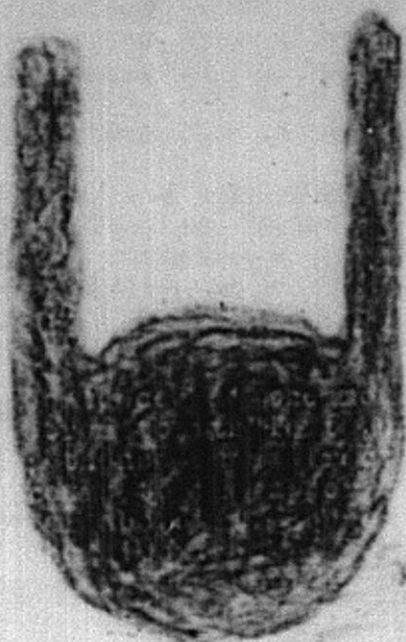
1/2 Actual Size

Outline of Petroglyph on Jordan sandstone at Foot of Painted Rock. For some reason a small area on the rock face on which the outline of this figure was cut, hardened on exposure while all around it weathered away leaving the "bear" standing out like a mushroom. It was removed and is now in the collections of the State Historical Society.

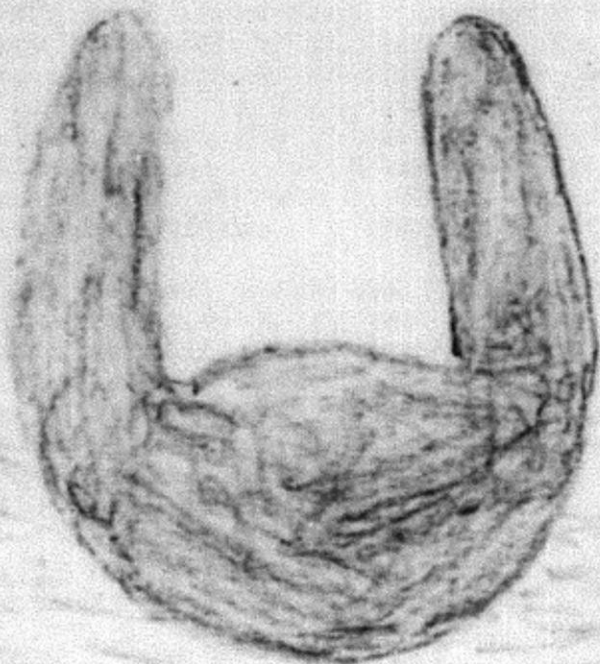


Jordan Sandstone Buttress at the south end of the Painted Rock, showing pre-historic markings. From the south-east.

STAINED OR PAINTED
FIGURES - HORNEED HEADS -
FORTY FEET ABOVE THE
FOOT, AND ABOUT AS FAR
FROM THE POINT AT THE
SOUTH END OF THE PAINT
ROCK PRECIPICE.
ONE-SIXTH ACTUAL SIZE.
1905



North
Head



South Head.

THE O'REGAN TERRACE PETROGLYPHS.

Near the base of a ledge, - not shelter, - of Jordan Sandstone, on the north side of the public road which runs along the foot of the bluffs which bound the O'Regan Terrace on the north, and in the north-east part of the SE NW Sec. 6, T. T. 99, R. 5 west of the 5th P.M., are a number of marks and characters cut in the face of the rock.

Some of which, like initial letters, are undoubtedly the work of white men and boys, while others were just as certainly made by Indians. Some of these are quite plain, others nearly obliterated.

Those shown on a later page are believed to be Indian work. Figures 1 and 2 occur but once each and it would be difficult to say what they are intended to represent. Figure 3, which occurs a number of times, is believed to be the Indian pictograph of the vulva. White men and boys do not so represent it. The grooves forming the sides are from three to four inches in length.

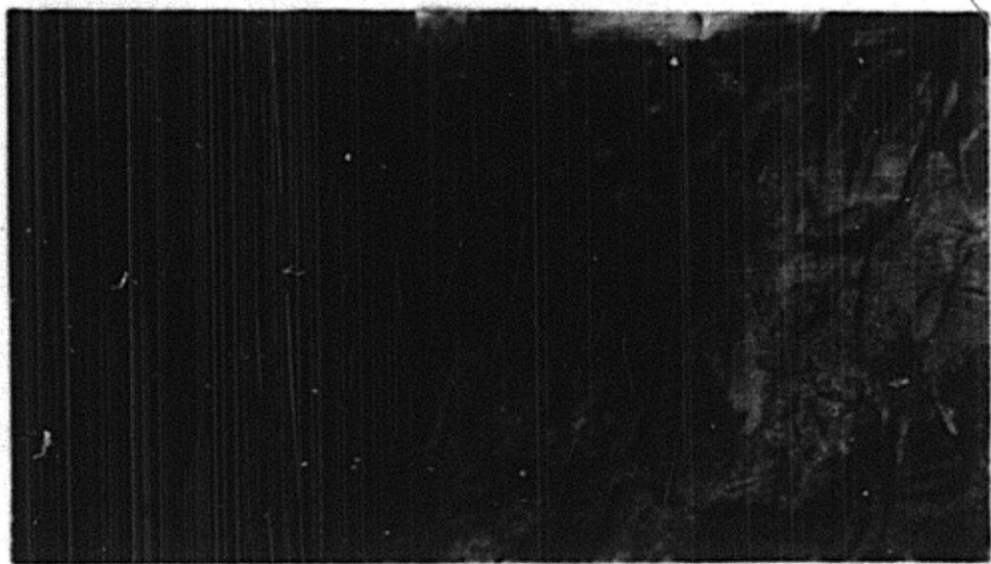
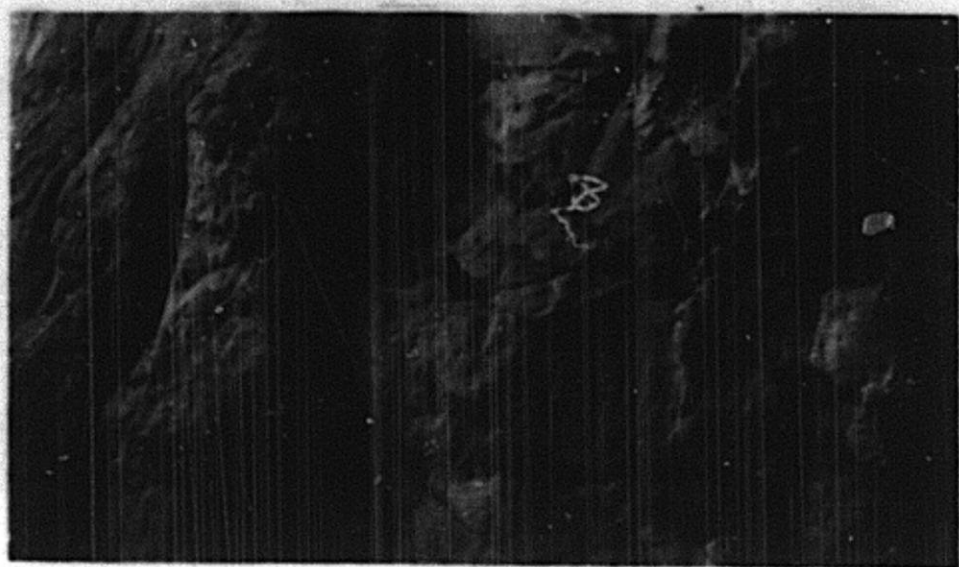
THE KUMPH BLUFF ROCK SHELTER PETROGLYPHS.

On the NE NW Sec. 5, T. 99, R. 5 west of the 5th P.M., directly south of and on the opposite side of the Upper Iowa River from the Elephant, and at a height of about one-hundred and fifty feet above the bottom lands, is an overhanging ledge of the same Jordan Sandstone as at O'Regans, facing the north while the O'Regans faces the south.

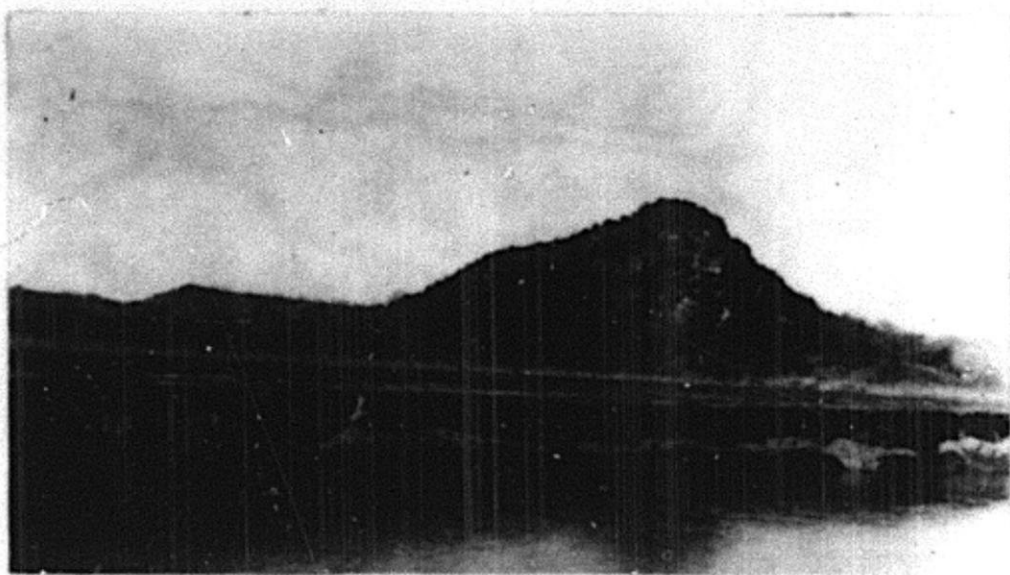
On the walls of the deep, cavern-like and sheltered recess under it, in the easily carved rock, when the country was first settled, Mr J.G.Ratcliffe says, were many characters made by the Indians. Copies of these were made by him but can not now be found. Since then, he says, many names of visitors have been cut and vandal boys and men have mutilated the figures. This was sixty years ago in 1926, (now in 1937, Seventy-one years ago), and the weathering away of the rock in the over seventy years has resulted in the obliteration of the figures to such an extent, that, excepting one, none can now be made out with certainty. A photograph of this will be found on a later page.

That part of the rock where was this figure, - like that of the "bear" under the Paint Rock figures in color, - had grown harder instead of disintegrating, thus preserving it and preventing the vandalism of visitors.

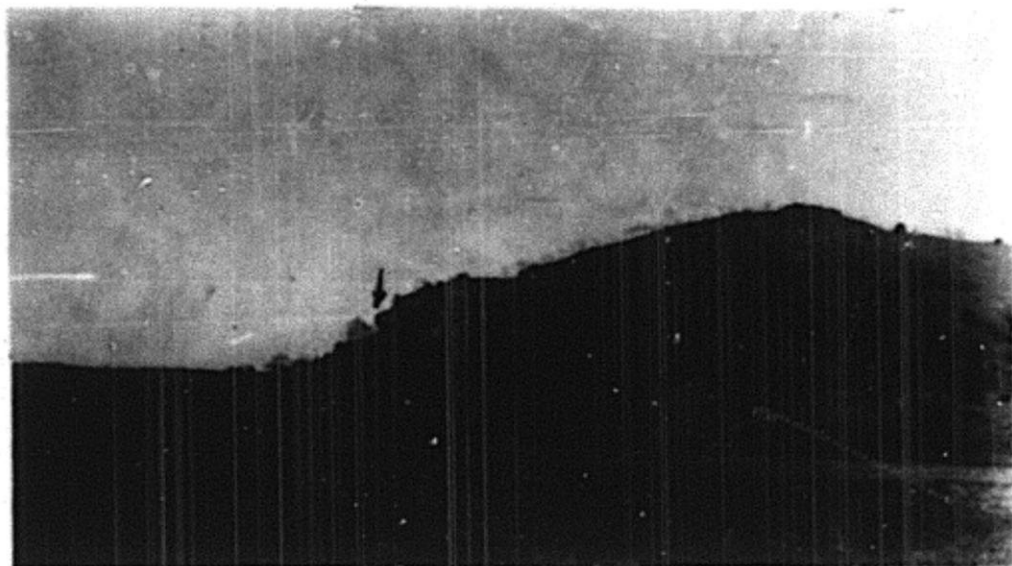
On a remnant of the river formed terrace some seventy-five feet below the shelter, several skeletons have been unearthed by farmers digging out the gravel. These burials, so far as can be ascertained, were of the usual Oneota culture type found on the terraces of the valley. The skeletons were found at a depth of from two to three feet. It was reported that pots, crushed and broken by the weight of the earth over them, were found with the skeletons.



Photographs of Pre-historic Figures on the the Face of the
Jordan Sandstone at the bottom of the Paint Rock Cliff.



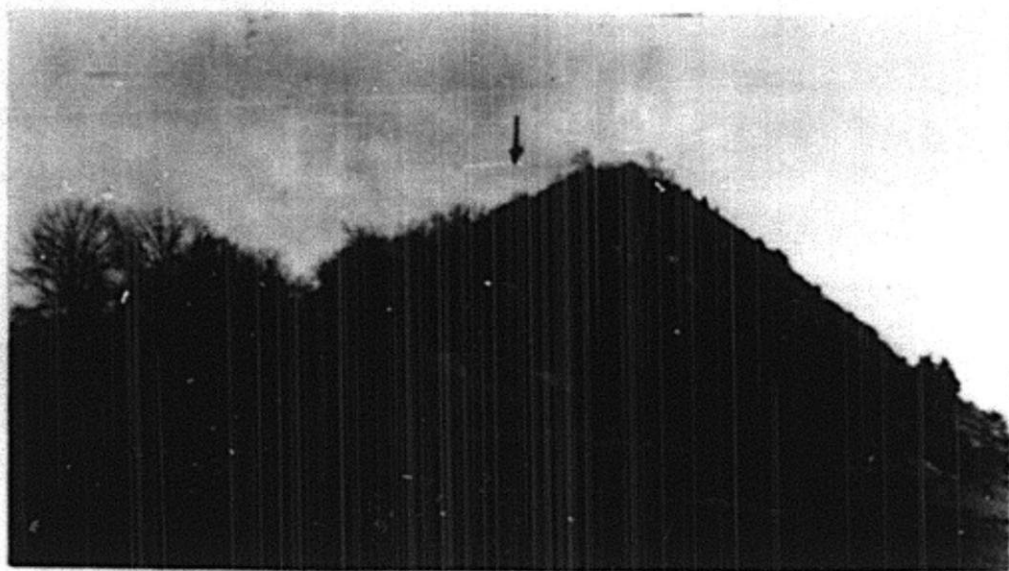
North end of Kumph's Bluff from across the Upper Iowa River.
Rock Shelter at foot of bluff, near center of picture.



A nearer view of Kumph's Bluff from the west. Rock Shelter
below the arrow.



A view of Kumph's Bluff from the west, showing the terrace and Bridge across the Upper Iowa River.



North end of Kumph's Bluff, showing terrace and ledge under which is Rock Shelter.

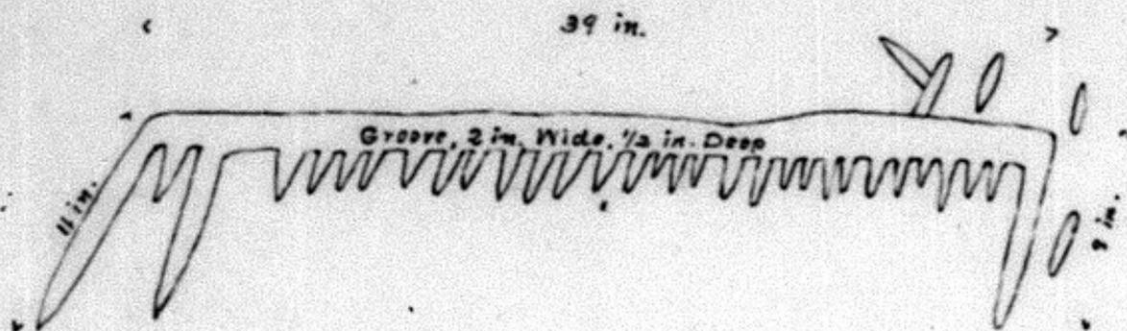


Fig. 1.

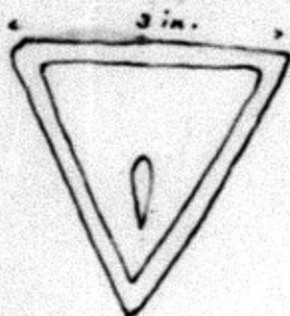


Fig. 3.

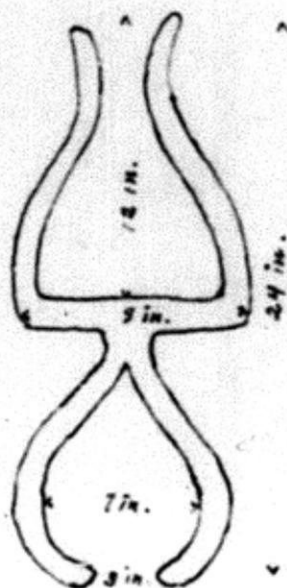


Fig. 2.

Petroglyphs cut in the soft Sand Rock, - Jordan Sandstone, - at the base of the low cliff on the north side of the Road, and north of the O'Regan Terrace on the Upper Iowa River.

On the NE part of the SE NW Sec. 6, T. 99, R. 5 west of the 5th P.M.

Survey by Ellison Orr, 1908



Face out in back wall of Kumph Rock Shelter. Rounded grooves forming it, 1 in. wide and 1/8 in deep. On the NE NW Sec. 5, T. 99, R. 5 west of the 5th P.M. Photo by E. Orr, 1926

THE RATCLIFFE ISOLATED ROCK PETROGLYPH.

Just beside the road running along the foot of the bluffs on the north side of the Upper Iowa River and on the NE of Sec. 4, T. 99, R. 5 west of the 5th P.M., is an irregularly cubical dolomite rock, lying more than one-half buried in the soil and rubble of the talus, with one face roughly 4 X 4 ft. vertical, and facing the south. This fragment long ago fell from the heavy ledges at the top of the bluff.

Much black earth and small rocks has undoubtedly accumulated about it since it fell, but around two feet of the south, - down hill side, - still protruded from the talus before road graders removed the support wholly from that side, next to the road. Now unless a concrete base is worked under it, it is in danger of falling into the ditch.

To the Indian this rock apparently had a more than usual mystical meaning. Perhaps it was believed that it was the dwelling place of a more than usually powerful spirit.

At any rate, on the south face are cut two circles, one within the other. The grooves which form these circles are one and one-half inches wide and one-eighth of an inch deep. The elevated part between the grooves is one and one-half inches wide and uniformly rounded. The part in the center of the smaller circle is a uniformly rounded protuberance one and one-half inches in diameter and one-eighth high.

The whole circular part is five inches in diameter from outside to outside. From the lowest point in the outside circle a sig-sag groove, one and one-half inches wide and one-eighth inch deep, extends downward for a total of thirteen inches.

The figure reminds one of the copper "snakes" occasionally found in the graves of the terraces.

The entire petroglyph is exceptionally well carved, and the weathering indicates age.

Photographs will be found on following pages.

See Page 167 of Appendix B of this Vol. for photographs.

CONWAY ROCK SHELTER PETROGLYPHS.

Along the Mississippi River between Lansing and New Albin the bluffs rise, with many escarpments, to a height of 450 ft. above low water in the Mississippi River.

On the river face of the bluff on which stands the "Cowen" monument of the Mississippi River Triangulation Survey, and not far from the north-east corner of Sec. 13, T. 99, R. 4 west of the 5th P.M., at one hundred and fifty feet below the top, is a rock shelter in which are a few interesting petroglyphs.

They consist of a number of "turkey tracks", a face, and a flying bird.

Owing to inaccessability and to the protecting overhanging rock these figures are still, - 1915, - very well preserved.

The flying bird is about eight inches from tip to tip of the extended wings, and the "face" is somewhat larger.

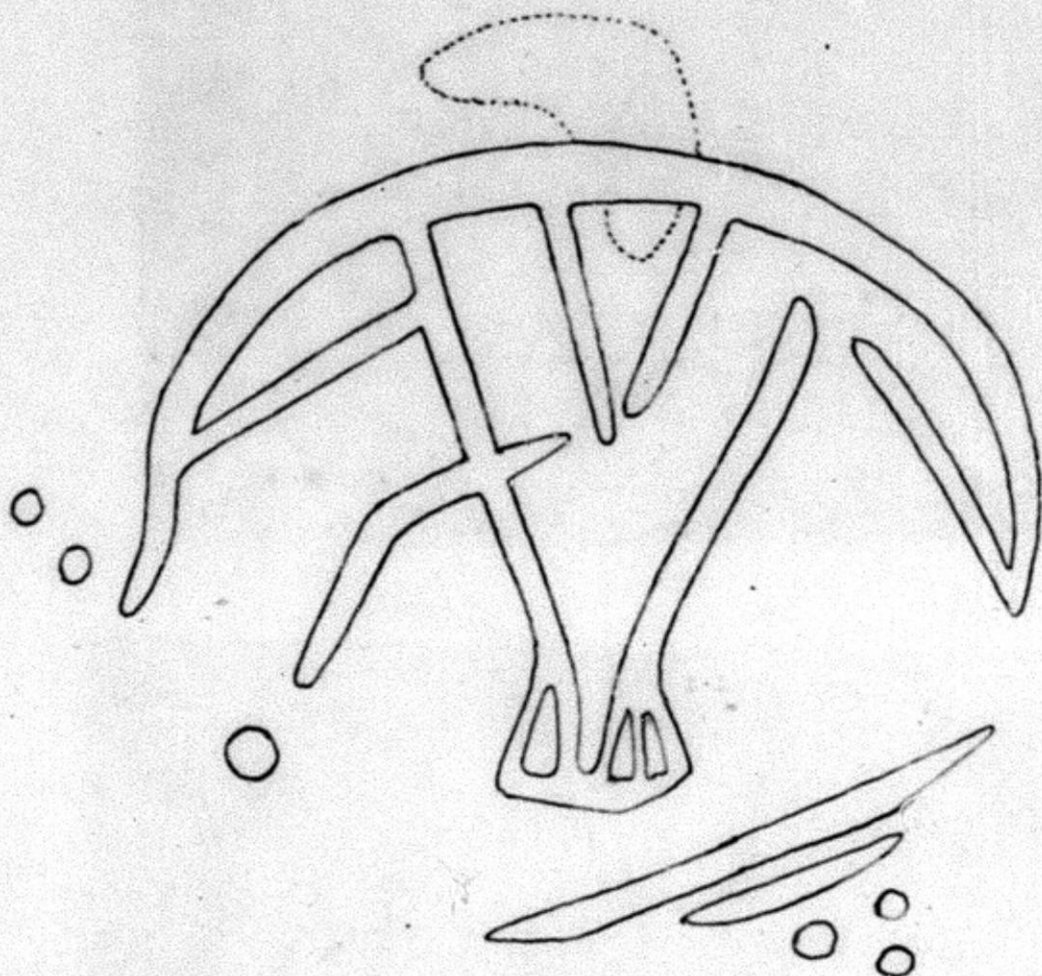
Both were formed by cutting uniformly rounded, shallow grooves about three-fourths inches wide and one-eighth deep in the face of the rock wall of the shelter. of which

Besides the above described, a sketch and photographs will be found on following pages, there were others, nearly time effaced, - bits of grooves and slashes, remnants of what were once completed figures.

From this place there is a wonderful outlook across the timbered bottom lands, threaded with sloughs and spattered with ponds, lakes and grassy marshes, to the hazy Wisconsin land.

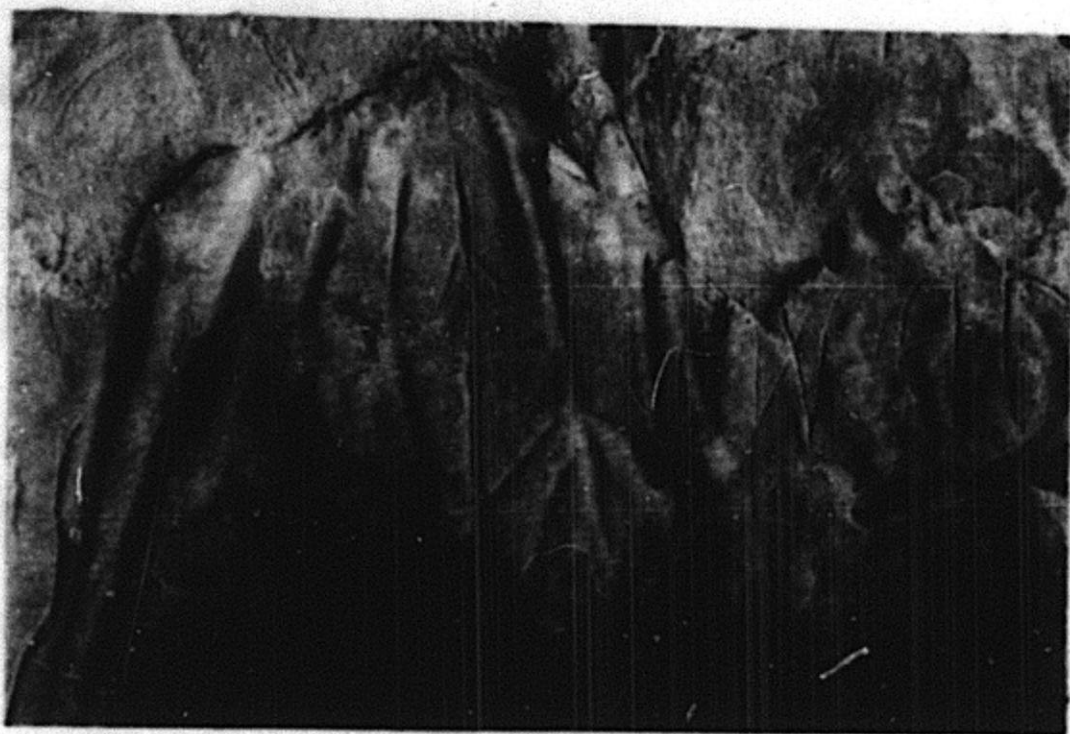
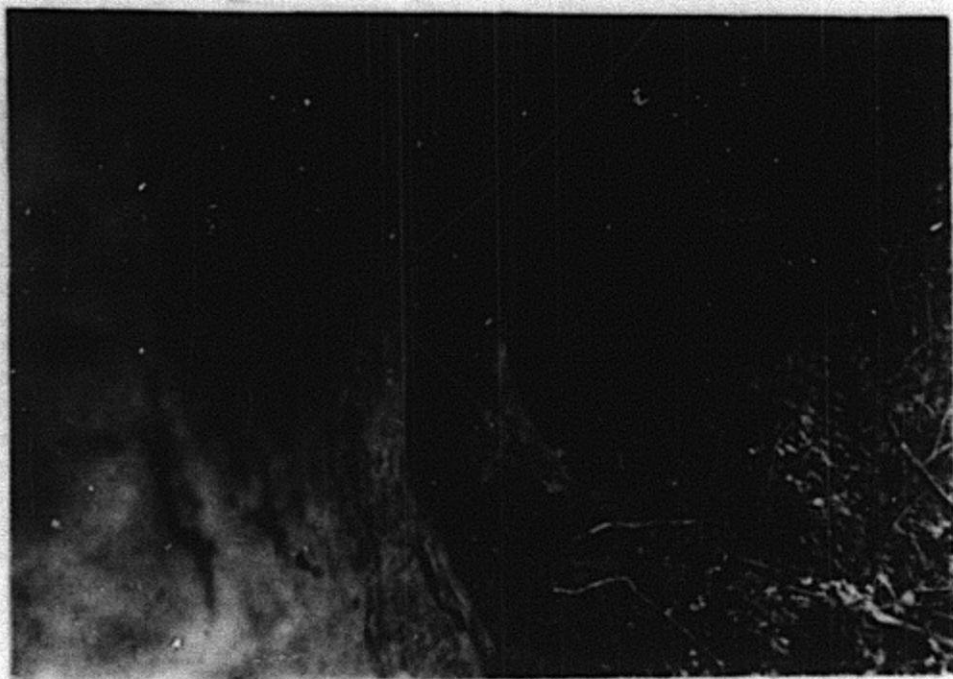
If the mysterious symbols and figures failed to impress the pre-historic man, the outlook, when he considered it, certainly should have done so.

Perhaps it was because of the appeal of the scenic beauty that he placed here on this and other commanding hills, evidences of the spiritual beliefs which he held and of nature's appeal to him.



"Flying Bird" Petroglyph, out in the wall of the Conway Rock Shelter.

Outline figure formed by shallow grooves, - one-half to three-fourths wide and one-fourth inch deep, - cut in face of wall of shallow cave formed by weathering out of crevice in Jordan Sandstone. One-half actual size.



Upper - Conway Rock Shelter from the north-east.
Lower - "Turkey tracks" on wall of same.

RESUME AND CONCLUSIONS, Jan. 1st, 1928.

Among the rock formations of Allamakee county is a sandstone to which the Minnesota geologists first gave the name of Jordan Sandstone from the town of that name in the valley of the Minnesota River south-west of St. Paul, where it was first studied.

This rock first begins to show above the river at McGregor. At Waukon Junction the base of the Paint Rock cliff is a typical exposure, and between there and the junction, all along the foot of the cliff, its characteristic buttresses, caves, fissures and overhangs are well shown.

Though very easily worked with almost any kind of pecking or gouging tool it yet weathers well into vertical faces, showing in places a tendency to recede at the base, forming under the projecting upper strata, recesses that can sometimes be called caves.

Fissures and crevices running back into the bluffs are widest at the cliff faces, narrowing quite rapidly till the opening in a few feet pinches out.

More resistant parts stand out as buttresses often showing a very characteristic hour-glass shape.

Above Lansing this formation has risen to more than two hundred feet above the river, - well towards the top of the bluffs.

On the Upper Iowa the last outcrops up the river are to be seen about the Lyons Plateau.

The shallow caves, fissures and overhangs afforded by it were much used by the Indians, but whether for shelter, for ceremonial, or for what other purpose, is not now clear.

On the walls of many of the well defined caves and fissures he has left the rude carvings and figures, such as we have been describing. These were uniformly by outlining the figures intended to be represented by shallow grooves less than an inch wide.

Sometimes the thing intended to be represented is easily recognized but much more often it is not. Many of the figures, too, have been more or less obliterated by weathering, and there is a great abundance of slashes and grooves that form no figure at all.

We have never found anything in these shelters that would seem to indicate their occupancy as places of abode by man, and we doubt if they were so used. It is more likely that they were used for ceremonial purposes by the medicine men or were sacred places at which votive offerings or prayers were made.

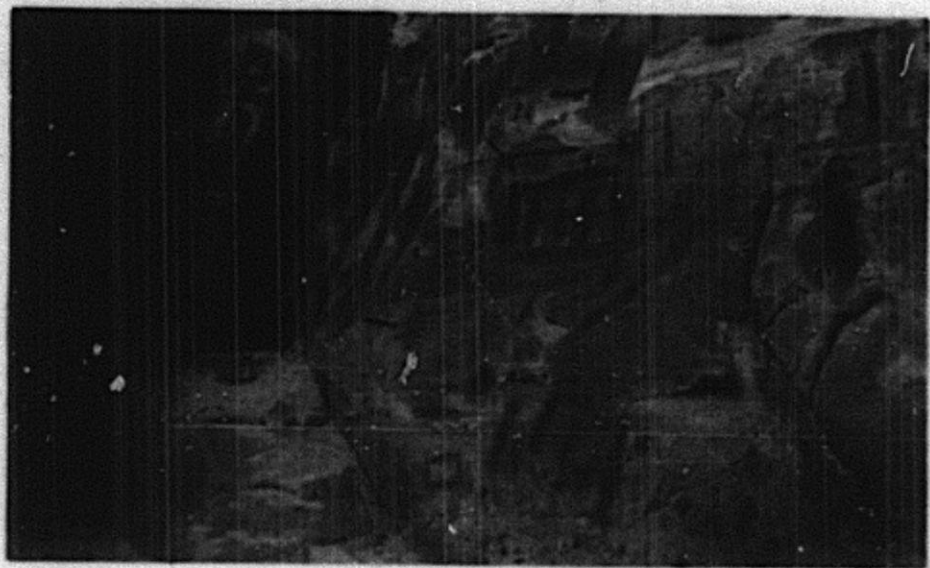
We doubt if the petroglyphs conveyed anything like a story of an event. They are more likely the symbols of an idea like the swastika or phallic symbols of other peoples.

With two exceptions the petroglyphs so far found occur only on the Jordan Sandstone, and the miles of outcropping ledges and cliffs of this rock along the Mississippi and Upper Iowa rivers, when fully explored, will doubtless reveal other locations.

T.H.Lewis, in 1889 and 1892, examined at least six shelters along the Mississippi bluffs between Waukon Junction and New Albin, and made rubbings of forty-one figures which he discovered in these. There were no doubt, many partly obliterated ones of which he made none.

At Paint Rock he found three that we have been unable to locate, while he missed two very plain ones which we found, while still another was found by both.

On our part we have discovered and made sketches or photos of thirteen figures from six localities, four of which were on the Upper Iowa, making the total found by both of us, of fifty-four, from ten localities.



*Petroglyphs on Walls of Paint Rock Shelter.
Note Similarity of Figures.*



Face on Wall of Conway Cave.

The Woolstrom Cliff Petroglyphs.

On the east side, rising from the water's edge of Bear Creek, on the SW SW Sec. 24, T. 100, R. 6 west of the 5th P.M., Waterloo township, Allamakee county, is a vertical cliff of Jordan Sandstone, three hundred feet long and fifteen to thirty feet high.

Near the south end is a three feet wide crevice parallel to the face of the cliff, pinching out at both ends to the north and south. Near the center a large opening has broken through the four to six feet of the cliff out to its face.

On the base of the inner, - east, - wall of the crevice are some obscure vertical slashes and one good "turkey-track", probably Indian petroglyphs.

There is also an unusual number of obscene oval carvings with central pit, probably the work of white men or boys.

There are very few initial letters.

If the sand at the base of this wall were cleared away more petroglyphs might be found that were carved there before the sand covered the base before the white man came.

Across Bear Creek, to the west, on a "high spot" in the flood plain was a village or camp site on which considerable chipped material, celts and grinding stones have been picked up.

Down the creek to the north, twenty rods, on sloping ground at the foot of the bluff but above the flood waters, in the fall of 1936, in trenches excavated by us under a project of the Iowa State Planning Board, four skeletons were found, with which, besides three typical Oneota Culture chert knives, a number of ear ornaments of coiled copper wire, and a piece, 4.5 inches long, of badly rusted iron wire apparently originally about the size of No. 9, was a fine boat-shaped pot 3.5 inches long.

Bear Creek for the most of the year is a wholly spring fed stream with many rapids, having an average width of about twenty-five feet. On either side of the sixty rod wide flood plain the bluffs rise steeply to a height of 300 ft., wooded where they slope to the north, mostly grass covered where they slope to the south.

U **BEAR CREEK ROCK SHELTER.**

Bear Creek Rock Shelter.

Extending in a northeasterly direction from the Lyons Plateau, the long curve of the "Hog Back" is a noticeable feature in the Upper Iowa valley topography about the vanished town of New Galena, in the south-east corner of Waterloo township, T. 100, R. 6.

This hog-back which divides the valleys of Bear and Waterloo creeks from that of the Upper Iowa, reaches an average height of about one-half that of the bluffs bordering these valleys.

Remnants of a terrace lie along its wooded north slope, and the "Sand Point" a high, small, but typical terrace, abuts against its eastern extremity. This Sand Point Terrace is reputed to be "covered with Indian graves" that no one seems to be able to find.

At the sand slide at the east end, so-called "fire pits" are often exposed along the top, the black soil of the pits bellying down into the pure sand lying at less than eighteen inches below the surface, only traces of fire are not always found in them.

South, across the Upper Iowa, is the New Galena Mound Group on an extensive terrace occupying an ox-bow of the river; west, a mile and one-half away, on the Lyons Plateau, is the "Old Fort", a prehistoric enclosure; east across the valley of Bear Creek is the New Galena Enclosure; while the burials on the terrace remnants in the valleys of Bear and Waterloo creeks have yielded much pottery and other material.

At three places on the Hog Back itself, where the soil was not too rocky, were burial places rich in relics.

North of its center, the most northerly point of the long curve, is the Bear Creek village site, and just to the south of this, on the slope of the bluff, is a four hundred foot long exposure of Jordan Sandstone, running in a north-east and south-west direction and having an average height of around thirty feet.

The top of the talus lying against this bluff is approximately fifty feet above the water in Bear Creek.

The cliff face is very irregular being much cut up by V-shaped fissures running at right angles back into the bluff.

Towards the east end is a considerable overhang, forming, with a large fissure extending back into the hill, a quite respectable cave or rock shelter. On the walls of this there are or rather were, a number of petroglyphs, all but four of which are so nearly obliterated by weathering that they can not now be made out.

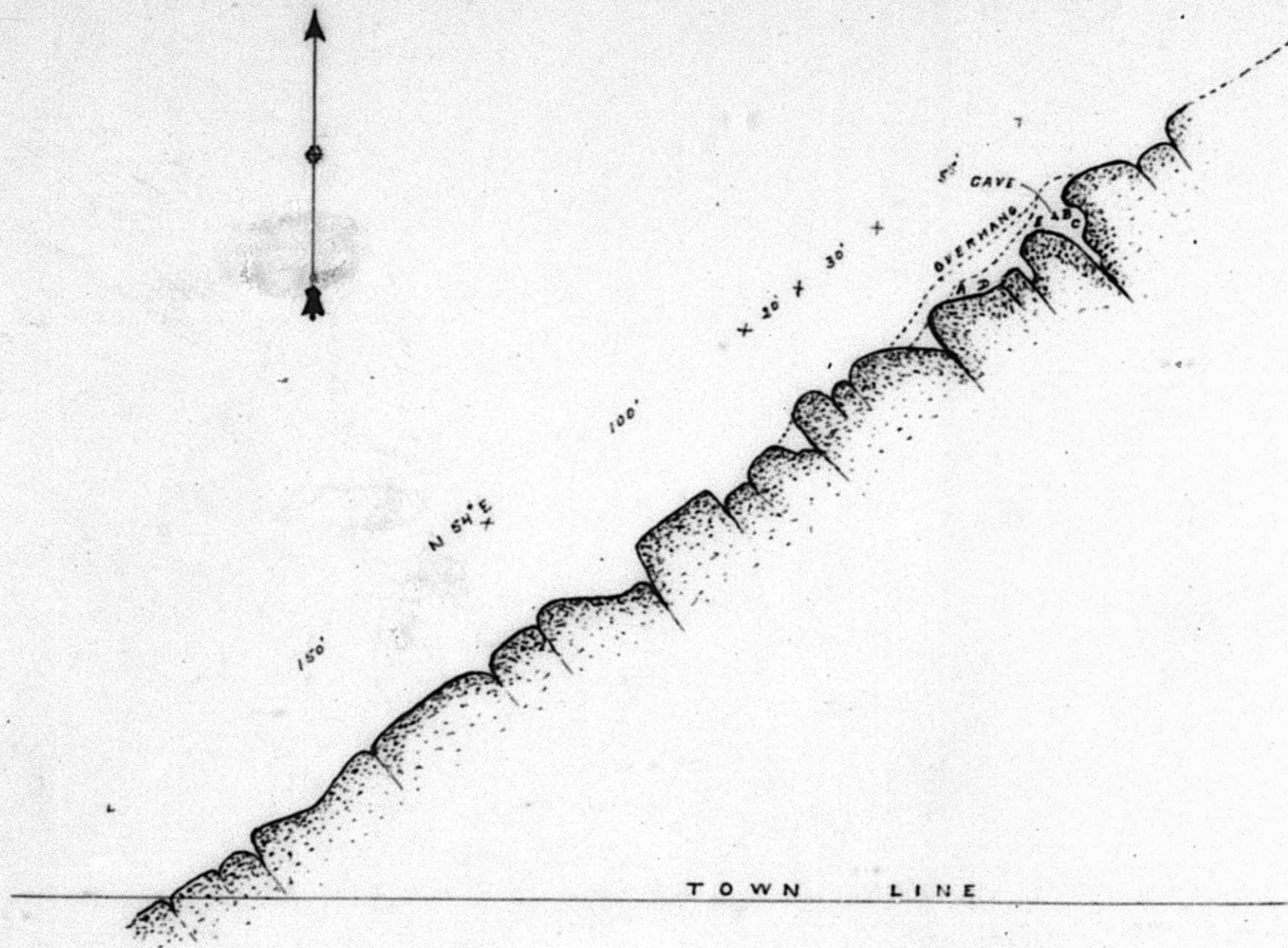
One type, peculiar to this particular shelter, is a bowl-shaped depression in which there was a figure, but in all except one of which the grooves are too obscure to enable one to determine what was intended to be represented.

Besides the one bowl figure still legible there was an undoubted figure of a buffalo, one of a turtle and one that was indeterminate. These are shown on following pages.

We dug over a couple of square yards of the loose sand forming the floor of the shelter down to the sand rock, a depth of about one foot, finding no burned wood or charcoal, no bones, no flints or other evidences of occupancy, - just pure sand.

① The "Flatiron Terrace"

BEAR CREEK ROCK SHELTER, -
OUTLINE OF CLIFF.



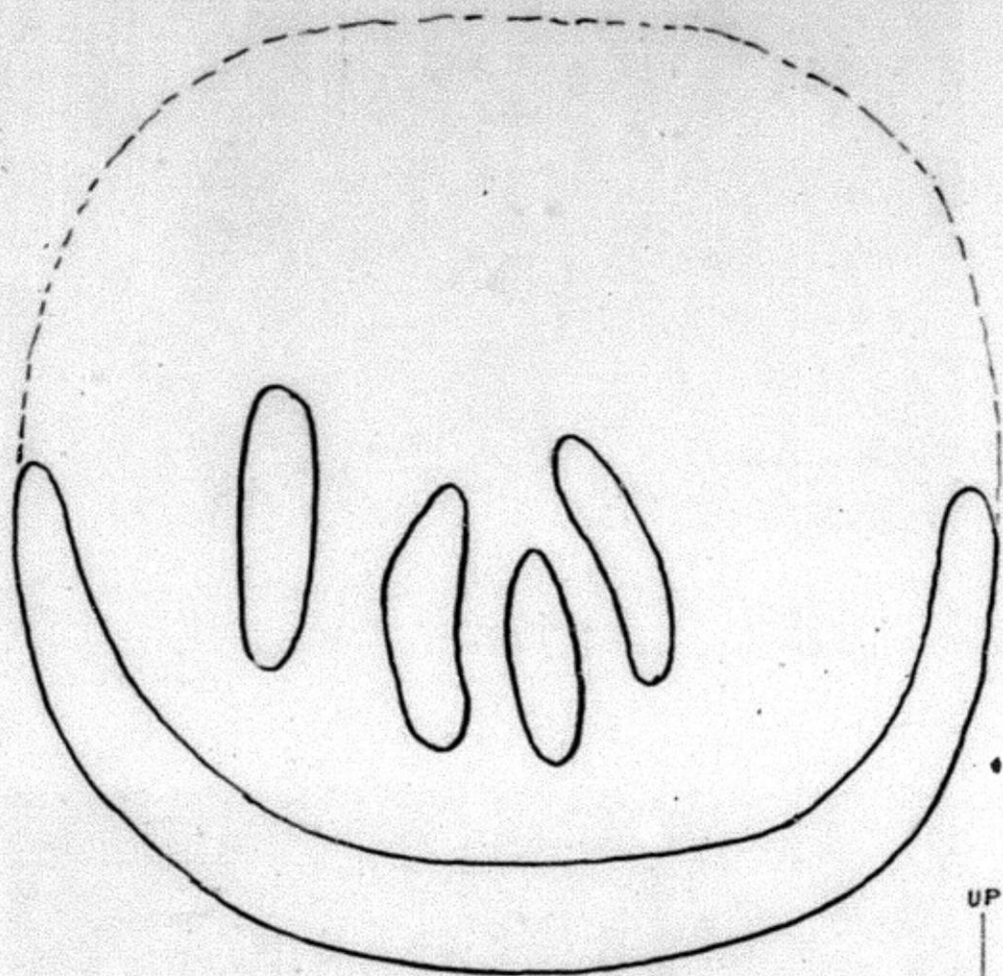
↗ OUTLINE OF FACE
 of
 ROCK SHELTER CLIFFS
 on
 BEAR CREEK

SE SW Sec. 35, T. 100, R. 6
 West of the 4th P.M.

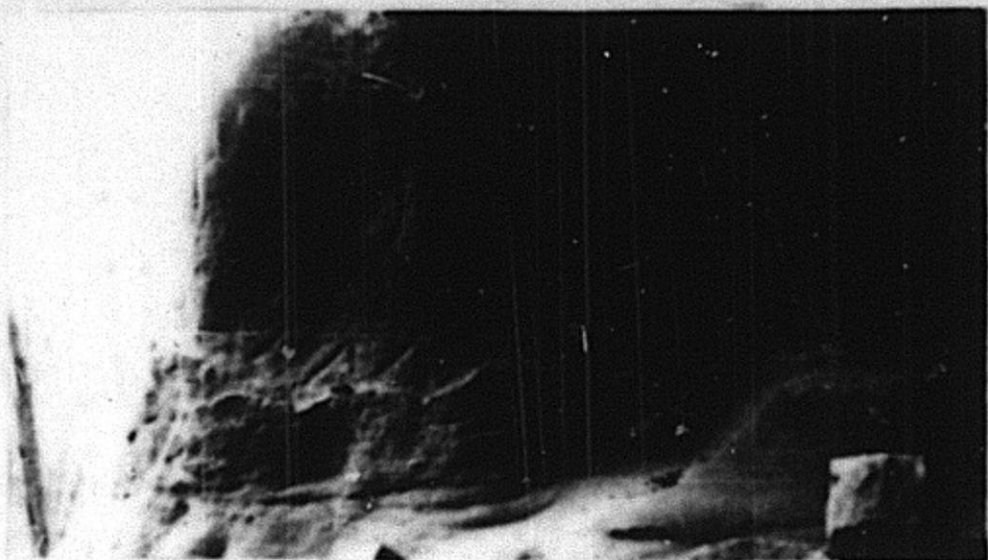
ALLAMAKEE COUNTY,
 IOWA.

Survey by Ellison Orr,
 Sept. 23, 1927.

Scale, 40 ft. to Inch.



PETROGLYPH from
BEAR CREEK ROCK SHELTER
On SE SW Sec. 35, T. 100, R. 6 west of the 5th P.m.
One-half Actual Size.
At C on Outline of Cliff Face.
Survey by Ellison Orr, Sept. 23d, 1927.



Photograph of Petroglyph in Bear Creek Rock Shelter,
looking north. Actual size, 14.5 X 8.5 inches.
See pages 96 and 99. Photographed May 1940 by
Ellison Orr.

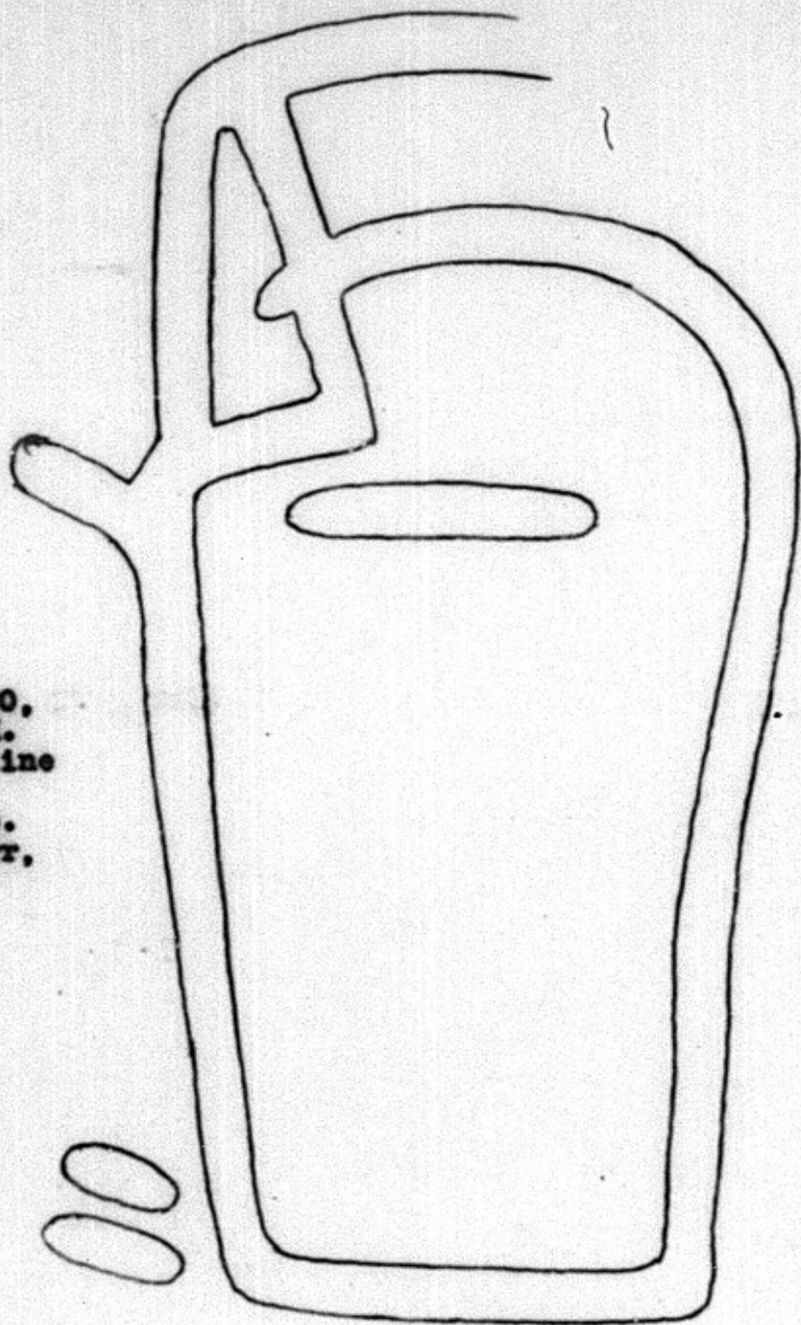
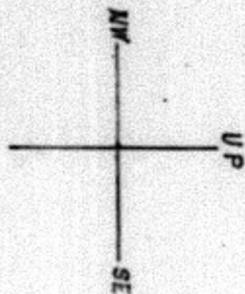


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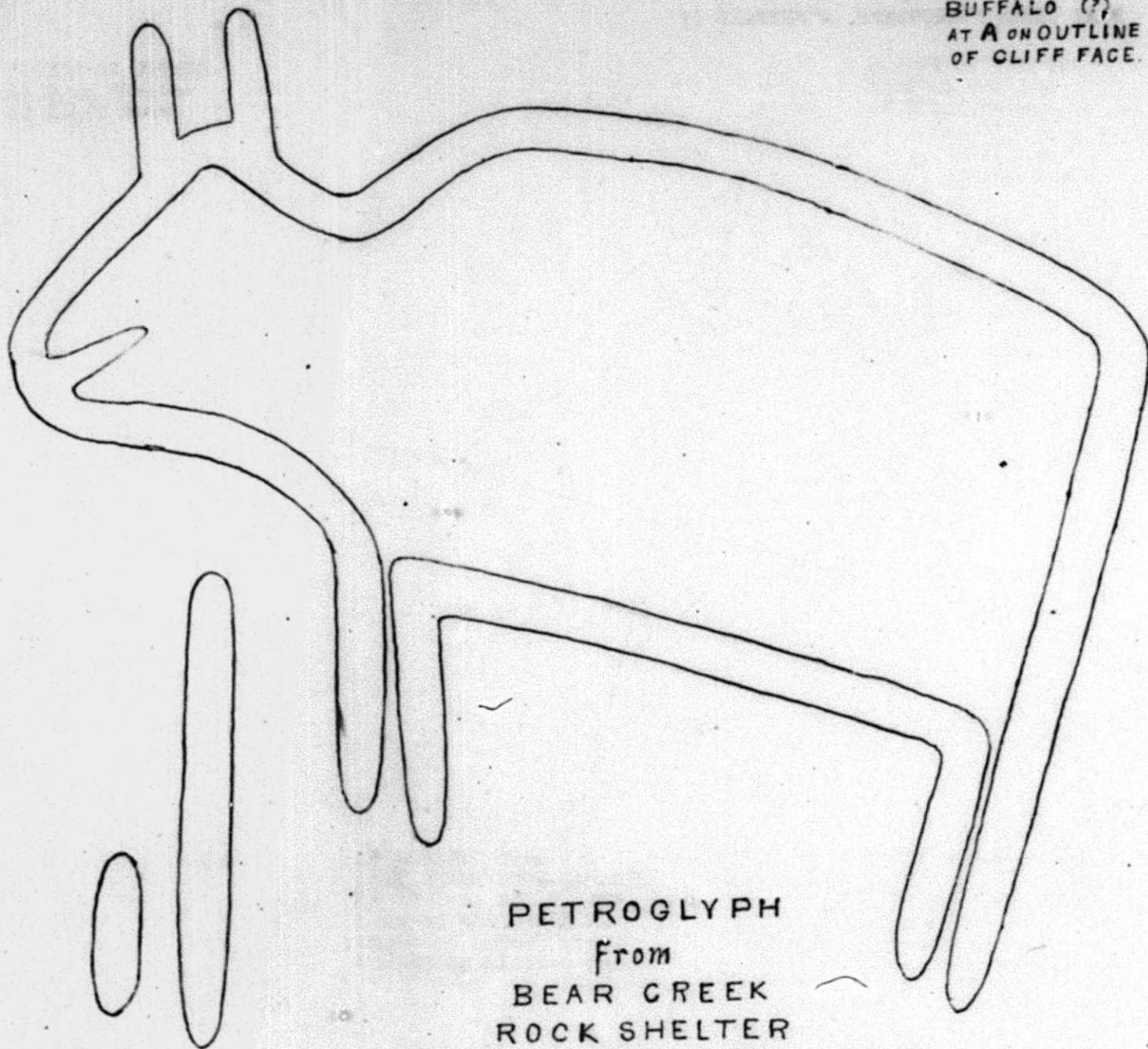
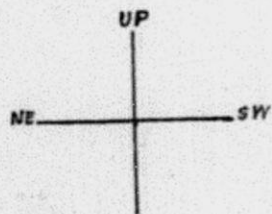
Photograph of Petroglyph of Buffalo in Bear Creek Rock
Shelter, looking south. Actual size, 17.5 X 12.0
inches. See pages 96 and 100. Photographed May, 1940
by Ellison Orr.

PETROGLYPH from
BEAR CREEK ROCK
SHELTER.

SE SW Sec. 35, T. 100,
R. 5 west of 5th P.M.
Located at B on Outline
of Cliff Face.
One-half Actual Size.
Survey by Ellison Orr,
Sept. 23d, 1927.

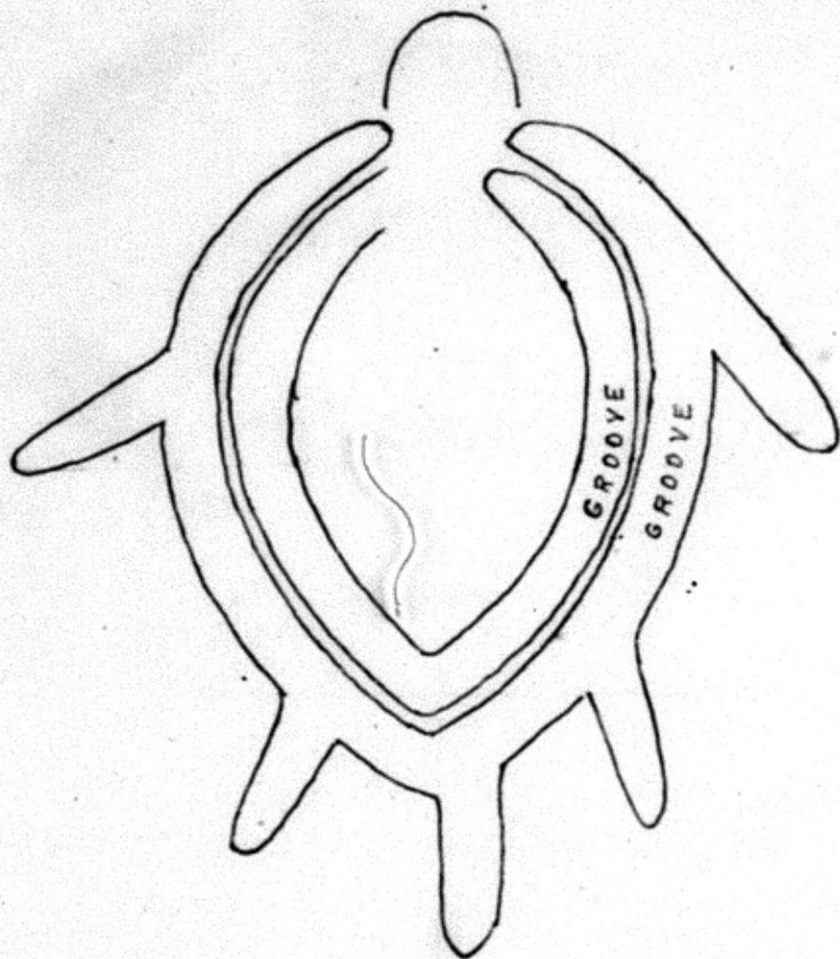


BUFFALO (?)
AT A ON OUTLINE
OF CLIFF FACE.



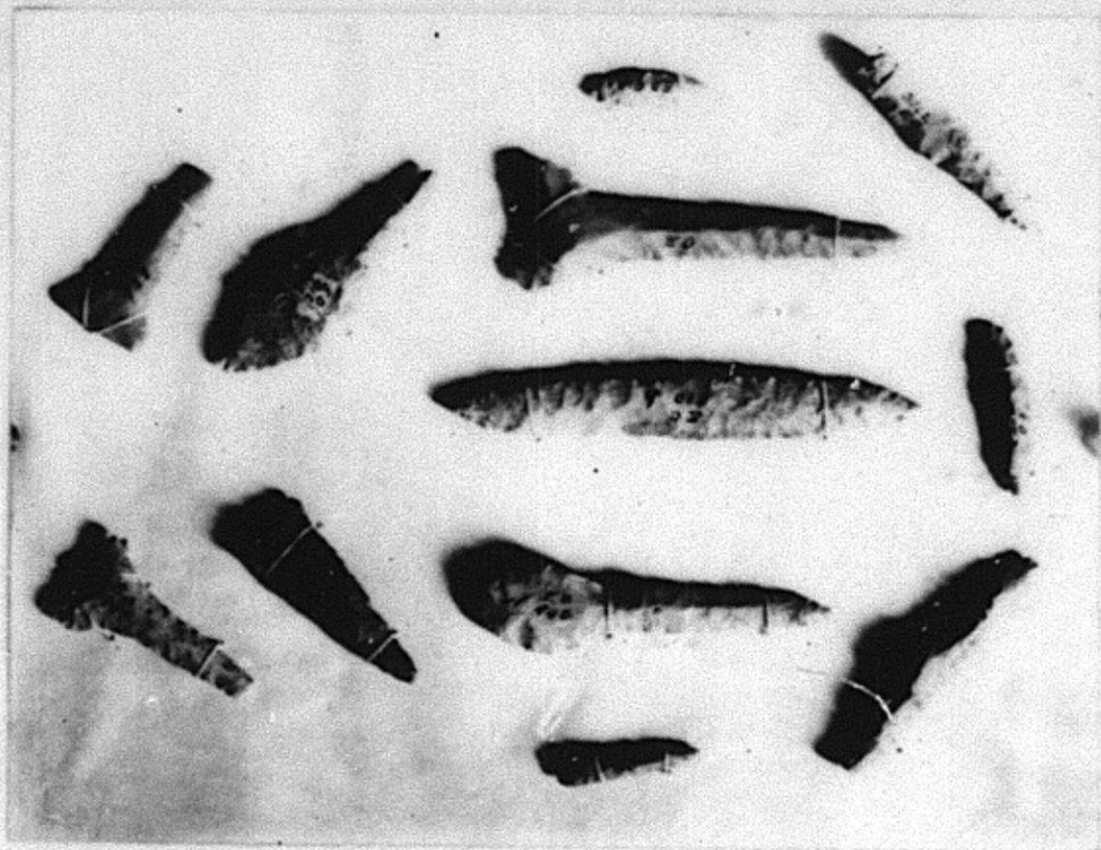
PETROGLYPH
From
BEAR CREEK
ROCK SHELTER
NW SW SEC. 35, T. 100, R. 5 WEST 5TH P.M.
One-half Actual Size.
Survey by Ellison Orr, Sept. 23d, 1927.

FIGURE OF TURTLE.
At D in Outline
of Cliff Face.



PETROGLYPH from
BEAR CREEK ROCK SHELTER.
SE SW Sec. 35, T. 100, R. 6
west of the 5th P.M.
One-half Actual Size.
Survey by Ellison Orr,
Sept. 23, 1927.

10.5 X 9.0 inches.



Typical Awls of Chipped Flint and Other Material.

Of the eleven pieces shown in the above photograph all are field finds and all but one are from Allamakee county, Iowa, and typical of those found in the area, nine being from the valley of the Upper Iowa.

No. 949 is from a bluff top field above Waukon Junction, and one, No. 939, is from McGregor, while a third, the only one from outside the county, No. 940, was purchased from a dealer and is supposed to be from St. Clair county, Ill.

The photograph shows them 5/9 actual size.

Outstanding pieces are the long slim double pointed oval in the center, one of the numbers 910, and No. 4025 of waxy translucent material. This latter is a perfect piece in form and chipping. The long piercing part is diamond shaped in transverse section and the base is flattened, symmetrical and curved.

We doubt if a finer one exists.

Awls are, in Allamakee county, the least common of chipped flint and quartzite. They constitute probably not to exceed 3 per cent of all finds.

THE NEW ALBIN INSCRIBED TABLET.

During the summer of 1915, workmen, in excavating for a cellar under the residence of Mr. Aug. Welper of New Albin, discovered a catlinite (pipestone) tablet with pictographs inscribed on both obverse and reverse sides, and the purpose of this paper is to set out briefly the data connected therewith.

New Albin is built on an extensive terrace of sand and gravel, - outwash from the glacier of the Wisconsin Ice Sheet, - lying along the foot of the bluffs on the Iowa side of the Mississippi River, and extending from the state line between Iowa and Minnesota on the north, down that river to the mouth of the Upper Iowa or Oneota River on the south. Having a length of about one and one-half miles and an average width of approximately one-half mile.

This terrace or "bench", as it is locally called, has an elevation above the present flood plain of the river of from forty to seventy feet and is simply an immense sand-bar of the old river, now covered with a foot or two of black sandy loam, and with heavy deposits of loess along and drifted against the foot of the bluffs.

It is an ideal town site, and evidently appealed to the Indian as such, as well as to his white successors.

While the digging for the Welper cellar was being done, one side caved in, and when the earth and sand was cleared away the tablet was found in it.

It was impossible to tell at just what depth it originally lay, but where it was found in the caved in earth, with reference to the surface soil, the workmen concluded that it originally lay about three feet below the surface.

No bones, charcoal, pottery or other material of any kind were found associated with it, which might lead to the conclusion that it might have been cached there for safe keeping and that its owner had died, or possibly had been killed or driven away in war, and all knowledge of its location lost.

Similar cases are the cache of a celt and fine spud found by Harrison Toney in 1911 in a bank beside the road near the May residence on the west end of the O'Regan Terrace on the Upper Iowa, and that of a couple of pairs of arrow shaft smoothers associated with a number of mealing stones, mullers, celts, etc., found a half mile southwest of New Albin by Mr. R.H. Thompson in digging a hole in which to bury a horse that dropped dead in the highway.

Copper beads and other trinkets have been found from time to time by workmen in the gravel pits in the north part of the town, and just over the line in Minnesota, on the terrace, are two mounds now nearly obliterated.

Hill, Brower and Winchell, in Aborigines of Minnesota, say that there were nine more to the south of these, in Iowa, where is now the old rail-road gravel pit.

On the top of the high bluff a little north of the village, and over the line in Minnesota, is a group of four conical burial mounds, and to the south-east of these on a terrace on the north side of the Winnebago creek, is a large group of forty, all of the conical type.

About one mile southwest of the village but still on the terrace, was formerly the problematical earthwork consisting of a trench with an embankment on either side, "shaped like a new moon", which has been obliterated by cultivation.

The south end of the terrace where it abuts on the flood plain of the Upper Iowa, consists of four salient points and three re-entrants, the most easterly of which extends as a drainage valley up to the junction of the Iowa River and State Line highways, and up the east branch of which the C. M. St. P. and P. Ry ascends to the level of the top of the terrace top.

On the most westerly salient, between which and the bluff foot the highway ascends, near the extreme point, is a mound about twenty feet in diameter and two feet high, which tradition says is the burial place of an Indian chief named Four-eyes.

Mrs. Hausman, a daughter of Mr. Hayes, who first settled on the land, and who later built a large and comfortable residence, since burned down, close beside this mound, says, that an old Indian woman told her parents that, when a child, she saw the burial, and that a hole was dug and in it was placed the chief's dead horse with him astride, dressed in all his finery, and that the earth was then heaped around and over horse and man.

On the next point to the east are Indian graves but no mounds.

On the third is a mound, while somewhere to the north of these in the field was located the earthwork before mentioned.

No doubt the New Albin terrace like those of the Upper Iowa valley has been occupied for centuries as camp or village sites by, at times, comparatively numerous populations of aborigines.

Resulting from these occupancies are the very numerous burials, the covered up debris of camps and villages, and the earthworks, mounds, - burial, linear and effigy.

The tablet is approximately pentagonal in shape. The shortest side is the base for the pictographs. The two lateral sides, the longest, are of nearly equal length. The two top sides are of unequal lengths and both shorter than the laterals, one being a curve. The respective lengths, beginning with the base and then the right hand side, are 3.25, 7.25, 4.0, 6.0, and 6.75 inches. The greatest length is 9.85 inches, the greatest width is 7.75 inches.

The obverse face has been countersunk leaving a rim from .25 to .5 of an inch wide at the bottom and on the lateral sides, and about .15 of an inch in height.

On the shorter of the top sides, nine tally notches have been cut, apparently by flint; on the longer side, thirteen; and on the base, ten. Five have been cut into the top of the rim on the left side near the center, with one by itself nearer the top.

The pictograph on the obverse side probably represents the thunder god or spirit. It has the body and limbs of a man with the head of a bird, facing the left. From the head a zig-zag line, probably intended to represent a bolt of lightning, runs diagonally downwards to near the center of the left hand rim.

The central figure on the reverse side is much more deeply incised than any other on the tablet and may be a representation of a flower or wand. On each side of this is a losenge shaped figure resembling a lance or spear head. These three figures reach from the base half way to the top and fill the space from side to side.

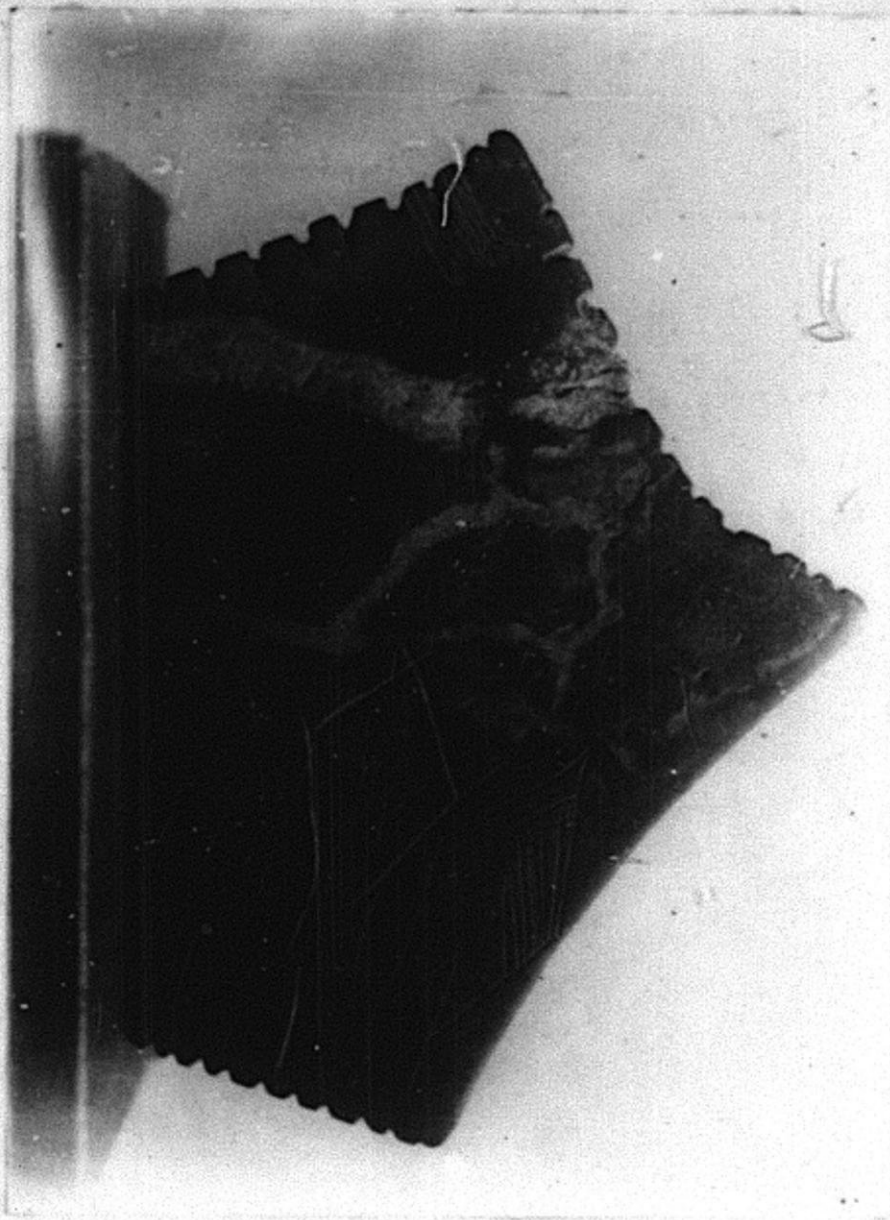
Above them and running crossways of the tablet, with the base to the right, is more faintly traced what looks like a school-boys picture of a lighthouse.

Other lines on both sides were undoubtedly put there by the engraver to convey some meaning, but with two exceptions they do not form an outline picture of any object.

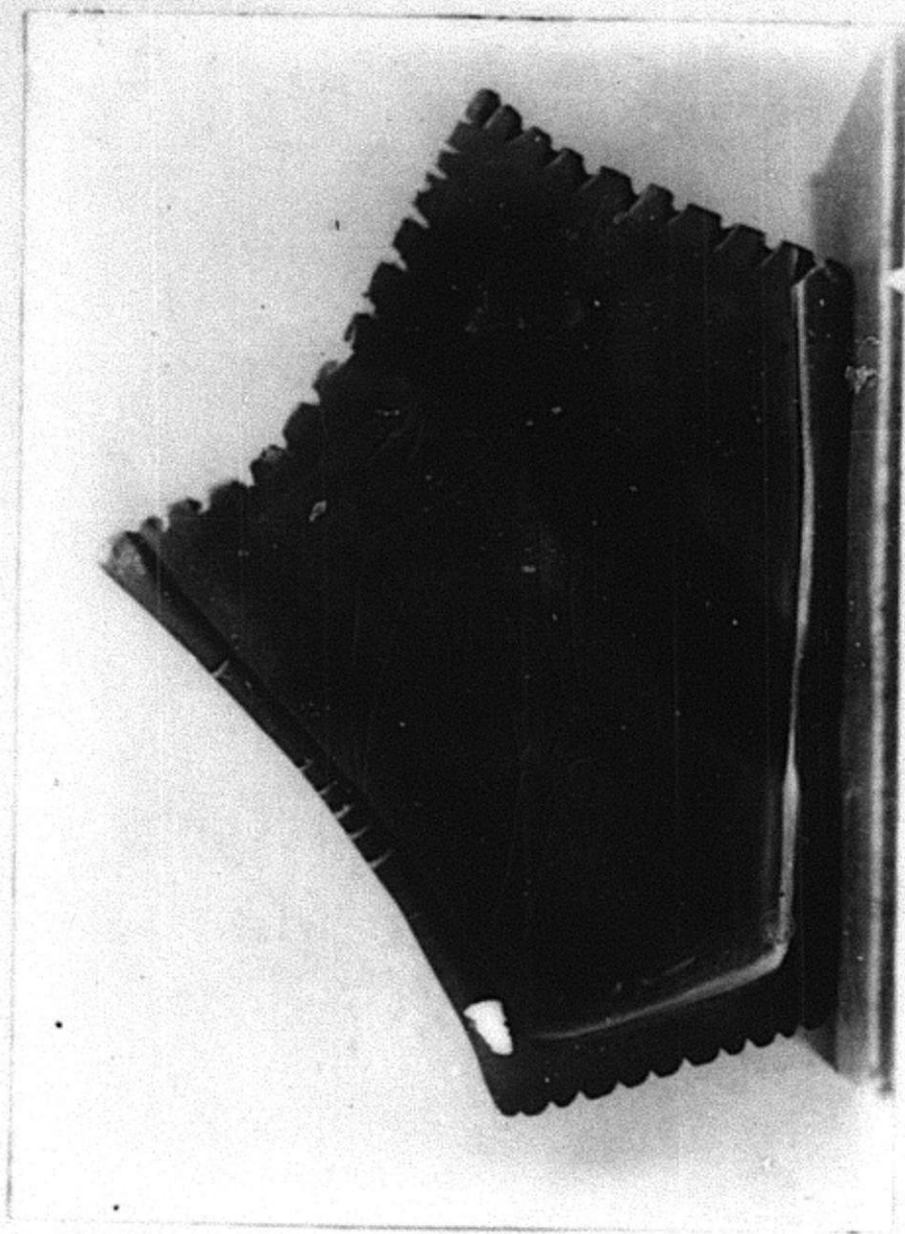
One is a small cross within and near the top of the flower pictograph, the other at the right of and near the loins of the thunder god may be intended for a frog.

The tablet was sold by Didling, the finder, to Mr. R.H. Thompson, and by him to Harry Orr, in whose possession it now is. 1937.

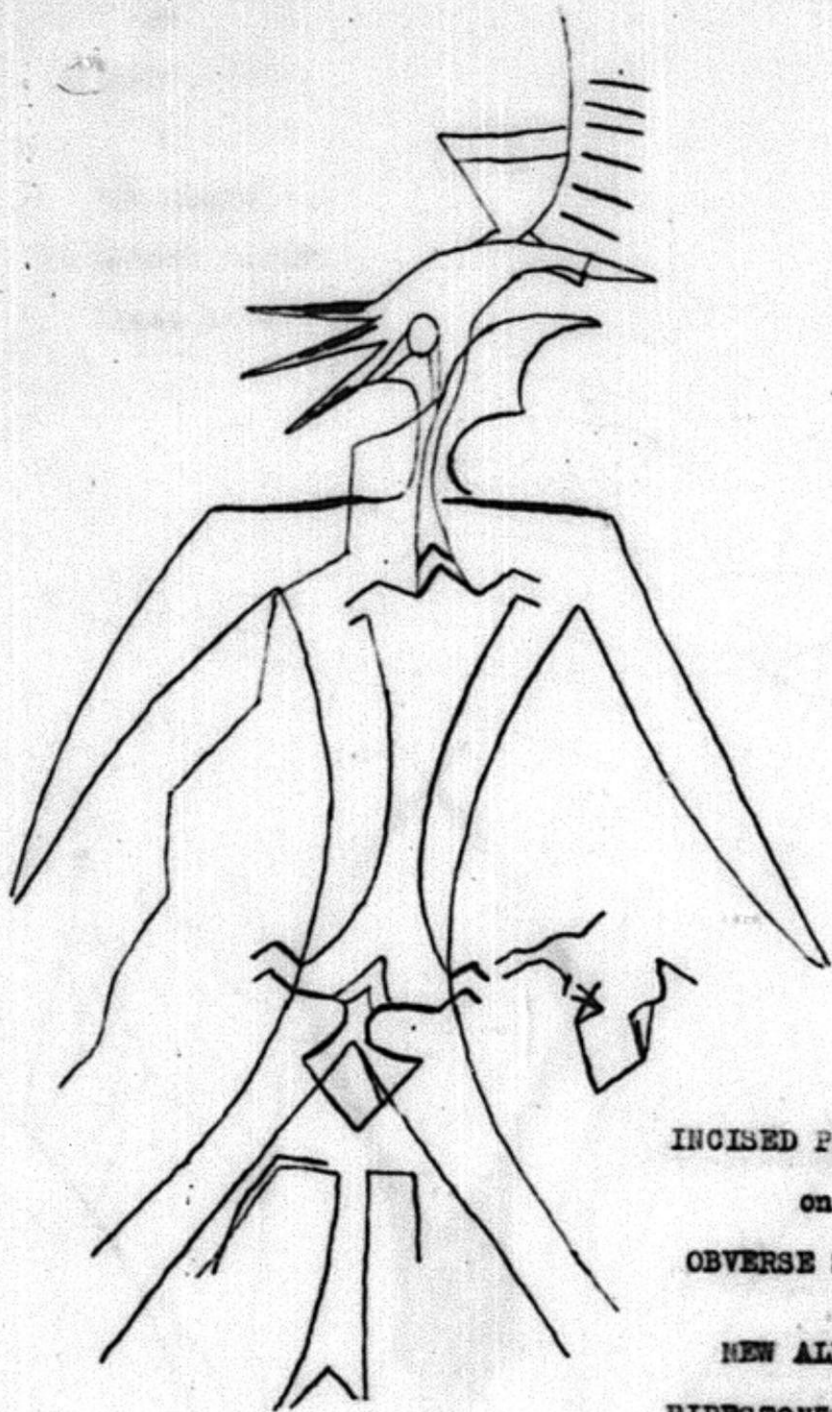
~~(See pages 124 and 125 of Vol. VII for sketches of figures on both sides.)~~



Reverse Side of the New Albin Inscribed Tablet.



Obverse or Face Side of the New Albin Inscribed Tablet.



INCISED PICTOGRAPH

on

OBVERSE SIDE

NEW ALBIN

PIPESTONE TABLET

Exact Size.

INSCRIBED PICTOGRAPH

on

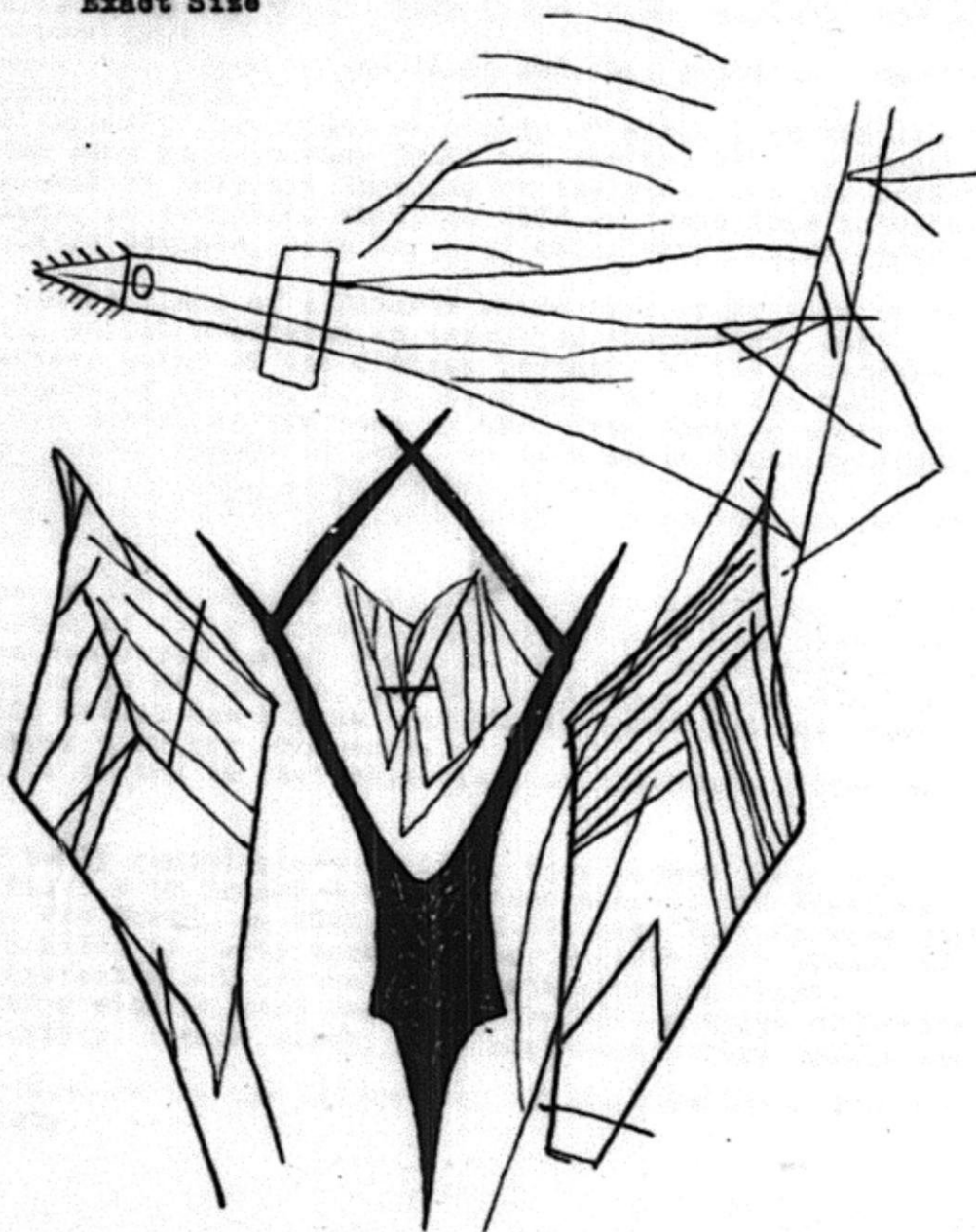
REVERSE SIDE

of

NEW ALBIN

PIPESTONE TABLET

Exact Size



A List of Finds of Iron Associated with Burials of People of the Oneota Culture or Found in the Refuse of Their Village Sites.

Blade of a Table Knife ground to a Point, Handle gone and Steel badly rusted. The only inclusion found with an extended burial, one of string of five on a low hog-back spur of bluff north of the Dennis Malone residence in the valley of Bear Creek and near the south-west corner of Sec. 34, T. 100, R. 6 west of the 5th P.M., in Waterloo township, Allamakee county, Iowa.

Found by Ellison Orr in excavating the last and most northerly of the burials, about 1890. This piece later crumbled into pieces and was thrown away.

The grave from which it was taken had flat rocks set edgewise on the sides and ends.

Almost directly east about an eighth of a mile, on the low terrace on the west side of Bear Creek was the Woolstrom village site, and north-east of this and just across the creek was the Woolstrom Burial Place, in trenching which in 1936 we found four interesting Oneota Culture burials, with three of which there were inclusions.

Badly rusted Blade of a Butcher knife from right side of the pelvis of a burial uncovered in trenching the western part of the eastern point of the O'Regan Terrace, on the south-west of the north-east of Sec. 6, T. 99, R. 5 west of the 5th P.M.

Extensive trenching was done by the party working under Dr. Charles R. Keyes, summer of 1934, on Iowa State Planning Board's Project # 1047, on this large burial place.

The butcher knife blade is now in the collections of the State Historical Society.

A Piece of badly rusted iron, possibly a wrought nail, found with skeleton of fully extended Oneota burial # 4 in Trench A excavated in Woolstrom Burial Place on low terrace on east side of Bear Creek on SW SW Sec. 34, T. 100, R. 6 west of the 5th P.M.

With this burial was a fine boat-shaped small pot and eight coiled copper wire ear ornaments.

This iron is now in the collections of the State Historical Society.

A very badly rusted piece of iron, four inches long, was found in Pit # 8 in Trench D of trenches made in the Enclosed Area, "The Old Fort", on that part of the Lane Farm Terrace north of Brown's Hill, by party working under Ellison Orr, summer of 1936, on Project # 962 of the Iowa State Planning Board.

Associated with it were sherds of the common types of Oneota Culture pottery, broken bones, bone implements, clam shells and ashes.

This piece now in the collections of the Iowa State Historical Society.

Dr. Charles R. Keyes has two pieces, six or more inches long, one probably a large perforating instrument, purchased from Ed. and Gus Wild, who found them in Oneota Culture graves on the Upper Iowa. Exact locality where found not known.



Two Knives found in Graves of the Oneota Culture, in the Valley of the Upper Iowa River.

No. 900 is a chert knife found in Pot No. 2 taken from a Grave on the low terrace to the south of and ^{near} the head of the "Elephant", an isolated bluff, (Hill of Circumnudation, Prof. Calvin called it.) on the north side of the Upper Iowa River, on the SE SW Sec. 32, T. 100, R. 5 west.

It was in one of the graves of the group, in one of which this knife was found, that Dr. Patcliffe found the "Dragon Pipe", the finest specimen known of that rare type of pipe.

No. 3068, of pinkish chert, was found by Francis Hartley in a low mound within the rectangular Hartley Enclosed Area in the NE NW Sec. 2, T. 99, R. 5 west, within a few rods of the township line between French Creek and Union City townships. in Allamakee county, Iowa. 7/10 actual size.

These are good examples of the fine type of knives found with burials of the Oneota Culture.



No. 2006
Bunt End



No. 2041
Spatulate



No. 919A
Bunt End



No. 323



No. 2054
Spatulate

Scraper is a name given to a type, or rather a number of types of implements which were supposedly used principally for dressing skins. In a collection of 64 specimens found in Allamakee county all but four or five were of different kinds of chert, three being of an oolitic variety. One of the exceptions was a milky quartzite hardly to be distinguished from Quartz. The others appeared to be chalcedony.

Above drawings are actual size.

The "Bunt end" or "Snub nose" is the most common of all chipped material found in the valley of the Upper Iowa.

SCRAPERS

Type 1. The "Bunt end", "Snub nose", is a leaf-shaped or roughly triangular piece, usually from one to two inches long, having one side flat or nearly so and the other rounding, with the widest end bluntly chipped off so as to form sometimes almost a right angle with the flat side.

It is seldom that the flat side of this implement shows any chipping while the opposite or rounded side is generally well wrought.

Type 2. The Spatulate type is a thin concavo-convex flake from half an inch to an inch wide and two to three inches long. The concave side is not chipped, the convex, nicely chipped forming a cutting edge all round.

Type 3. The Thick-triangular is usually less than an inch in length, rather broadly triangular in outline, with one side flat while the other is chipped from a central point to form a cutting edge on the three respective edges, so that when laid on its flat side it resembles a triangular arrow point with a very decided hump on its upper side.

Type 4. Notched Scrapers. These are quite likely spear heads or knives that have had the point broken off, the line of fracture on the stem end being worked over to form a cutting edge. This type is rare in Iowa, there being but one in the collection mentioned.

Type 5. Irregular scrapers are made of thin flakes, flat or nearly so on both sides and of any shape, with one or more of the edges flaked or chipped roughly to a cutting edge.

Type 6. Finely wrought scrapers of rare form. These have not been found in north-eastern Iowa.

All these forms run into each other and it is sometimes very difficult to decide how a particular specimen should be classified.

Packed together with four bone awls and two broken knives and 24 unwrought pieces of chert, in the bones of the right hand of a squaw of the Oneota Culture people, whose skeleton was exhumed on a point of sandy terrace on Waterloo Creek, on Sec. 25, T. 100, R. 6 west of the 5th P.M., were 8 chert scrapers of at least three varieties of that rock.

Of these 3 would be classified as type 1, 3 as type 2, 1 as type 3 and 1 as type 6.

When a boy we used a small, - 2 in. wide, - chert core from from which small flakes had been struck all round, leaving a residue flat on one side and hump-backed on the other, to dress and remove the fat and flesh from the pelts of minks caught by us, and considered it the best thing which we could find for that purpose, - far better than a knife. The cutting edge seemed to be just right for removing the flesh rapidly and at the same time not injuring the skin.

PAPER
ON THE OCCURRENCE OF ELEPHAS PRIMIGENIUS AND
MASTODON AMERICANUS IN NORTH EASTERN IOWA.
ELLISON ORR

ON THE OCCURRENCE OF ELIPHAS PRIMIGNIUS AND MASTODON
AMERICANUS IN NORTH EASTERN IOWA.

South and east of Postville, Iowa, in the south-western part of Grand Meadow township, Clayton county, is an area of a few square miles of country of a more or less moranic nature. The Judge Williams farm lies in this territory. Near the farm residence are deposits of stratified sand which curiously enough contain some gold dust. To the ~~east~~^{west} of the sand banks ~~three~~^{one}-quarters of a mile, a small brook bottom widens out into a peat bog covering between twenty and forty acres, in which have been found bones and horns of the buffalo.

Running about through the low rounded hills are shallow ravines and small valleys, which unlike those in the more recent areas of like nature, form a complete drainage system, but which have so little fall, that before the country was settled, they contained many boggy, marshy places. After the settlement of the country, ditches, sometimes natural and sometimes artificial, were cut in these valleys, which, widened and deepened by floods, cut down through the peat and black soil to the underlying drift, and sometimes deeply into that.

Occasionally bones and horns of the buffalo were washed out of these ditches and afterwards picked up by the people living near. Once about the year 1890 a fragment of a jaw bone of Mastodon americanus with one imbedded well preserved molar was found by a farmer and sold to Dr. F. J. Becker, a member of the

faculty of the Iowa State University, and which is probably still in his possession.

About 1900 a single molar of *Elephas primigenius* was found in one of these washed out ditches and is now in the possession of the writer. It is well preserved and measures in its greatest length, $10\frac{1}{2}$ inches, is $3\frac{1}{5}$ inches wide, and $5\frac{1}{2}$ inches from crown to tip of root. Other teeth and pieces of large bones have been reported as being found but afterwards lost or destroyed. Plate IV is a photograph of this fossil.

The animals of which these are the remains were probably mired down in the boggy sloughs and there perished at no very remote period.

In the summer of 1904, the four molars, the pelvis, a few vertebrae, and some fragments of ribs of what was probably a much older specimen of *E. primigenius* were taken out of a loess bank on Yellow River, in the north-west part of Post township in Allamakee county.

At the place where these remains were discovered a bank of loess seems to have drifted off the upland to the north, over the low ledges of Galena-Trenton limestone bordering the creek at this point, which it covered up, running out for about 200 ft. into the valley which the stream had cut into the rocks. The valley from rock bank to rock bank is about forty rods wide.

The creek flowing against the down stream side of this point of loess, which projects diagonally up-stream, has eaten it away till now there is a vertical exposure twelve feet in height

and upwards of two hundred feet long.

At the bottom from two to three feet of Post Kansan loess, containing ferruginous matter in the form of pipes and thin seams and layers, rests directly on the Galena rock, a foot or more of which is exposed. Above the Post-Kansan or blue loess, the exposure to within a few inches of the surface is ^{the} typical Iowa or yellow loess, ^{at this locality,} containing a very few loess-kindchen, but no fossil shells.

Mr. Harvey French, a farmer living near, first discovered one of the molars sticking out of the clay at the junction of the Post-Kansan and the Iowan. A few hours digging by himself and a neighbor brought to light at the same horizon, the remaining three molars and other parts of skeleton mentioned.

On exposure to the atmosphere, the pelvis, which was quite complete, soon crumbled to pieces. Unfortunately no measurements were taken. The molars and less than half a dozen of the bodies of vertebrae were all that were saved.

The dead body of this elephant was, in all probability, washed down by the stream at some time between the deposition of the Post-Kansan and the Iowan. Lodging at this place, the flesh decayed or was eaten by animals, or if you have a good imagination, perhaps by man. The bones were scattered about, some decayed and others washed away by the stream, and later what remained, covered up by the wind driven Iowa loess, which accounts for only a part of the skeleton being found.

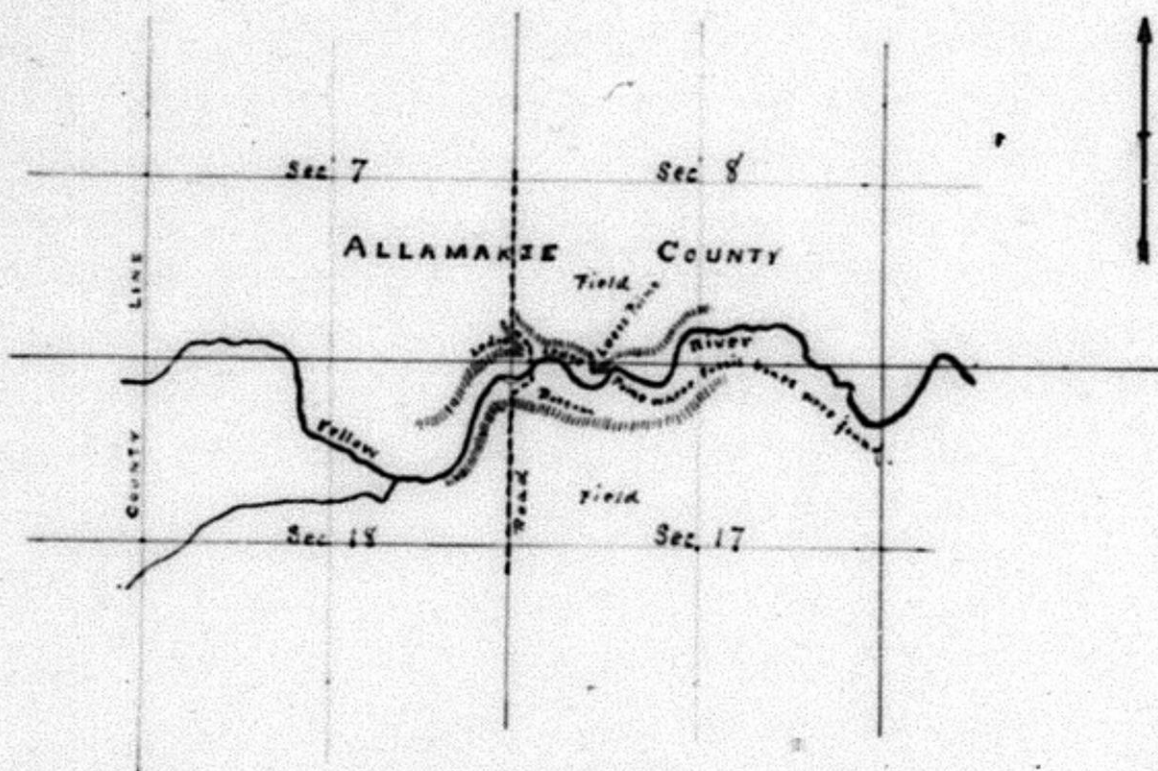
Perhaps death overtook the giant where his bones lay, and after the flesh had been devoured, decayed or dried up, the skeleton became separated and scattered, and lay for a long time exposed to the supposedly dry atmosphere of the period of the deposition of the Iowa loess. Further cutting away of the bank may bring to light more of the bones.

Following is a map of the locality.

Plate I is a photograph of the exposure taken from the opposite side of the creek, X marking the place where the fossils were found.

Plate II is a photograph of the same taken from a point farther away.

Plate III is a photograph of the Molars and vertebrae now in the possession of Mr. French.



REMAINS OF MASTODONS FOUND IN IOWA

See Iowa Geological Survey Report, Vol. XXIII, 1912

Counties	Bones	Teeth	Tusks
Boone	1	1	
Carroll	1		
Clayton		1	
Clinton		2	1
Crawford	1	1	3
Dallas	1	1	1
Greene	2		
Harrison	5	7	
Henry	1	4	
Jackson	1		
Lee	2	2	1
Linn		2	1
Lyon	1		2
Mahaska		1	
Monona	2	2	2
Muscatine		6	1
Plymouth	2		1
Polk		1	
Poweshiek	1		
Sac	1		
Scott	1		
Story	1		
VanBuren	1	1	
Wapello	2		
Warren		1	

25

33

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REMAINS OF ELEPHANTS FOUND IN IOWA.

See Iowa Geol. Report, Vol. XXIII, 1912.

Counties	Bones	Teeth	Tusks
Allamakee	1	4	
Black Hawk		3	
Cedar		2	
Cerro Gordo	1	3	
Cherokee		1	1
Clayton		2	
Clinton		2	1
Crawford		3	
Davis		2	
Des Moines		2	
Dubuque		3	
Fayette		2	
Floyd		3	
Franklin		1	
Harrison	1	5	
Iowa	1	3	
Johnson			1
Lee		1	
Linn		1	
Louisa	1	6	1
Lyon	1		
Mahaska	1		
Marshall		1	
Mills	1	5	1
Monona	1	3	
Montgomery		1	
Muscatine	1	2	
Polk	1	5	
Pottawottamie	1	5	1
Sac	1		
Scott	1	3	1
Tama		1	
Warren	1	3	
Woodbury		1	



PLATE I

*Exposure of Loess where Remains of E. Primigenius were found
Yellow River Sec 17-36 '6. Looking N.*

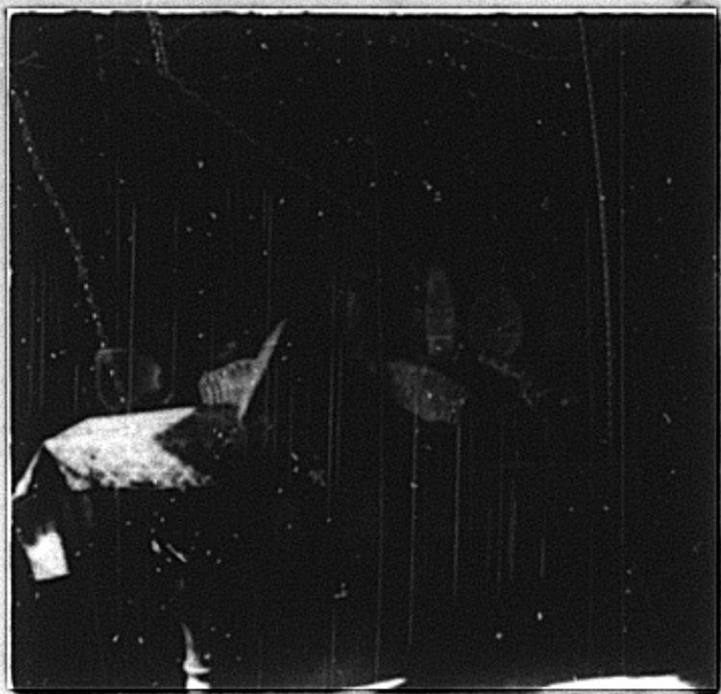
121



PLATE II

View of same Exposure as Plate I View looking North.

PLATE III



*Photograph of Molars and Fragments of Bones of E.
Primigenius found at Junction of Post Kansan and Iowa
Loess. Sec 17-96-6*

On the bluff top just south of the village of Dorchester, in the valley of Waterloo Creek, a stream that heads in the Drifless Area in Fillmore County, Minnesota, Mr. T. Schwartzhoff, in 1921, found a well preserved tooth of an American mastodon, *Mammot americanum*.

The exact location is not definitely known but was somewhere near the center of Section 23, Town. 100, Range 6 W.

The crown of this tooth measures eight by three and three-fourths inches. The processes are all somewhat broken, apparently after it was separated from its owner, as the edges of the breaks are fresh and not worn.

The skeletal remains of fossil elephants have been, so far as we have information, found only in bog deposits and the alluvial soil of river flood plains, and the finding of this tooth on the top of a two hundred foot high bluff is certainly unique, and we conclude that it was probably carried there by man.

Plate IV shows a side view of this tooth one-half natural size, and Plate V, a view of the top three-fourths natural size.

THE BEAR CREEK ELEPHANT.

About the time of the finding of the Mastodon tooth near Dorchester, a femur, a tooth and some other fragments of the skeleton of an *Elephas primigenius* or of some other closely related species, were washed out of the bank of Bear Creek near the home of Matt Flynn on the north-east of the south-west of Section 26, Town. 100, Range 6 W.

The femur appears to have been in a fair state of preservation but the others were all badly decayed and fell to pieces soon after being uncovered.

The tooth was apparently that of a not fully grown individual and the crown was badly decayed.

These remains were not imbedded in the alluvial soil of the creek bottom but in the loess bank on one side of the flood plain similar to the Yellow River find of Mr. Harvey French.

Plates VI and VII are photographs of opposite sides of the one tooth found, about two-thirds actual size.

THE MATTHEWS TOOTH.

A party by the name of Matthews whose home is in Elgin, Iowa, is said to have either a mastodon or an elephant tooth that was found in the valley of one of the smaller streams tributary to the Upper Iowa River.

Apr. 15, 1944. See Appendix A

About 1930 a fragment of a large leg bone of *Elephas* was found in Commercial Gravel Pit in N. end of Harper's Ferry Terrace - out wash from Wisconsin Glacier.

THE STORY OF AN ELEPHANT'S TOOTH.

By Ellison Orr

An outstanding feature of the landscape of northeastern Iowa is the V-shaped, trough-like and deep ravines and valleys separated by high and narrow divides.

For the causes producing this result we must go far back in time. For ages this part of the world was elevated much higher above sea level than now and the run-off of storm water had much greater erosive power and cut deep into the rock floors and sides of all water courses from rivulet to river.

Then as the long ages drifted by there came a change. The earth's crust sank slowly the flood waters had less force and transferred less material. Instead of being scoured deeper, the valleys began to fill with sediment; "bottom lands" or flood plains were formed; in general the country began to level up.

Perhaps such long periods of alternating erosion and deposition occurred many times. Geologists tell us that, since it emerged from the waters of the old Silurian sea far back in the hoary past, some hundreds of feet of the Mississippi valley have been disintegrated by the action of heat, cold, chemical action and other causes, washed into the rivers, and carried far south to form new ocean beds.

The flat present bottom lands of our valleys have a thickness of from eight to twenty feet above the old gravel beds of the last period of erosion.

This deposit consists of worked over sandy soil and gravel at the bottom, overlain by yellow clay - the "loess" of geologists, - which in turn is covered by black alluvial loam consisting largely of decayed leaves and other vegetable matter - a very rich soil.

At a couple of miles east of Waukon is a typical valley, illustrating well both the erosion and deposition periods.

This valley begins at the Elon road on the NE NE of Sec. 33, T. 98, R. 5 and runs south across that section and sections 3 and 4 of the next township to the south, opening into the valley of Paint Creek near the south line of section 3.

For the first eighty rods it is V-shaped and deepens rapidly with no bottom land. Then a tributary valley comes in from the west just above which begins the level bottom. This at first, no wider than six rods, has increased to a width of twenty at one-hundred rods farther down where another tributary valley comes in from the east, below which it continues at about the same width to its mouth.

Beginning where it unites with Paint Creek and year by year working its way up stream or rather, up valley, the run-off of violent storms that were prevalent some years ago, cut a wide ditch in the easily washed out alluvial soil down to the ancient gravels.

Now during the long periods of the cutting out of this valley and that of refilling it in part, animal life existed in the country round about, at times abundant and of species long since extinct.

For long, elephants of two kinds roamed over Allamakee county - one with a thick coat of long, woolly hair. Then there was a camel - not a cigarette - but an honest-to-goodness long-necked beast; two species of great ground sloths; a hog like the fierce little fellows found down in Texas and Mexico, called peccaries; four species of wild horses - the horses that we have are not descendants of these but of those brought across the sea; several species of deer and elk; a musk ox and two species of bison, or as we know them, buffalo, larger than the living species.

All of these are now extinct.

Then how do we know that such animals have once lived here in Iowa land?

Because we find now and then their skeletons, or parts of them, buried deep under deposits of earth that have been laid down since they lived, that after they died, buried and covered up the remains and preserved them till now.

The State Geological Survey in its museum has skeletons or parts of them of all I have named, found in different places over the state.

In Allamakee the parts of bones or teeth of at least five different elephants have been found in as many places. In Grand Meadow township, just across the Clayton county line south of Postville, there has been found the teeth of five others and two skulls of an extinct bison, while in the gravel pit at Clermont was found the skull of a musk ox.

All these animals were vegetarians and their presence is proof of an Iowa, even at that remote period, beautiful with prairie and forest.

On Corn Day at Waukon there was exhibited in the corn display room a very recent proof of elephants at large in our county. This was a tusk, probably of the Woolly Elephant, *Elephas primigenius*, the remains of which are found over Europe, Asia and North America. So numerous were they in Siberia and Alaska that their well preserved fossil tusks, washed out of river banks and the marshes along the shores of the Arctic ocean, have been an article of commerce.

Over in the typical ravine east of Waukon Mr. George A. Schultz dug this tusk out of the hard old gravel bed at the bottom of the ditch in which the most of it was solidly imbedded. That part which had been uncovered and exposed to weathering by the cutting away of the gravel by recent floods, had separated into thin encircling laminae or layers, and much of these had crumbled into decayed fragments.

Around the outside of its curve this one Allamakee elephant's tusk - for the beast to which it belonged was undoubtedly born, grew to maturity, and died right here in our county - measured seven feet and six inches, while straight across from base to tip was four feet and four inches. At the base it was seven inches in diameter, at the tip, two inches.

A few days after Corn Day we went out and took pictures of the place from which it was taken. The base was farthest up the valley and about six inches higher in the gravel than the tip.

The impression of it was very distinct in the clay-gravel deposit which was too hard to yield readily to any tool except a pick.

This place was on the west side of the ditch and directly opposite the mouth of the tributary ravine coming in from the east.

And - an elephant's tusk is one of an elephant's two front teeth.

A very few water-worn greenstone pebbles were found in the ancient gravel bed.

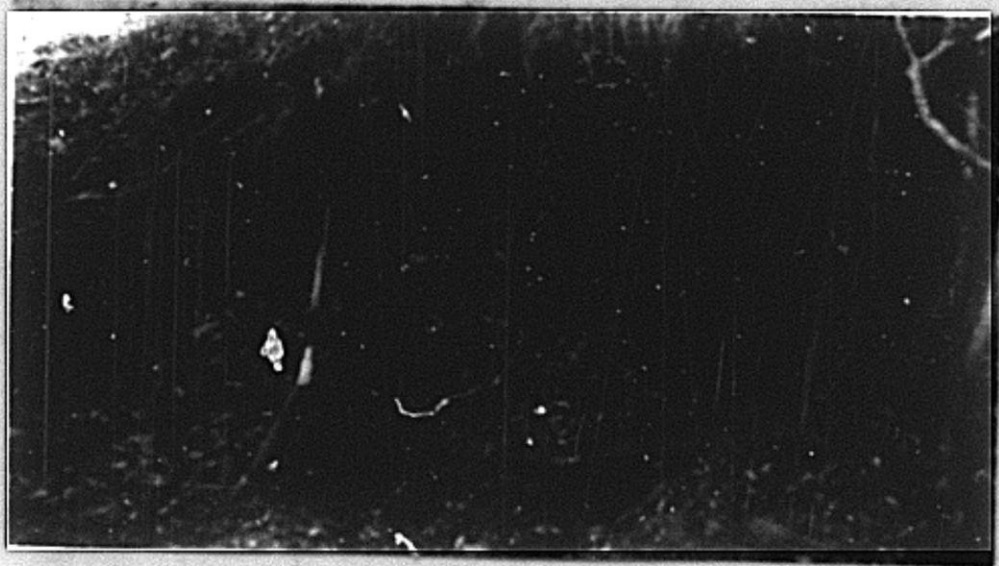


View of a "raw bank" side of the erosion ditch in which the elephant's tusk was found, at twenty rods above.

Note 4 ft. of "made land" at top below which is approximately the same thickness of black loam on the right thickening to 6 - 8 ft. on the left. Below this is 2 - 8 ft. of yellow loess with a trace of the blue beneath. Then 5 ft. of the ancient gravels - the same as the deposit in which the tusk was found. Creek gravels at right foreground.



View of the place, on the SE SE Sec. 33, T. 98, R. 5, Makeo township, on the west side of the ditch, where the tusk was found. Note the two holes near the gun standing against the bank and in the upper foot of the gravel bed, in which were imbedded the ends.



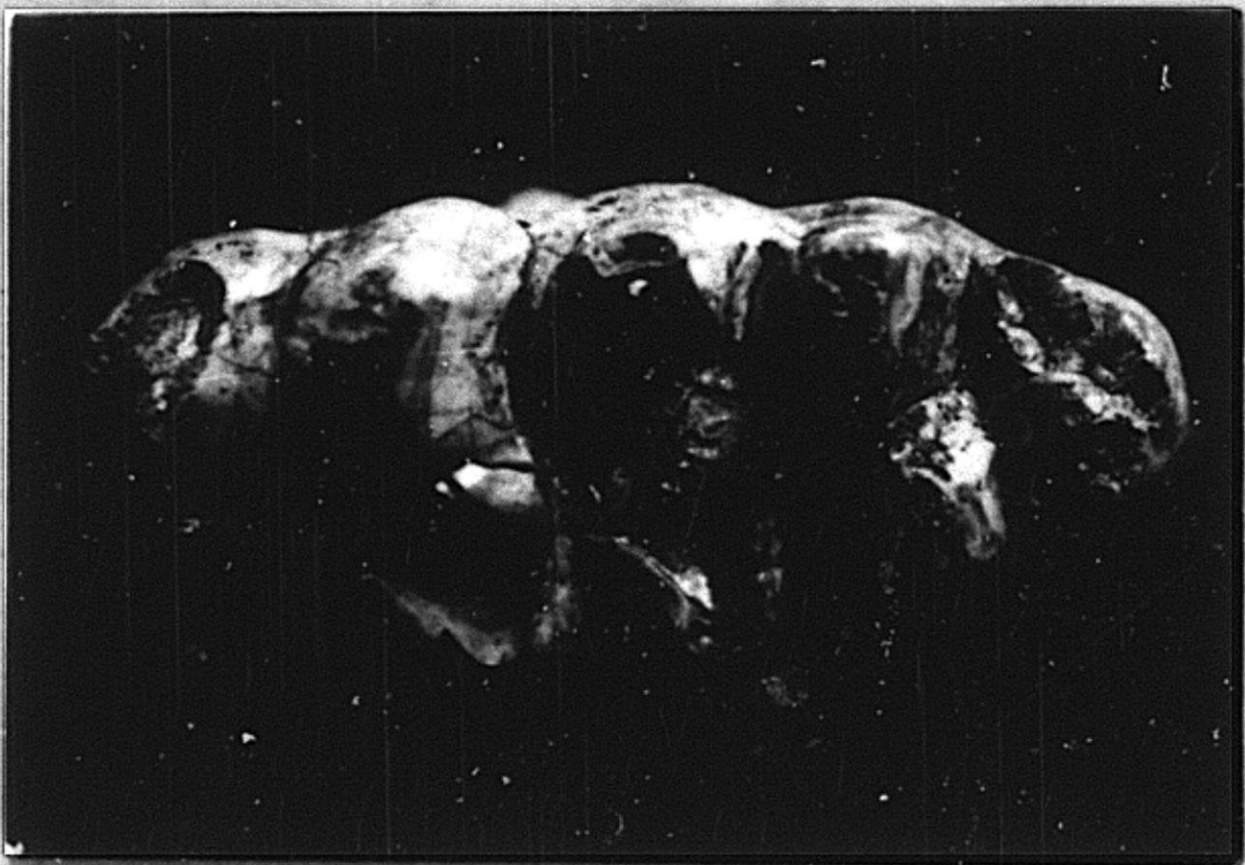
A close-up of the place. Note the two holes in which the ends were imbedded with the long smooth spot connecting them - a mould of the tusk.



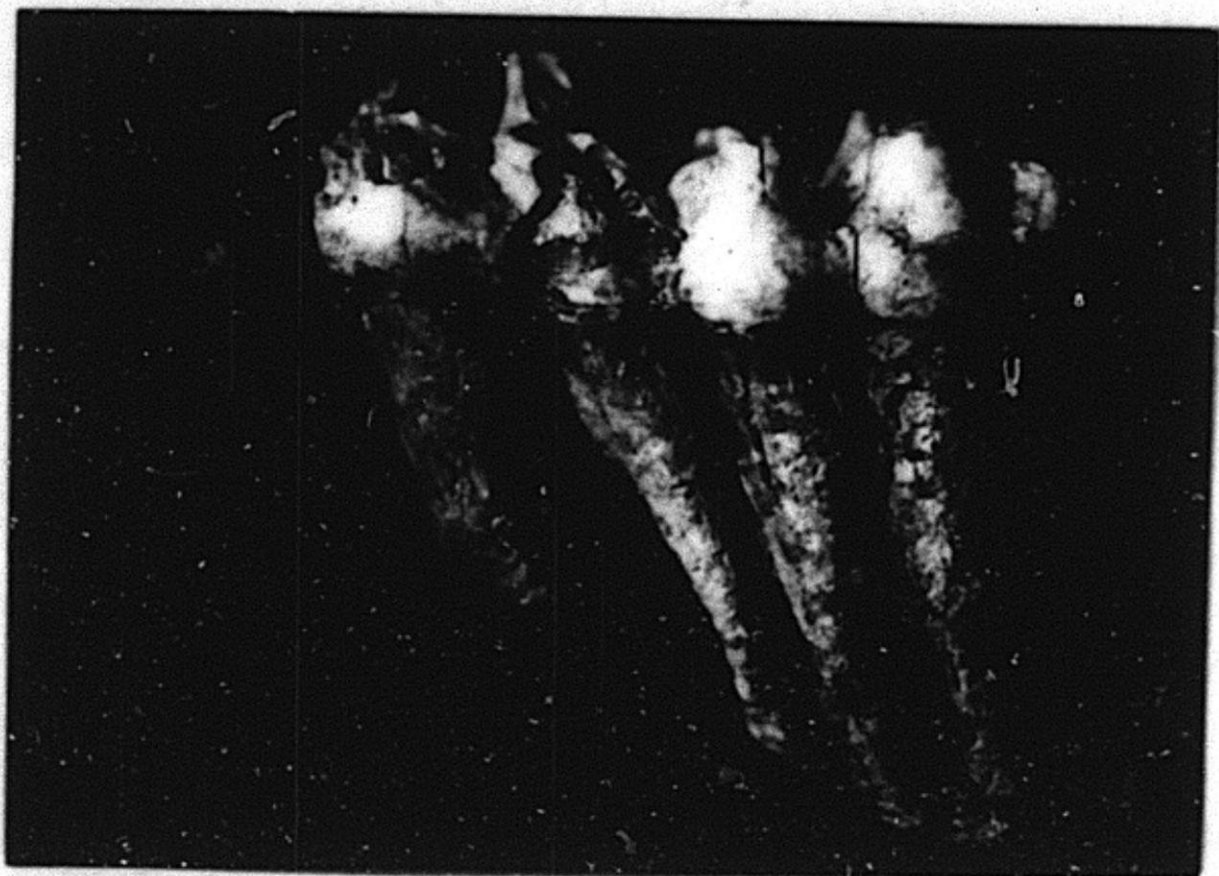
Photograph of opposite side of tooth of Bear Creek elephant shown in preceeding plate. About two-thirds natural size.



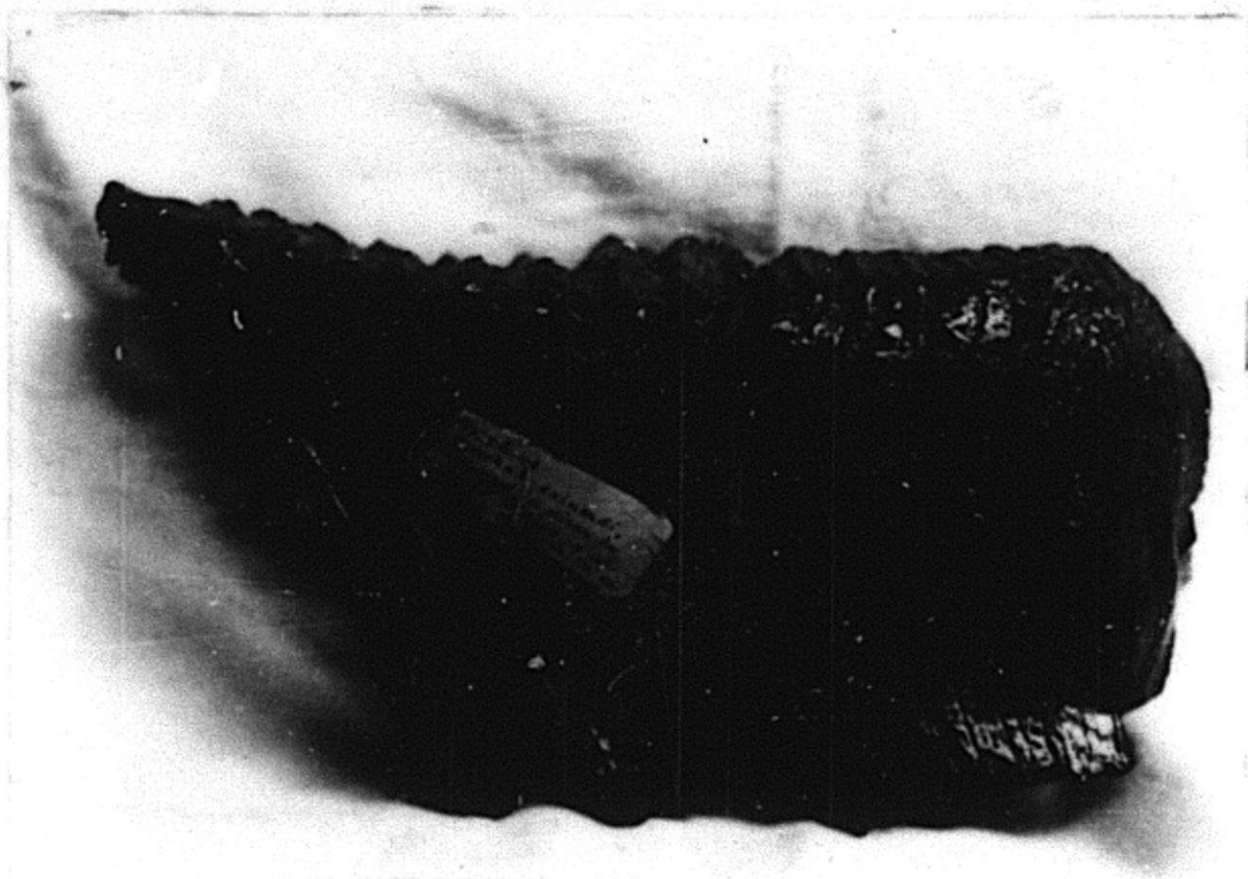
Photograph of tooth of Bear Creek elephant, *Elephas primigenius*, (?) about two-thirds natural size.



View of crown of tooth of *Mammut americanum* found on top of bluff near Dorchester, Iowa. Three-fourths natural size.



Side view of Tooth of Mammut americanum found on top
of bluff near Dorchester, Iowa. One-half natural size.



About 1/2 Actual Size.

Tooth of *Elephas columbi*. (?)

Found in an erosion ditch in a boggy slough in Grand Meadow township, Clayton County, Ia.

From this or a nearby slough a piece of a leg bone of either *Elephas* or *Mastodon* was washed out in another ditch.

Two skulls of buffalo were picked up in a similar ditch in the bog near the farm house on the Judge Williams Farm in Sec. 17, T. 95, R. 6 west of the 5th P.M.

The Dorchester Fossil Elephant's Jaw Bone.

About May 1st, 1943, Mr. Francis Schwartzhoff, living in the large old stone house on the Dorchester - Spring Grove ridge road, who operates a commercial gravel pit in the south side of the Flatiron terrace at the New Galena bridge across the Upper Iowa river, on the SE NE Sec. 2, T. 99, R. 6 west of the 5th P.M., Hanover township, uncovered in the fine sand, at the depth of 25 ft. below the surface of the terrace, a well preserved lower jaw of an *Elephas primigenius* or *E. columbi*.

Except that the proximal ends of the two rami were frayed and ground off; the thin bones enclosing the back and inside of the two back molars, broken off since found by careless handling; and several back plates of these teeth had separated from the remainder, the fossil was complete.

There were four molars - two on each side of the jaw - the back ones, loose, the front ones firmly imbedded in the bone.

The dimensions of the grinding surfaces of these were:

The back right	2 by 5 - 7 inches, approximately
The front right	2.8 by 6.8 inches
The back left	2 by 5 - 7 inches, approximately
The front left	2.8 by 7 inches

From the point of the jaw to the approximate ends of the rami 22 inches.

From outside to outside, across jaw, of rami at the widest point 19 inches.

Photographs taken and measurements made May 23d, 1943 by Dr. Warren Hays and Ellison Orr.

The Flatiron terrace, like the others along the Upper Iowa river, is a deposit in places showing cross-bedding, scattered about in which are large blocks of limestone showing no erosion, and with irregular non-continuous areas of fine gravel of varying depths, approximately 67 ft. in height above the present flood plain of the river and extending for an unknown depth below it. This is capped by 18 to 20 inches of black sandy soil.

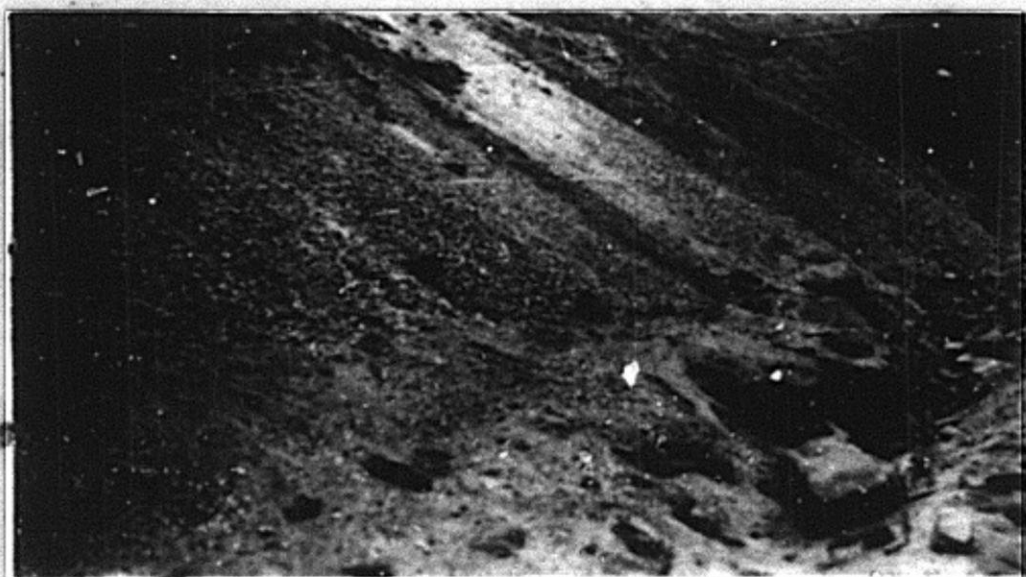
The top of the terrace was originally flat.

It is believed that the terraces of the Upper Iowa are outwash - valley trains - from the melting Iowa glacier. The headwaters of the present Upper Iowa river are in the area in Winnebago, Howard counties in Iowa and Fillmore and Mower counties in Minn. once covered by this glacier.

As the sand in the lower part is brownish or yellowish in color while the upper part is pure white it is possible that a part may have been laid down by floods from the much older Kansan glacier which covered all of northern Iowa except perhaps three townships in the extreme NE corner of Allamakee county.



Mandible of the Schwartzhoff Elephant, *Elephas primigenius* or *E. Columbi*, found in the long drag-shovel pit, # 3, of the Flat-iron Terrace on the north side of the Upper Iowa river near the east end of the New Galena bridge, on the SE 1/4 Sec. 2, T. 99, R. 6 west. About one-third actual size. Photographed by Ellison Orr, 1943.



Pit # 3 in the Flat-iron terrace, looking north from the mouth on the south side. Mandible of elephant was found where the two men can be seen, at about twenty-five feet below the level top of the terrace. This terrace is an immense sand bank covered with from one to one and one-half feet of black sandy soil. Formerly having an area of one and 1/4 acre.

A Study of a Fragment of a Large, Heavy Oneota Culture Storage Pot with Attached Handle.

5181

To Determine approximately the dimensions of a vessel of which we may have a fragment of the neck with a portion of the body attached, we have found that the method given below will give fairly accurate results if care is taken.

It however is of use only where the body of the vessel is sub-globular and the neck round. If the neck is oval it is useless.

To determine the neck, which is the basis of our estimate, first place the sherd up-side down with the rim resting on a sheet of paper.

Then with a pencil held vertically against the inside of the neck where it joins the body, draw a line which will be an arc of the circle formed by the neck. Connect the ends of this arc with a straight line, - the chord of this arc. At the center of this chord erect a perpendicular. Project this perpendicular to intersect the arc which it subtends at its center.

From this center point of the arc draw straight lines to its ends, - chords of the two sub-arcs. Then erect perpendiculars to the center of these sub-chords.

These two perpendiculars will intersect the first perpendicular at a point which is the center of the circle formed by the neck.

The distance from this center, measured along either of the perpendiculars through the center of its chord to that of its arc will be the radius of the circle formed by the neck. Twice that will be the diameter of the neck, and, customarily, the greatest diameter of the bowl is one and one-half times that of the neck.

The accuracy of this method depends entirely on how true a circle the neck forms. Usually the circumference is more or less irregular and the arc formed by a fragment can not be relied on for more than an approximate result, but is certainly better than a guess made from an inspection.

This sherd which we are to study was taken out of the last trench, (Trench H in the Lane Farm Terrace Enclosed Area on the NW SW Sec. 36, T. 100, R. 5 west of the 5th P.M.) from a depth of 3 ft. on Dec. 4th, 1936. From the last trench in the last hour of the last day of the season's work.

By the method above outlined the radius of the neck of the fragment was found to be 6.7 inches, the diameter 13.4 inches.

Now if we assume that the inside of the neck was really a true circle, and that the whole vessel was circular at its greatest diameter, then in accordance with the usual proportion between diameter of neck and diameter of - horizontal - bowl, - diameter of neck, 2, of bowl, 3, we have 20.1 in. as the horizontal diameter of the bowl.

The neck and body are approximately at right angles to each other. The neck apparently flaring out upwards at an angle to the perpendicular, and the top of the body out and downwards at about the same angle.

(over)

The body of this sherd has a thickness of .3 to .4 in. and has a distinctly cross-laminated appearance, - like the shingles on a house.

At the junction of the neck and bowl the thickness is .5 in.

The inside of the bowl shows finger impressions and the inside of the neck, fine horizontal striations probably made by smoothing with a piece of elk skin.

Many of the clam shell tempering flakes have a diameter of .1 in.

The body is without decoration except for four incised lines, .5 in. in diameter, extending from the lower attachment of the handle, at irregular intervals, downwards. The neck as usual has none.

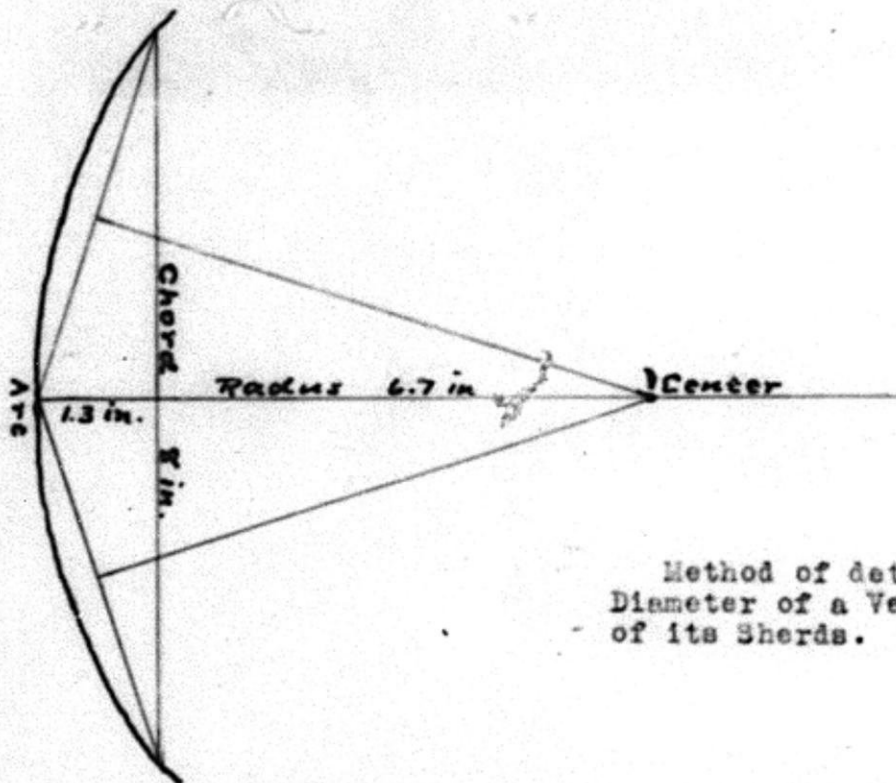
Along the top of the rim are indentations made by pressing the end of the finger straight down.

The handle which is 2.5 in wide where attached to the rim, which there has a rounded elevation above its general level, is 1.2 in. wide where attached to the body. It is ornamented by three diverging lines, .2 in. wide, made by the end of a flint point pushed upward. -- **an attenuated "turkey track."**

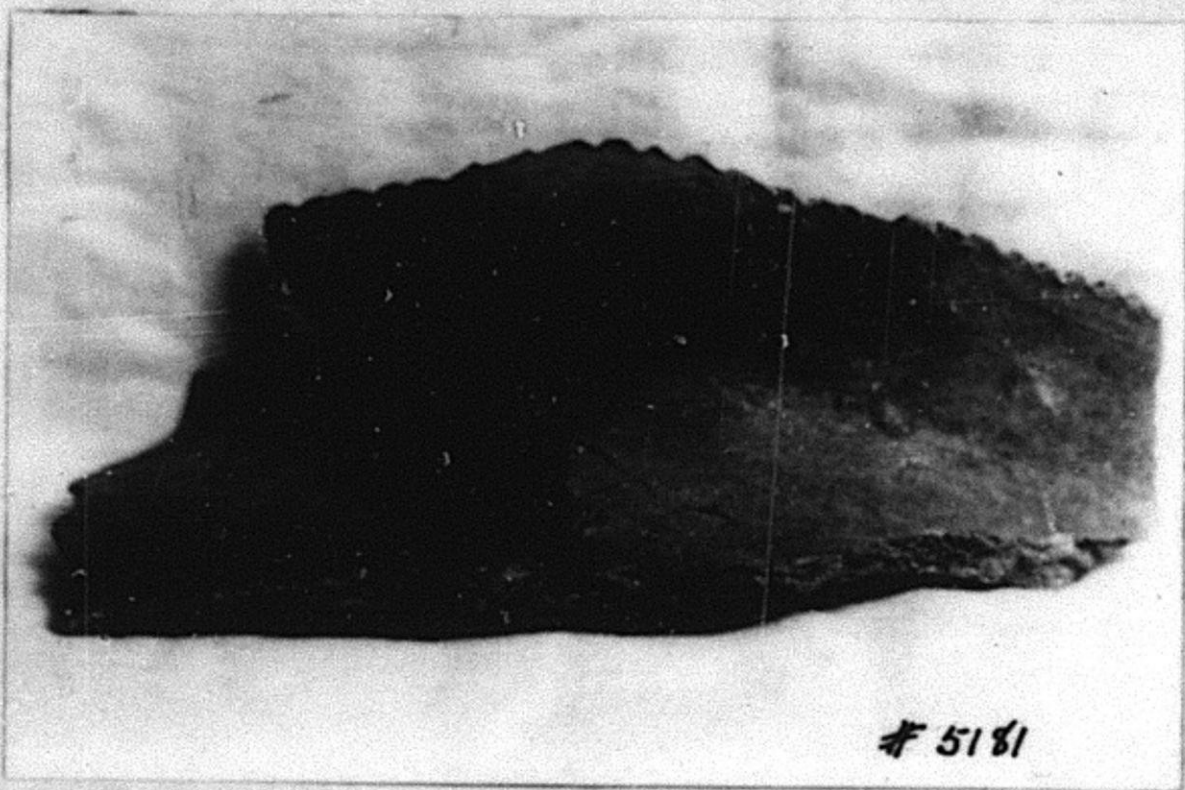
It is stained blackish, both inside and out, which color appears to extend down over the body from the lower end. Three fingers can easily be thrust through it.

The remainder of the sherd, both inside and out, is a dirty pinkish white.

Waukon, Iowa, Jan. 25th, 1937.



Method of determining the Diameter of a Vessel from one of its Sherds.



Photograph of a Pottery Fragment from Trench E, in
Lane Farm Terrace Enclosed Area, ("Old Fort")
Three-fourths actual size.

A Study of two Fragments of a Large, Oneota Culture Storage Pot without handles, found in the alluvial bottom land on the north side of Yellow River and near the center of the NW NW Sec. 24, T. 96, R. 5 west of the 5th P.M.,

5180 & # 5180A

THE SMITHFIELD ONEOTA CULTURE POT.

Across Yellow River where once was the town of Smithfield with its mill and dam, the site of a tragedy, and now but an almost forgotten name, this summer was built a one-hundred-and-fifty foot span steel bridge with a concrete floor, high enough on great concrete abutments to be above any flood that might come down the river, and strong enough to safely carry any traffic of these days of big trucks that might cross it.

Fred Orr, assistant in our archaeological work, was one of the men who built it.

High approaches of earth on either side, and a high dike below it on the north to keep floods within the channel, were necessary.

To widen the channel and at the same time to get the earth for the dike, the black alluvial soil and gravel of the flood plain along the river side were excavated and heaped up by a power shovel.

In doing this work two sizeable fragments of the same large pre-historic Indian pot were thrown over on the dike where they were discovered by Fred. Search and watching failed to bring to light any further pieces.

Both pieces consist of a part of the upper body with attached neck and rim. The body part of the larger piece, # 5180, is 6 in. long and 4 in. wide at one end 3 in. at the other, and from .2 to .3 in. thick. It is almost flat from the neck out towards the greatest diameter of the bowl, having an upward or outward arch of but .2 to .3 in.

The neck of each, on the outside, forms almost a right angle with the body part.

At about one inch from the neck, the body part is decorated with ~~with~~ a horizontal band, from 1.0 to 1.3 in. wide, consisting of three parallel zig-zag incised lines about .2 in. apart, and between the angles having a length of 1.5 to 1.9 in.

The incised lines forming this band have a width of .06 in. From each angle other incised lines, .04 in. wide, run straight out or down towards the greatest diameter of the bowl. Between and equi-distant from each of these lines is another having the same direction and the same width.

All lines are straight and the spacing uniform. The rim is ornamented by impressions made by drawing the finger across its edge upward and inward. These impressions almost touch but are irregular as to their direction across the rim.

In pattern of decoration, curvature of body top and angle of rim to the bowl, the smaller piece, # 5180A, with a length of 6 in. and width of body part of from 1 to 2 in., is a replica of the larger.

Both pieces have a hole drilled through at the junction of the neck and body. Two drills apparently were used in making these holes. The inside of the pot shows where the smaller one having a diameter of .15 in. broke through. On the outside a drill making a cone-shaped hole, .5 in. in diameter was used to penetrate part way through.

The material used was a clay apparently containing sand grains of microscopic size and tempered sparingly with finely crushed clam shell. In firing it turned a uniform dark gray or ash color.

On the outside a thin reddish slip was used. This was applied after the decorations were made.

This vessel is clearly a type of the Oneota aspect of the Upper Mississippi River phase of the Siouan culture. However it is superior in hardness and decoration to the Oneota pottery of the Upper Iowa River.

Except near its mouth, I know of but one other piece of pottery picked up in the valley of the Yellow River. This was a small piece which I picked many years ago on the banks of the race of the old Myron Mill near the center of Sec. 3, T. 96, R. 6 west of the 5th P.M. This piece was of a reddish-yellow, grit tempered and decorated with impressions of a twisted string, - a piece of neck with vertical decorations and a row of .2 in. holes apparently running horizontally around the vessel at a half inch below the rim. # 5150

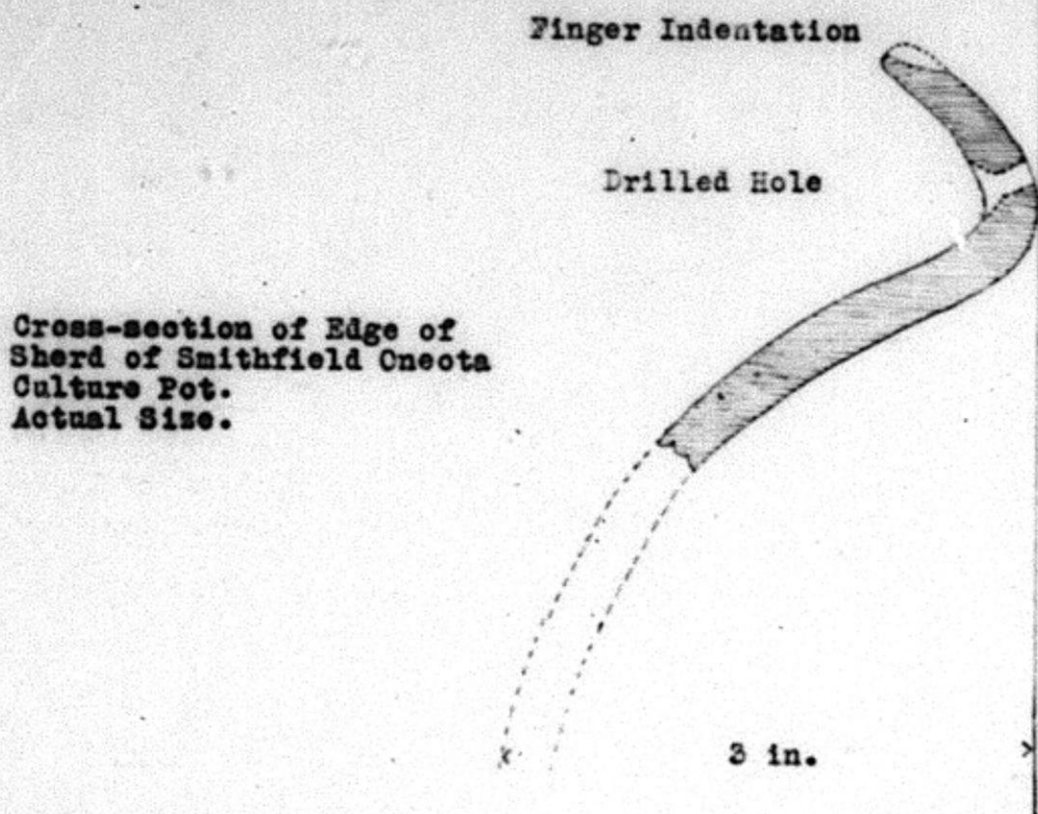
A few days search along Yellow river and interviews with the people of its valley might result in the finding of more pieces.

Should they be like the Smithfield fragments, the type might be called the Yellow River focus of the Oneota aspect.

By taking intersections of verticals to chords of similar arcs of the inside of the neck of # 5180A, the piece of which the neck has the greatest curve, we get 4.5 in. as the radius and 9 in. as the diameter. Assuming that the neck would have about the angle to the vertical shown in Fig. 2, the bowl would not have less than 6 in. greater diameter or a total of 15 in.

Measurements of the intersection of chords of arcs of # 518c, the piece which has the least curve, would give a neck diameter of 20 in. or greatest diameter of body as 26 in.

Probably something like an average of the two would be more nearly what it really was, say 12 to 14 in. for the neck and 18 to 24 in. for the body.



**Sherd of Smithfield Oneota Culture Pot. # 5180.
Three-fourths Actual Size.**

Study of a New Type of Oneota Culture Pottery.

5172

In Trench F, excavated across the embankment along the east side of the Enclosed Area, - the "Old Fort", - on that part of the Lane Farm Terrace lying north of Brown's Hill, and along the edge of this terrace, was found at a depth of 24 inches below the surface, a new type of an Oneota Culture Pot.

This was a 1 in. long piece of rim and neck with a fragment of the body attached, and three additional body sherds that fitted on to the first and each other in such way as to make a complete narrow section of the vessel from rim to bottom, thus affording a sufficient foundation on which to build a good restoration, both as to size and shape.

The neck, .5 inch high, forms a right angle with the body, and all the sherds show no ornamentation except that the neck has around its perimeter a row of vertical indentations on the inner side.

These were made by pushing a hollow grass or other stem from the inner upper corner of the rim, down along the neck, cutting a series of trough-shaped grooves, .15 inch long and .05 inch wide.

Much labor seems to have been expended in smoothing the outside of the body, and top of the same inside with, probably, a blunt pointed instrument of bone or wood, .05 to .1 inch wide.

This appears to have been done with a great number of short, ^{incised} trailing strokes. These had the effect of giving the surface a somewhat polished, but lumpy, appearance.

A slip which in firing turned a pinkish, drab or black, was used on both outside and inside.

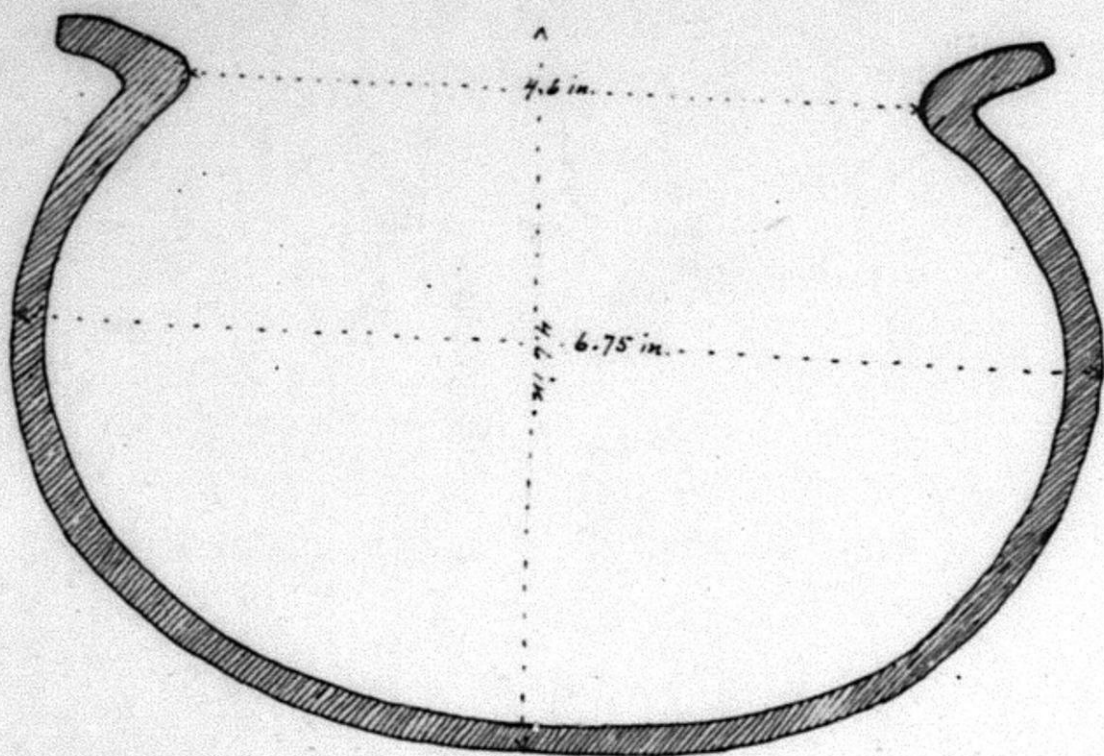
The material used appears to have been a superior kind of clay tempered sparingly with finely comminuted shell, producing dense, hard, decay-resistant ware.

The body at its junction with the neck has a thickness of .3 inch. This decreases to .15 inch at the bottom.

On the following page is an outline of the highly propable size and shape.

Recovered by Harrison Toney in excavation of 1936.

The earth for a couple of feet around where the pieces recovered were found was carefully sifted but no others were found.



Outline of Unique Type of Durota Culture Pot.
From Trench F, Lane Farm Terrace Enclosed Area.

Summary of Characteristics of the Oneota Aspect of the Upper Mississippi as it occurs in the type locality, the Valley of the Upper Iowa River in Allamakee County, Iowa.

Sites:

Evidences of straggling village sites abundant on all terraces of any size along the river from its mouth to New Galena, fifteen miles upstream.

Houses:

Type unknown. Probably a framework of saplings covered with bark or skins similar to those built by the historic Winnebago. No hut pits. No evidence of log structures.

Caches:

None for preservation of food found. For weapons, implements and material for making same, - occasional.

Mounds:

No certain evidence that the people of this culture built mounds in the Upper Iowa valley. (There is abundant evidence on the surface to show that a people of the same or closely allied aspect or phase, had villages on the great Blood Run terrace on the east side of the Big Sioux in north-west Lyon county, Iowa, and built the "Enclosed Area," of fifteen acres, and probably the great group of large mounds on this terrace.)

Enclosed Areas:

Eight sub-circular areas having diameters of from twenty-five to two hundred and fifty feet, surrounded by an embankment from one to four feet high, with a ditch inside, - sites of compact villages or places where ceremonial gatherings were held, - were located on the terraces and flood plain in the valley and on the bordering bluff tops. These are the work of the Oneota people. There is also one rectangular in shape. Only Oneota Culture pottery found in Enclosed Areas.

Refuse Pits:

Numerous in the Enclosed Areas, especially next to the embankments; *on the Flatiron Terrace and probably on all Village sites.*

Burials:

Extended singly or side by side in rows in cemeteries, or intrusive in mounds built by a people of woodland culture. Occasionally reclining - not flexed. Very rarely a bundle. Many skeletons apparently incomplete when interred.

Burials - continued:

On terraces and flood plain - seldom on bordering bluff tops. Usually more or less grave goods consisting of pottery, beautifully wrought triangular unnotched arrow heads and thin oval knives, disk and elbow pipes, awls and beads of bone, arrow-shaft straighteners of elk ribs, and rolled copper beads. Clam shell spoons in pots.

Pottery:

Very abundant. Both sherds and whole vessels. Not polished. Material: clay tempered with crushed clam shell.

Shape: olla type. Bowl, sub-globular, ellipsoidal - some of which quite pointed. One of bowl shape known.

Neck: one-half to three inches high, recurved outward, or vertical, round or oval, approximately one-third the diameter of the bowl and without ornament.

Decoration: body plain or by straight, irregular, infrequent, vertical incised lines from neck to shoulder, or by punctate triangular areas, point towards the shoulder, usually bounded on either side by the incised lines of a sig-sag horizontal belt. One sherd shows a continuous horizontal belt of three irregular horizontal incised lines. Occasionally a toy vessel, crudely made, vertically ellipsoidal and without ornament, is found.

Handles:

Two to four "jug" handles welded at opposite sides to neck and bowl. ~~XXXXXXXXXXXX~~ Plain or ornamented with straight, vertical, incised, parallel or "turkey track" lines. One found with three horizontal, incised lines across. Or there may be from three to five vertical ridges with intervals between. Occasionally irregular punctate ornamentation.

Lip:

plain or marked by finger-end or incised indentations. No ornamentation on the inside..

1 Mealing Stones:

Common, small, six to twelve inches in diameter. Of greenstone, quartzite and limestone. (See page I47)

2 Mullers:

Common. Of greenstone, granite and quartzite.

3 Grooved Hammers, War clubs and Mauls:

Common.

4 Grooved Axes:

Surface finds, believed to be Oneota, - not common, crude, grooved all round.

- 5 **Gaming Stones:**
If certain well made, symmetrical pieces that have usually been classed as mullers, are gaming stones, then common, No others.
- 6 **Hammer Stones:**
Irregular. Mostly unshaped, of greenstone and granites - common. Of chert concretions - occasional.
- 7 **Polished Celts:**
Common.
- 8 **Abraiders, - Arrow Shaft Smoothers:**
Matched pairs, singles and pieces of a coarse but decay resistant sandstone, - not rare.
 - eight
 (The ~~same~~ preceding have never been found with burials, but because of their association, on unquestioned Oneota village sites, with the very abundant pottery of that culture and no other, they must be considered as belonging to that culture.)

Pipes:

Types of disk and elbow, - common. See page 147

Catlinite Inscribed Tablets:

Only one known and that not certainly Oneota.
(Common on Blood Run Terrace)

Arrow Heads:

Small unnotched, triangular, finely made, - Abundant.

End (Snub nosed) Scrapers:

The most abundant relic found.

Chipped Stonework:

Scrapers, arrow heads, knives and lance and spear heads. All finely wrought, - found mostly with burials. Also many scrapers, arrow heads, lance heads and knives, crudely made, with very abundant flakes, are common field finds on village sites and occur as deposits with burials.

Work on Shell:

Edges of clam shell spoons with tally marks found in funeral pottery.

Work on Antlers:

Ends of antler tines, common. Large punches (?) occasional.

Implements and Ornaments of Bone:

Arrow-shaft straighteners of elk or buffalo ribs. Beads, awls, needles and unworked small bones the use of which is unknown, - common. Whistles of bird bones. Shoulder blade digging tools - not common.

Copper:

Bracelets and beads, - rolled.

Bones of Animals, fishes, birds and turtles, - very common.

Natural textiles:

None.

ADDITIONAL

(See page I45)

These circular stones having a diameter of 6 to 14 inches, and thickness of 3 to 4 inches, of greenstone, the quartzitic strata of New Richmond sandstone and occasionally of hard limestone, the perimeter roughly flaked and on some having a partial polish, with the top and bottom flat or slightly concave, and with some polish, are doubtfully classed as mealing stones.

Some of the smaller ones were quite certainly used for grinding iron ore for paint. Others of the larger ones for sharpening celts and axes.

Nine of the ten Iowa River Pipes donated to the State Historical Society of Iowa were some type or pattern of the Disk Pipe.

One, a ceremonial disk pipe found by W. F. Dresser in an Oneota grave on Burke's Mound, of which West says: (See page 215, Tobacco Pipes and Smoking Customs of the North American Indian) "Ceremonial Disk Pipes are occasionally taken from the sacred bundles of the Iowa Indians."

As the Iowa and the Oneota are one and the same people, it would appear that it might be said that the disk pipe is typical of the Oneota culture. See page I46.

Fire Pits.

Along the sides of the dendritic erosion ditches that have been cut deep into the terraces of the the Upper Iowa (Oneota) river, are exposed profile sections of pits sunk into the pure sand or gravel lying below the usual eighteen to twenty-four inches of black, sandy surface soil to a depth of twelve to twenty-four inches, which from evidences of fire found in all but a very few of them, we have tentatively designated as "fire pits".

More particularly they are found in such terraces as apparently were the sites of villages of the Oneota people. On the sides of a deep ditch, which, with its many ramifications, extends back for twenty rods from the river bottoms of the Oneota into the "Sand Cove" terrace on the south side of that river and on the SE of Sec. 28 and the SW of Sec. 27, T. 100, R. 4, in Iowa township.

Other places where they are found, are, on the sides of a similar ditch in the Oregon terrace - also a village site and cemetery - on the north side of the river north of the center of Sec. 6, T. 99, R. 5, in French Creek township. And in a ditch cut into the north side of the extensive terrace on the south side of the river on the south half of Sec. 36, T. 100, R. 5 - the Lane Farm Terrace, on which is located the Lane Farm Mound Group of over eighty burial tumuli and two enclosed areas, one circular and the other rectangular. In this particular ditch a very fine pit was exposed during the spring of 1910. Deposited in it was a stratum of burned rocks on the bottom at about eighteen inches below the natural surface. This stratum was about ten inches thick and twenty-four in diameter. A pot handle - shell tempered - and some charcoal was found in the soil mixed with the stones. There was no ashes or bones. This pit was noticeable for its slight depth and the number of rocks which it contained.

The Mississippi river terrace at LaCrescent, Minn., like those of the Oneota at the Sand Cove and other points mentioned, consists of from one to one and one-half feet of black sandy loam overlying a deposit of almost pure sand with some strata of fine gravel gradually changing to coarser material, in all having a depth of from forty to sixty feet to the level of the flood plain of the big river.

Wherever these terraces have been cut away to any depth by erosion or excavation, vertical sections of the fire pits are seen in profile when present, and are easily recognized along the sides by the dipping down of the black surface soil into sand below, the dividing line between the darker soil and the sand being usually very distinct.

In diameter, depth and general appearance they are quite uniform at all localities where found except that along the Oneota they are somewhat shallower than the ones at LaCrescent.

It would seem that a circular pit, usually about two and one-half feet in diameter, had been dug from one to two feet into the sand, or an average depth of around 3 feet below the present surface,

and that afterwards before the sides caved in, this pit had been filled level full with the sandy surface soil.

Irregular and uneven layers of ashes, from a trace to two or even three inches in thickness, containing not very numerous bits of charcoal not to exceed half an inch in diameter, alternated with the black surface soil, also containing bits of charcoal, and the chunks of limestone rock from three or four up to eight inches in diameter and having a burned appearance - these latter being more abundant in the Oneota pits - fill the pits for about a foot above the dividing line between the filled in soil and the sand at the bottom.

Fragments of bones of small animals and fishes, clam shells, potsherds and flint chips are scattered sparingly through the black earth and in the ashes, but are not burned or charred. Very rarely chipped flint is found in them.

Above the mixed strata of soil and ashes at the bottom, the filling, from the sand on one side to that on the other, in no way differs from the surface soil. Usually there is an almost total absence of inclusions above the ashy strata. No depression or elevation of the surface is noticeable.

After an examination of a number of these pits we conclude that it was probably the custom of some tribe - we believe them all, both at LaCrescent and on the Oneota, to have been made by a people of the same culture, the makers of shell-tempered, round-bottomed, pottery decorated with incised lines on the shoulder - to dig and use them for cooking purposes.

The absence of any burned clay, soil or vitrified sand indicates that if fires were burned in the pits, such fires were not very hot. Possibly after pits were dug, highly heated stones and ashes were placed in them around flesh, fish or fowl wrapped in leaves, as is sometimes now done by hunters, and the pit covered to confine the heat. The bones and shells are the refuse of a meal, thrown back into the pit.

The vertical and well defined walls of sand, with the filled-in soil the same as the surface, would seem to indicate that these pits did not remain open for any great length of time and that they were filled again by those making them. Had they been left to fill themselves, the caving in of the sides would have mixed sand and surface soil indiscriminately, and unless the pits were very old giving nature time to fill them, there would be a depression at the surface. A section of a pit filled in naturally would show a not very well defined, funnel-shaped mass of mixed sand and loam with the ash strata at the bottom.

A curious thing about the potsherds is that usually no two pieces in the same pit have been parts of the same pot.

What seems to have been several pits intermingled could be seen on the side of one of the arms of the large ditch on the ORegan terrace found during the summer of 1907. The large size of the potsherds and the abundance and large size of the burned stones were noticeable at this place. Many of the sherds must have been parts of pots not less than eighteen inches in diameter.

TERRACE PITS, - NEW GALENA. May, 1940.

At its east end, the peninsula-like Lyons' Plateau on Secs 2 and 3, T. 99, R. 6 west of the 5th P.M., with its six hundred acre quite level top at the same elevation as the bluffs across the valleys of its almost encircling streams on the north and south, Bear Creek and the Upper Iowa River, is continued eastward in a somewhat lower, elbow-shaped, sharp "hog-back" divide three-fourths of a mile long.

Abutting against the end of this is a seventy foot high, flatiron shaped terrace, the top of which, about a couple of acres in extent, is a dead level.

This terrace is essentially a huge bank of pure white sand in which is an occasional small boulder of limestone. The upper three to four feet is small gravel overlaid by eighteen inches of black sandy or gravelly soil.

When the new steel bridge on Highway # 13 was built across the Upper Iowa River at the point of the flatiron this top gravel was used in making the concrete for the abutments and the southern extremity of the terrace, for one hundred feet back, was trucked away to make a twelve foot high embankment for the highway across the bottom lands of Bear Creek and the river.

As the sand was removed at the terrace foot by a powerful steam shovel sections of the top would break off and come sliding down. When the break-off occurred there would be exposed along the line of separation, pits in the sand, around two feet in diameter and eighteen inches deep, filled with a downward dip of the black surface soil.

The line of separation between the sand and the black earth over it is sharp and distinct, as are also the walls and bottoms of the man excavated and filled pits.

Since the removal of the large quantity of sand for the road embankment much has been, and still is being removed for building purposes, and fresh sections of pits are being exposed frequently. I seldom pass there, which is quite often, without seeing from one to four pit profiles exposed at the top of the slide.

In the black earth at the bottoms of these pits, thin strata and traces of ashes, bits of charcoal, an occasional roughly worked flint, and very rarely a pottery sherd, is found. Several times skeletons have been exposed. The bones of these together with such other material as the pits may contain, gradually works down to the bottom of the slide.

Harrison Toney, who worked with us on archaeological projects of the Iowa State Planning Board during the summer of 1934, the winter of 1934-35, the summers of 1935 and 36, found in different places there, early in the summer of 1937, following the spring thaw and rains which loosened up the face of the slide, a sherd each, consisting of neck, lip, and part of shoulder, of four different types of shell tempered (Oneota Culture) pottery, one of which had a three-ribbed "jug handle" attached.

Also five shell tempered body sherds of at least three types of vessel, all different from the foregoing described. All of his finds were numbered 5178.

In addition he picked up a sherd, one and one-half inches in diameter, of grit tempered, roulette decorated ware.

There is no way of determining whether these pottery fragments occurred indiscriminately in the surface soil or whether they were from the pit bottoms.

At the time the bridge was built I found in situ at the bottom of one of the pits, imbedded in unusually black soil, which the stripping of the gravel at the top had exposed, a black neck sherd tempered with crushed granite, bits of mica being quite noticeable. This is #70. Slightly curved outward, ornamented with string impressed horizontal lines that evidently extended entirely around the neck, the rim a quarter inch wide bevel sloping upward and inward and ornamented by vertical string or stamp impressed lines .1 inch apart and .25 inch long, this sherd is an interesting fragment of what appears to have been an unusually large well made pot of people of the Woodland culture.

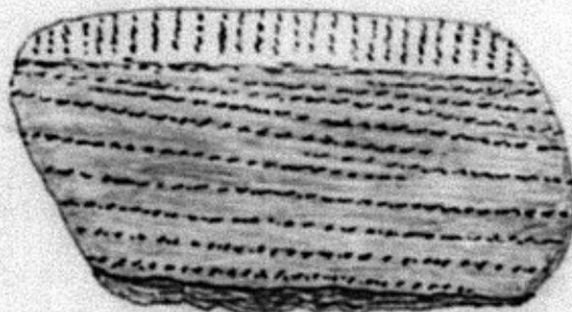
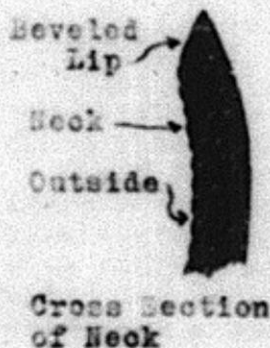
Some years later the terrace top was cleared of the sumac and other brush and planted to potatoes followed the next year by Soudan grass, after which it was allowed to revert to June grass pasture. In a pile of hand boulders that had been removed from the surface a mortar and muller was found.

Years before this when but little of the sand had been removed, at the terrace foot was found a very large grooved granite maul resembling those of which many are found in northwestern Iowa.

Pits like these occurring on the flatiron terrace, described above, are found on the Oregon and Sand Cove terraces on the Upper Iowa river and on the terrace south of LaCrescent, Minn.

In our excavations we also found them very abundant in the trenches dug in the Enclosed Area, ("Old Fort") on the Lane Farm Terrace.

Dec. 6th, 1937



70

Sherd of Granite Tempered Woodland Pottery from Pit on New Galena, (Flatiron) Terrace on NE NE Sec. 2, T. 99, R. 6 west of the 5th P.M.

On a visit, Oct. 12th, 1911, to the La Crescent excavations, we found exposed three well defined pit outlines on the sides. The gravel and sand walls had crumbled away and left the firmer dark earth filling of the pit three or four inches in relief. Each of these pits had been sunk thirty inches into the sand subsoil above which the black surface soil had a thickness of from twenty-two to thirty inches.

All three of these pits were characterized by ash strata, potsherds, stones and charcoal.

To the State of Iowa belongs what was originally about one-fourth of the "flat iron" terrace at the east end of the "Hog Back" just north of the New Galena Bridge across the Upper Iowa in the N 1/2 of the N 1/4 of Sec. 2, T. 99, R. 6, Hanover township.

The remainder of the terrace has been leased to parties who have stripped about one-half of it of the eighteen to twenty-four inches of black, sandy surface soil and have opened up two pits from which they are removing for commercial purposes, the upper underlying four feet of gravel and sand and under that, down to the level of the river flood plain, the pure sand in which occurs limestone boulders up to two feet in diameter, and which shows many cross-bedded strata.

In an area of stripping in the north central part, about 60 X 80 ft., we counted, on a visit, May, 1940, 32 circular areas, two to three feet in diameter, of the black surface soil in the pure sand-gravel uncovered. These were the refilling with the surface soil of pits in the last above named.

Out of three of these we removed the black soil to the bottoms of the original pits at a depth of 2.6 to 3.6 feet below the terrace surface. The contact of the black soil with the light yellow sand forming the sides of the pit was very sharp.

At the bottom was .1 ft. of fine sand mixed with what appeared to be very fine carbonaceous material - grass burned to charcoal (?) Above this was a .4 ft. stratum of light brownish or yellowish earth without sand, over which to the level of the top of the sand-gravel, .8 in. of the black sandy surface soil. In the filling of surface soil were two body sherds of hard, smooth, light-colored and shell-tempered pottery, .3 in. thick, and a fragment of a flaring strap handle, 1.3 in. wide, with three ribs and two intervals.

In pit # 2, on the bottom 3.5 ft. below the surface, was a deposit of eight hand-sized chunks of limestone showing signs on much heating with which was mixed a very black sandy soil mixed with carbonaceous material.

Pit # 3, five feet deep and three feet in diameter was filled uniformly with the black surface soil showing no signs of fire. In it were three gray or brownish shoulder or body sherds ornamented with roughly parallel, interrupted, trailed lines, .15 to .25 inches wide; one very thin, 1/20 inch thick; one small unornamented body sherd and a small clam shell.

In different places at about 18 inches above the bottom were the four phalangeal bones, lying in their proper relations, of three hands or feet. With two of these were three and four smaller or toe or finger bones. All were in an excellent state of preservation and the phalanges from two to three tenths inches in diameter. Whether or not these are finger or toe bones we are unable to say. Apparently they were still united when placed in the pit.

There was also two large, hard, plain, gray shell-tempered body sherds, smooth but unpolished, picked up at different places on the surface soil that had been removed. Also a vertical or flaring rim one inch high, thinning almost to an edge at the top in which were small indentations .15 inches apart. This piece was apparently colored on the outside with a pinkish slip and smoothed with a piece of tanned skin.

Another use to which some of these pits may have been put is described in the Youth's Companion in one of the 1910 issues of that paper, in an article entitled "Making a Blackfoot Warrior", which purports to be a true account of that event witnessed by a white man who, when a young man lived for years with that tribe.

The following is quoted from his description:

"We took the hide - that of a buffalo bull - home and after soaking in water for a few days, rubbed off the hair, leaving the thin, glossy-black, brownish surface intact. Then one afternoon it was delivered to old Red Eagle, and the interesting ceremony of transforming it into a shield took place.

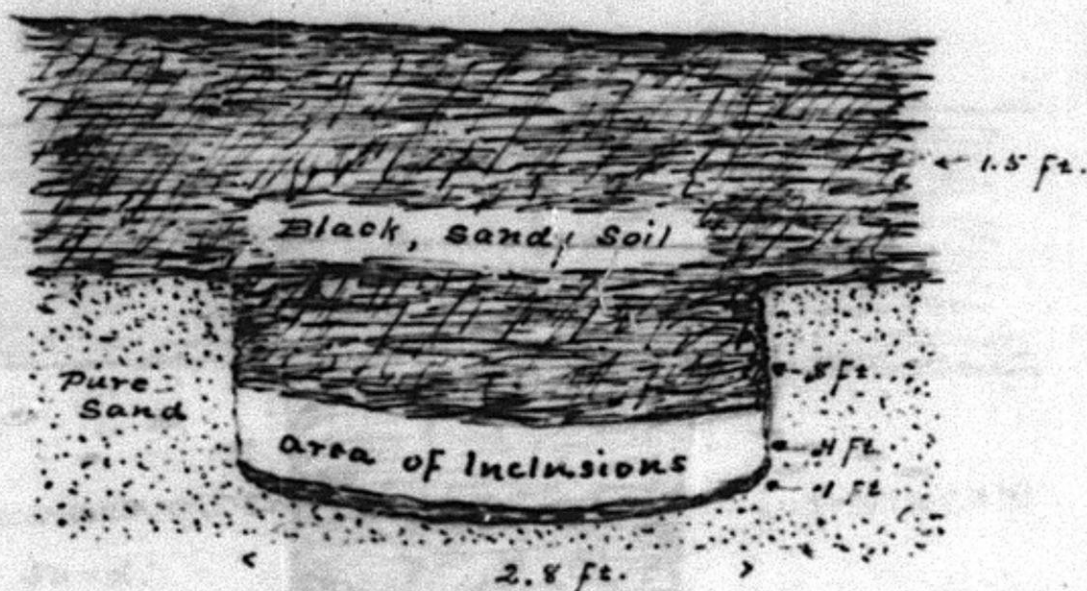
"By the side of his lodge the bull hide was stretched and pegged to the ground, and kneeling on it he began to pray, at the same time starting to cut from the skin a circular piece about four feet in diameter.

"Nearby some women were heating some stones in a fire, and near the blaze a small pit had been dug in the ground. The women rolled some of the red-hot stones into it as soon as the old man had cut out the circular piece of hide, and with three warriors to help him, he quickly placed the hide over the pit, and inserting pegs in slits that had been cut out at regular intervals along the edge, fastened it to the ground.

"As each man drove a peg he recounted a coupe; that is, told in a few words of a fight in which he had been victor. Tightly as the hide had been fastened down, it began to shrink at once under the influence of the hot rocks, until it pulled the pegs over. As fast as it loosened, the men drove them in again, Red Eagle carefully supervising the work, feeling of the hide to see that it did not get so hot as to burn, and calling for more hot stones as they were needed.

"In about an hour the hide had shrunk to about one-half its original diameter, and was at least an inch thick. No arrow, nor a ball from a Hudson Bay flintlock could pierce it."

Profile of Pit 3.



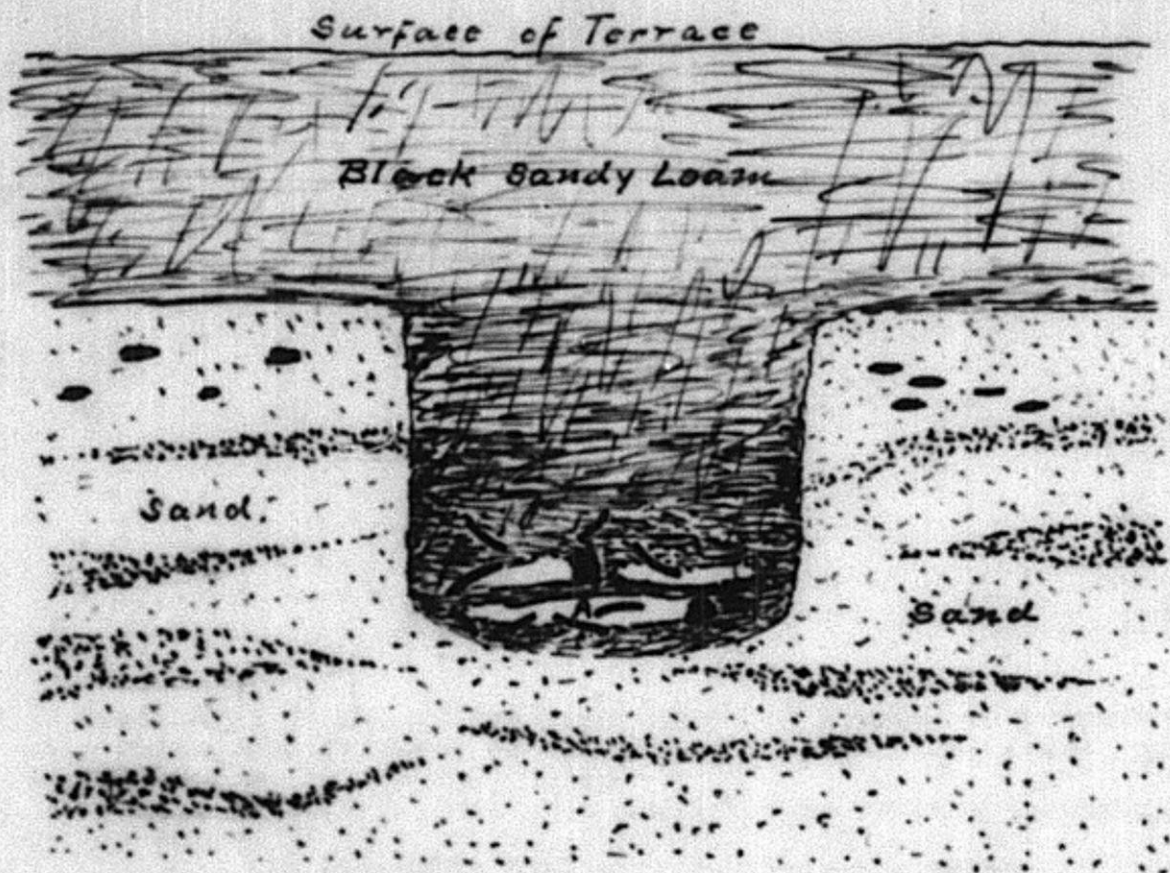
See Page 149-A

Pit 3 is located at the same place as Pit 1.

Section of one of a number of pits, each exposed on the side of an excavation from which sand and gravel are excavated but from which, at present, no material is being removed.

These are one-half foot deep and two and one-half feet wide. In A, where the strata, which are light blue, is very thin and with many fragments of bone, pebbles and charcoal, which are in it.

June 1st, 1917



Fire Pit in LaCrescent, Minnesota, terrace.

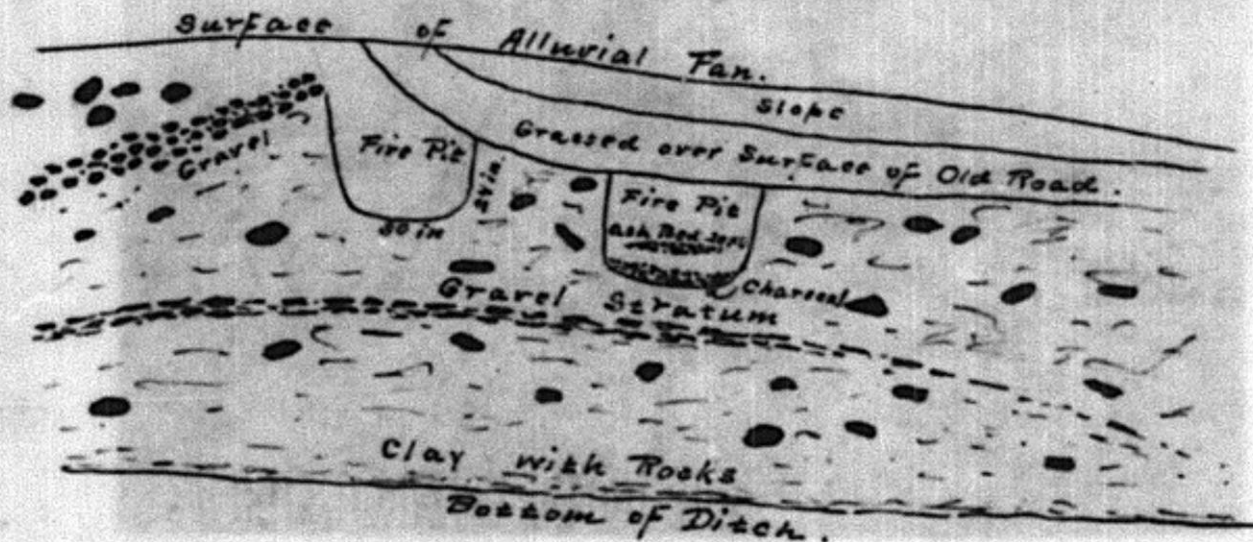
Section of one, of a number of fire pits exposed on the side of an excavation from which sand and gravel for rail-road ballast had been taken, at LaCrescent, Minnesota.

Three and one-half feet deep and two and one-half feet wide.

At A. three ash strata, each one inch thick, in very black soil with many fragments of bone, potsherds and charcoal mixed in it.

June 1st, 1907

Oneota Fire Pit near the Herman Gang Residence.



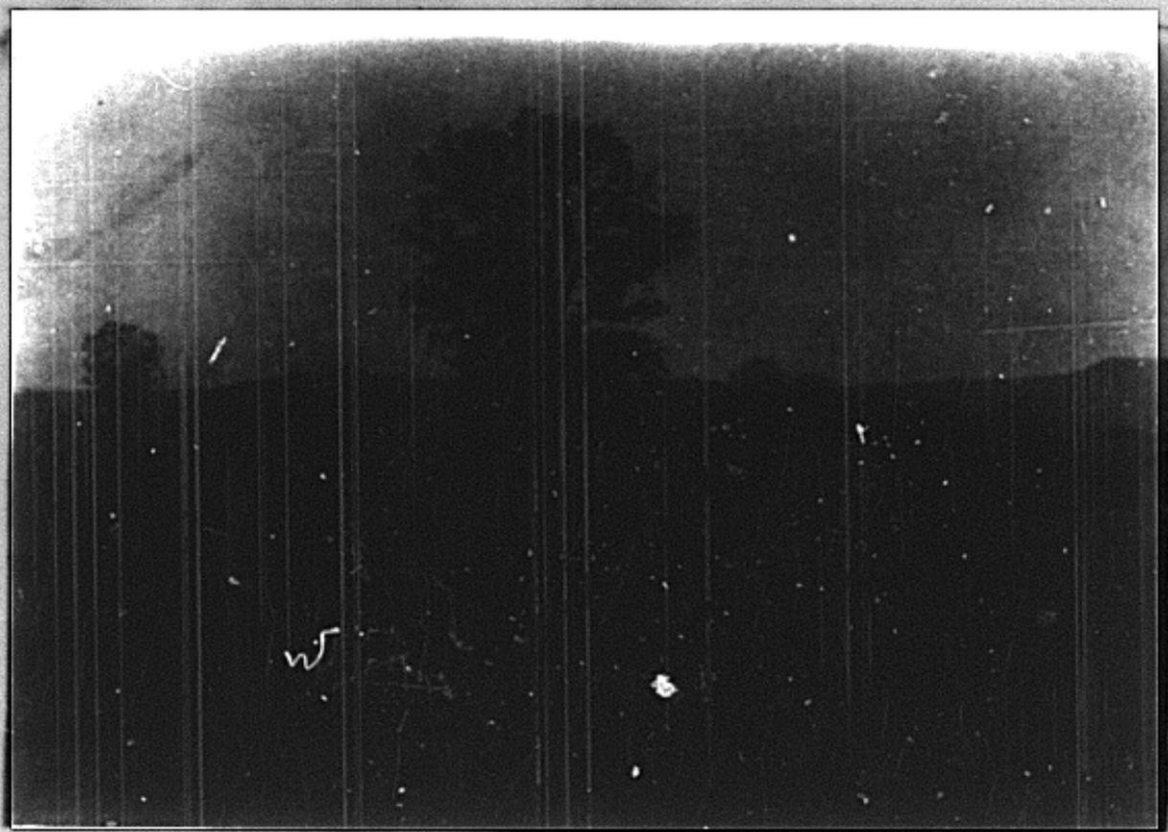
Profile of 25 ft. of the north slope, of a wide, deep road-side ditch, 200 ft. west of the Herman Gang farm residence, on the SE SE Sec. 35, T. 100, R. 6.

Largely an alluvial fan of a small ravine running up the bluff to the north.

Note the two fire pits, the most easterly one having at the bottom a stratum 12 inches thick containing more than 25 per cent of charcoal in which were pieces of burned corn cobs. Above this was an ash bed 20 inches in diameter and 3 inches thick in the center.

A few burned bones of small animals and fishes were found in the ash bed and in the clay filling. No worked flints or chips were found.

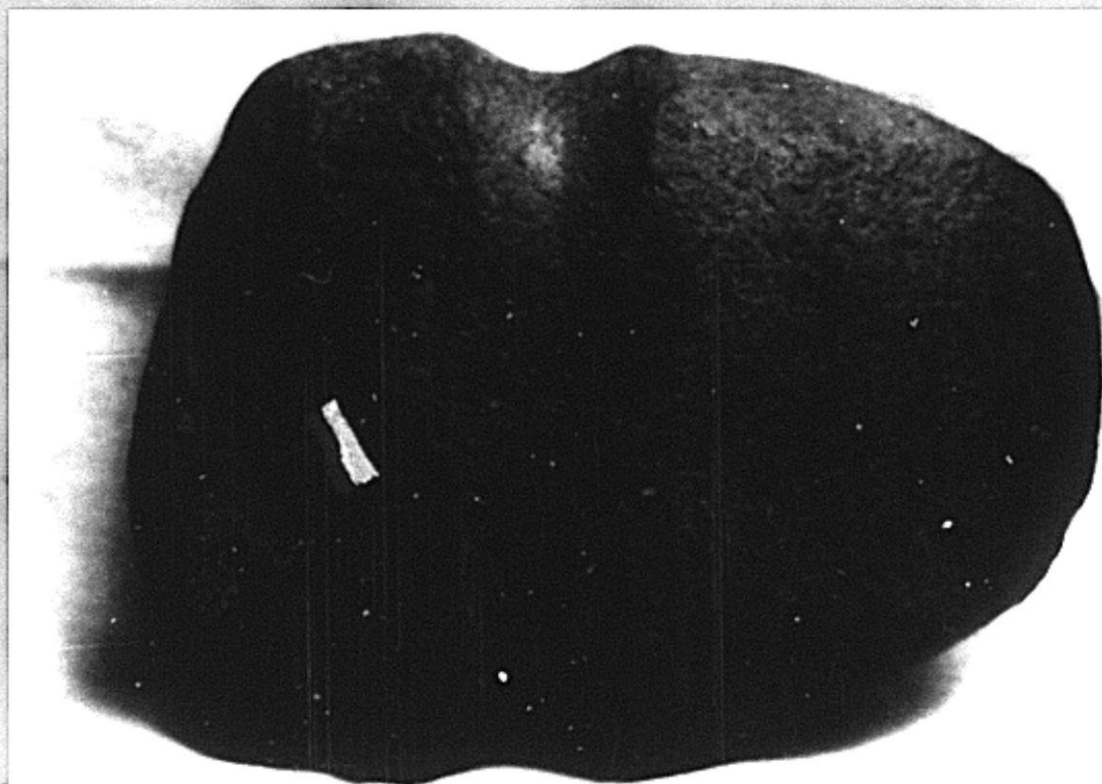
May, 1931.



Head of an extensive erosion ditch in the north - river - side of the "Sand Cove", on the SW NW Sec. 27, T. 100, R. 4 west of the 5th P.M. Looking north.

Bluffs on the north side of the Upper Iowa river in the background 1.5 miles away.

This was an old Oneota culture village site and scattering fireplace rocks, pottery sherds and flint pieces have been found in the sides of the ditch to a depth of 12 to 18 inches below the surface. Also in the sides were a number of Fire Pits.



Oneota Culture Axe.

Photograph - actual size - of a large greenstone axe, believed to be a typical Oneota culture implement or weapon.

This was a surface find by Mr. Bulman on the west part of the ORegan terrace on the SE NW Sec. 31, T. 100, R. 5 west of the 5th P.M. Tradition has it that the east part of this field is a pre-historic Indian burial place. A large cottonwood, standing when the first settlers came, they were told, marked the resting place of a chief.

It was not known to what tribe the Indians who visited it for a few years after the whites came, belonged.

From the abundant material turned up by the plow for many years, the ORegan terrace, for many years beyond question, was a village site. At the east end was an extensive burial place from which much Indian material was recovered.

See Vol. I, page 137.

At least three types of axes were found in the valley of the Upper Iowa. By far the most common were those of the type illustrated above.

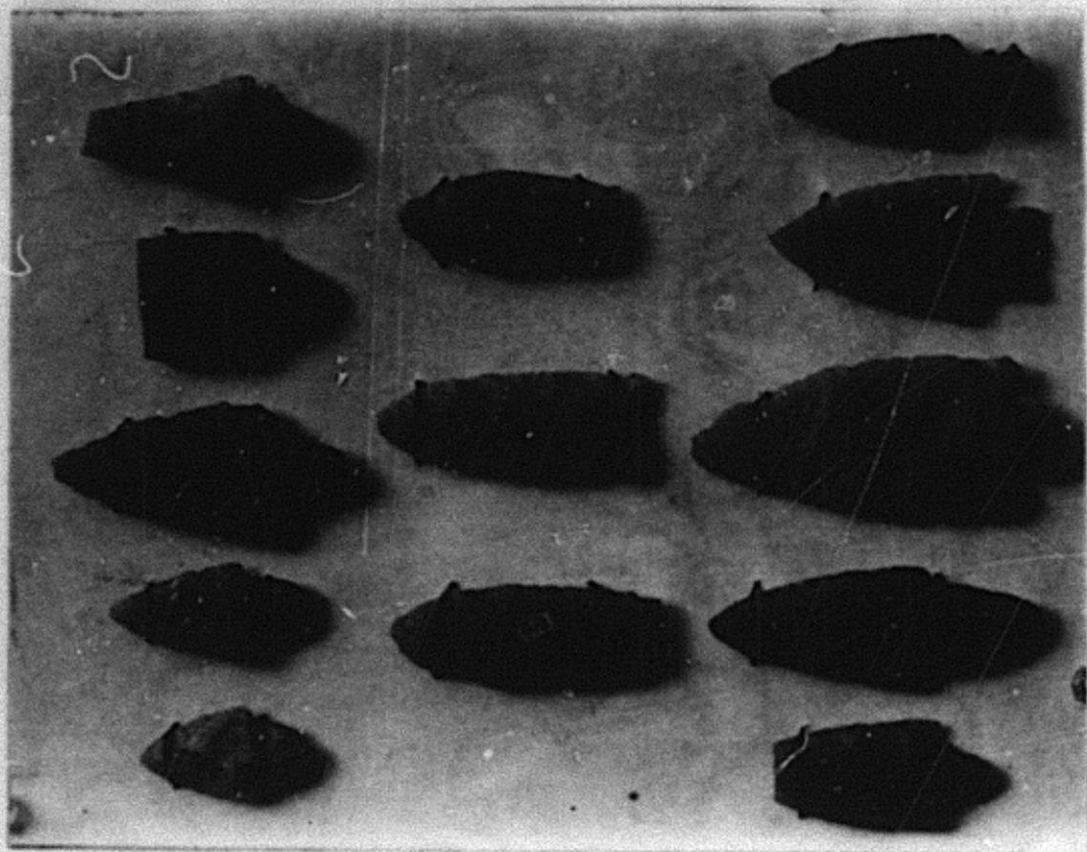
Characteristics were:

Roughly pecked or flaked and ground smooth but not polished except the bitt; roughly egg-shaped in outline; poll rounded; all-round groove; bitt about one-half as wide as poll.

Usually not so large or heavy as the one shown.

Flaked Quartzite Pieces.

- 913 Spear head from railroad ballast at Waukon Junction, Ia.
- 989 Spear Head found by self on sandy point of high island below Harper's Ferry, Ia.
- 2012 Broken quartzite spear from Lyons' plateau, Sec. 3, T. 99, R. 6 west 5th P.M.
- 2028 Quartzite spear head, field find from Lyons' plateau, Sec. 3, T. 99, R. 6 west of 5th P.M.
- 2045 Quartzite Spear from Saddler bench NE NE Sec. 5, T. 99, R. 5 west of 5th P.M.
- 2065 White quartzite piece, - field find, Arcadie, Wis.
- 2084 Quartzite spear head, field find, Allamakee county, Ia.
- 3011 Quartzite spear head. Found in ditch in Yellow River bottom land. Sec. 9, T. 96, R. 6 west of 5th P.M.
- 3016 Quartzite spear head. Field find from north end of Harper's Ferry terrace.
- 3040 Quartzite spear head. Field find from near Brownsville, Minn.
- 4004 Quartzite spear head. Field find from Upper Iowa river.
- 4055 Quartzite piece from Powell farm, Yellow river. NE Sec. 15, T. 96, R. 5. west 5th P.M.
- 4163 Quartzite spear head, field find from near Lansing, Iowa.
- 4204 Quartzite spear head from field in Union City township, Allamakee county, Ia. Purchased from Wm Renk.



Flaked Quartzite.

About one-half Actual Size.

(See Preceding Page for Memoranda.)

Seven Fine Quartzite Pieces.
One-half Actual Size.

No. 989 was found by self, Nov, 1908, on the sandy shore of Harper's Channel just below the southern point of the terrace remnant of Brazell's Island, NE SW Sec. 26, T. 97, R. 3, SW of Harper's Ferry, Ia. On the terrace above this down stream point is a fine "Bear" effigy mound, to the north of which are two long and one round mounds.

Numbers 4265 and 4266 are large flakes on which has been done a very workmanlike job of secondary chipping. No. 4265 may be said to be unique. It was undoubtedly a knife as was No. 4266. Both were found by Mr. Dan Curtin in working his field on the high divide on the SW SW Sec. 7, T. 98, R. 6 west of the 5th P.M. Purchased from Curtin, Oct., 1931.

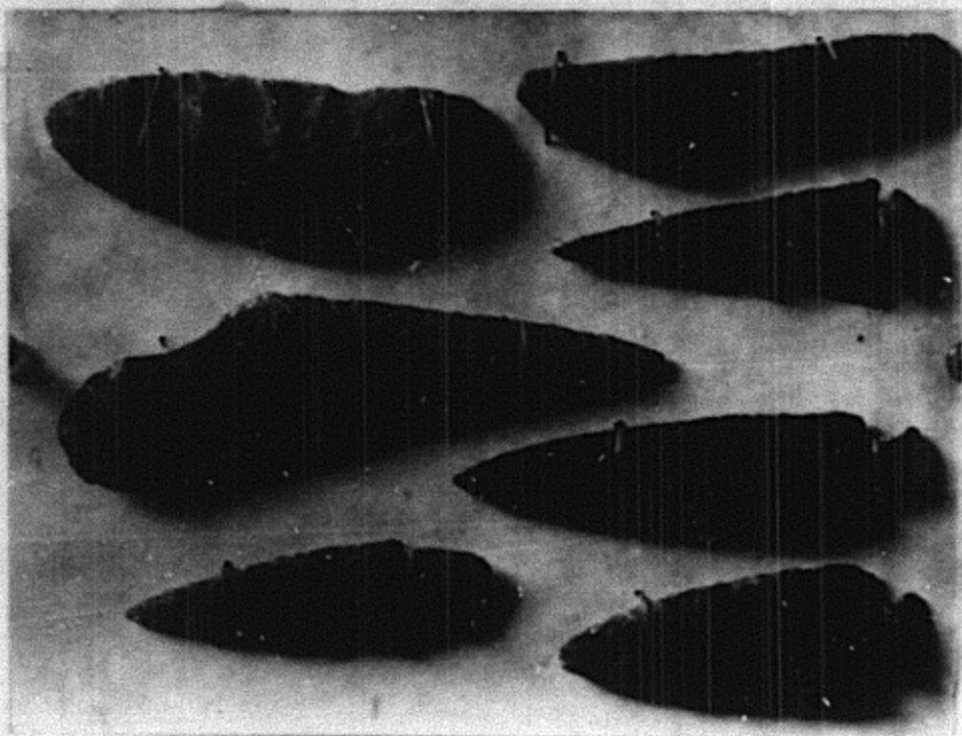
No. 2011 is a knife picked up by self within the Enclosed Area at the west end of the Lyons' Plateau between the Upper Iowa and Bear and Waterloo Creeks on the SE NW Sec. 3, T. 99, R. 6 west of the 5th P.M., about the year 1910. This Enclosed Area is now, 1933, entirely obliterated by cultivation.

No. 4310 was found by Russell Lane, in 1932, in an upland field near Dorchester, Iowa. It was threshing time and he was loading oats in the field.

No. 4150 was found in a field on the SE SW Sec. 6, T. 97, R. 2 west of the 5th P.M., on a terrace remnant by Jacob Ewing, about forty rods directly west of the west end of the Lynxville Dam.

No. 4264 was found by Russell Lane at sand pit in terrace on Waterloo Creek, south of Dorchester, Ia.

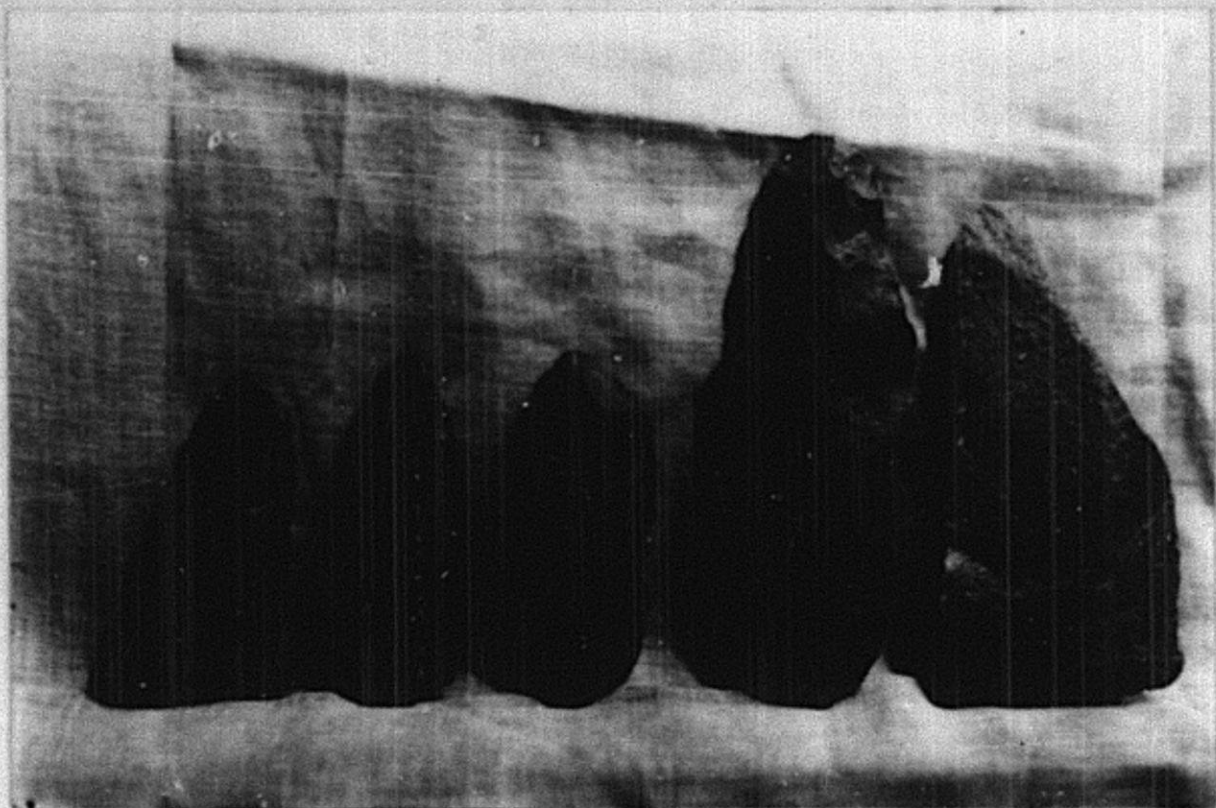
All of the above are now in the museum of the State Historical Society at Iowa City. 1933.



Fine Quartzite Pieces.
From Allamakee County, Iowa.
One-half Actual Size.

(For Memoranda See Preceding Page)

Page 152

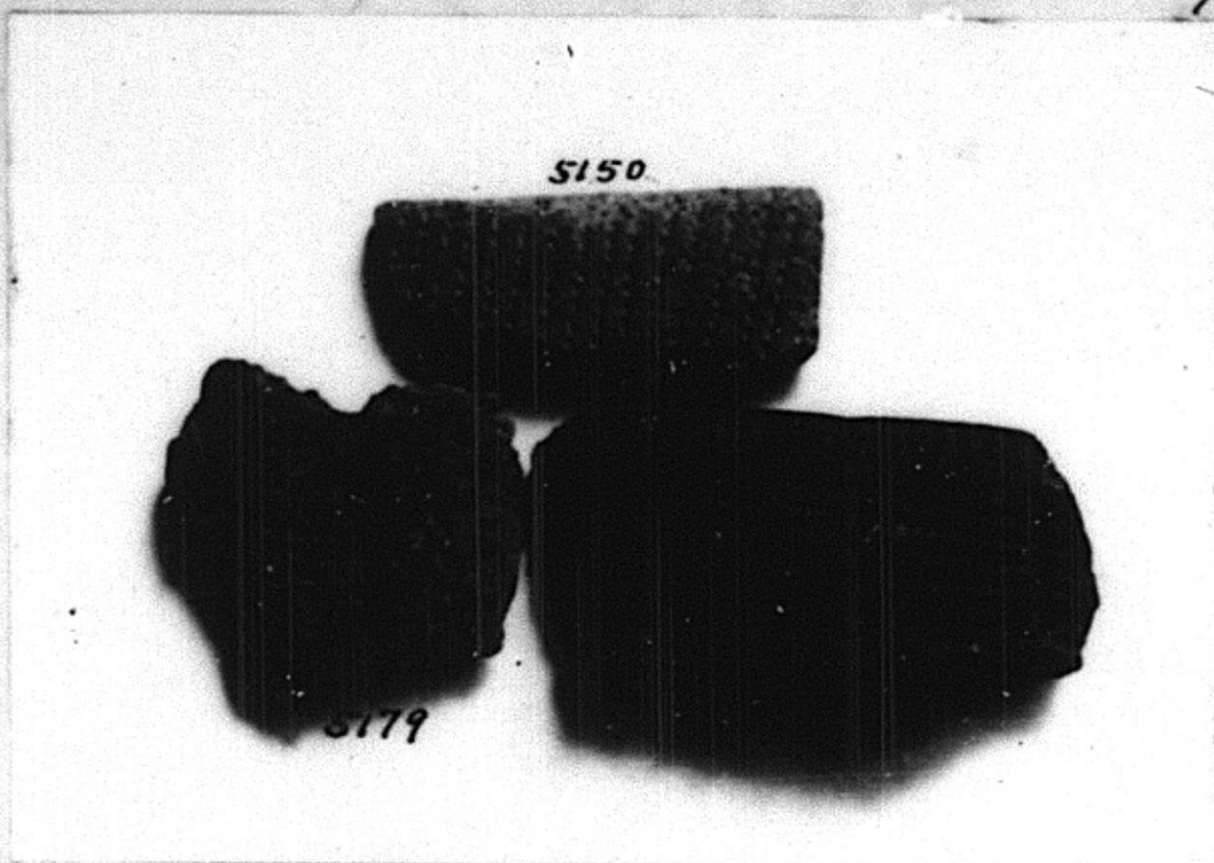


Pieces Showing Extent of Traffic.

No. 4275 is a knife or spear head of very dark material, a field find from Paint Creek township, Allamakee county, Iowa, while the two pieces numbered 4102 are roughly flaked from what appears to be the same material from the east end of Flint Ridge, Ohio.

No. 2003, a micaceous, roughly flaked knife, was found within the Lyons' Enclosed Area, on the west end of the Lyons' Plateau, a butte or table land of around 300 acres, lying in Secs 2 and 3, T. 99, R. 6 west of the 5th P.M., appears to be of the same material as the sample of micaceous quartzite from the prehistoric quarry on Medicine Butte, Lyman county, S. Dakota.

Photograph, 6/II actual size.



Three Woodland Culture Sherds of More than Usual Interest.

Numbers 70 and 5179, from pits on the Flatiron Terrace at the New Galena Bridge, the occurrence and finding of which is more fully described on page 148 preceeding, are the only worthwhile sherds, of the less than a dozen pieces of this culture found in the valley of the Upper Iowa, other than the sherds and whole vessels found in the mounds.

No. 5150 was picked, many years ago, on the bank of the mill race, between the dam across Yellow River and the mill at Myron, on Sec. 3, T. 96, R. 6 west of the 5th P.M.

Dec. 13th, 1937.

The Iowa Indians in Proto-historic Time

1

The Name "Oneota."

In the Pleistocene History of Northeastern Iowa, on page 204, by J. W. McGhee, which was first published in the 11th Annual Report of the director (J.W. Powell) of the U. S. Geological Survey, 1889 to 1890, we find the following:

"The Oneota river embouches into the greater river, (the Mississippi) through a gateway a mile wide between the 500 ft. high salient of sandstone and limestone on the north, "The Winnebago Bluff" of the whites and the "Oneota" of the poor remnant of the Winnebago Indian tribe still lingering about its base, and the scarcely lower "Iowa Bluff" on the south."

The words "river" and "the Mississippi", above are ours.

In a foot note to the above is the following:

----- "the Iowa or Upper Iowa of most maps, The Indians about its mouth call the bluff flanking it on the north, Oneota, and recognize the river under the same name. The signification of the term as used by the Winnebago is obscure. It signifies in the Mohawk dialect, "The people who have sprung from a rock".

See "Schoolcraft; Oneota or Characteristics of the Red Race of America, 1845 p. v.

On the date of the publication of the above book the Winnebago occupied the "Neutral Strip", 40 miles wide, running from the Mississippi river southwest to the Des Moines. The Upper Iowa river is the center of this strip or reservation at its east end.

The heavy bedded dolomitic Lower Magnesian limestone of Owen was in part differentiated by McGhee and renamed the "Oneota."

As the castellated, precipitous cliffs of the formation outcrop along the most northeasterly river of the state, it also, on the evidence of Schoolcraft was also given that name by him.

Later Calvin, in his report on the geology of Allamakee county, Vol. IV of the Reports of the Iowa Geological Survey, adopted it.

Its use by him to replace that first given it by the white man, of Upper Iowa, in this report and in other papers and his lectures, did much to bring the name to the attention of the public, but the name of the first settlers still survives.

The Iowa Indians in Proto-historic Time.

1 Perrot, who came to the Mississippi valley in 1685, and built forts on lake Pepin, near Trempealeau, in Illinois near the lead region, and on the prairie north of the junction of the Wisconsin and Mississippi rivers, the last, Ft. St. Nicholas, now called by the residents of Prairie du Chein, "The Old French Fort" (See Belin's map, p. 47, Aborigines of Minnesota.) in his Memoirs, tells us that the Ottowas, in fear of raids of the Iriquois, moved from their location in southeastern Wisconsin, across the Mississippi into the valley of a river "qui se nomme Ayoes" and that they were hospitably received by a nation near its head. This was in 1686.

2 The Ottowas remained but a short time before returning to their original seat. The hospitable "nation" was, in all probability, the Iowa, and this is the first historical mention of this people, if our surmise is correct, and the river was the Upper Iowa.

For # 3
see Sheet 2

4 H. H. Winchell in Aborigines of Minnesota, commenting on a Dutch map, purporting to show the discoveries of Joliet and Marquette, made in 1673, says on page 26, "The falls of St. Anthony are represented, though not named, a short distance above the Minnesota, which river is called the Arcaneus because of the residence of the Iowa on its bank." The Arcaneus was a designation of the Iowas.

5 In the same book, on page 29, on Franquelin's map, the Root river, emptying into the Mississippi river at twenty miles north of the mouth of the Upper Iowa, is named R. des Arcounous, and on its upper waters (this stream has a total length of around sixty miles) are shown the Arcounous.

15 De L'Isle's map on page 34 of same book, dated 1703, shows the Ayoes (Iowas) just south of Le Sueur's Ft. L'Huillier on the river S. Pierre (Minnesota) at the mouth of the Blue Earth river.

6 On page 70 of book quoted above is the following: "Rev. G. H. Pond, (a missionary among the Indians) has given in Vol. I, P. 144, of the Minnesota Historical Collections, some account of the Iowa Indians as related by Black Tomahawk from tradition. According to this, the Iowa lived at a place which was formerly called Oak Grove, seven or eight miles west of Ft. Snelling on the north side of the Minnesota river. ----- Here they were attacked by the Isanti (Sioux) probably from Mille Lacs, and retreated to the south side of the river, where they built another village.

7 When the Dakota obtained firearms they were again expelled, fighting their last battle with them on Pilot Knob, back of Mendota. This was probably about 1680. They then fled to the mouth of the (Upper) Iowa river, from which they were again eventually driven by the Sioux."

8 Father Membre, in 1680, placed the Anthontantas (Oto) and the Nadouessious Meskontons (Iowa) 130 leagues (390 miles) from the Illinois in 3 great villages built near a river which empties into the river Colbert (Mississippi) on the west side above the Illinois, almost opposite the mouth of the Wisconsin.

When allowance is made for the inaccuracy estimates of distances because of unreliability of information of same obtained from the Indians, this river could be no other than the Upper Iowa.

(See Sheet 6)

3 On a fac-simile of Marquett's map, which he made after his voyage of discovery in 1673, which is preserved in St. Mary's College, Montreal, among the tribes which he locates west of the river (Conception - Mississippi) are the Maha. (Omaha)
He does not show the Iowas. The only Indians which he saw in the territory which is now Iowa were a village of the Illini (Illinois) probably located on the Iowa river.

9 Dr H.H. Winchell, after an exhaustive examination of early maps and records, says, on page 67 of *Aborigines of Minnesota*, "that the Iowa were expelled from Minnesota by the Dakota is quite certain, and the expulsion could not have been long preceded the advent of the whites." On his map showing the distribution of the Dakota in Minnesota at the time of Hennepin, 1680, he places the Iowa on the Minnesota river not far above its mouth. See also Sheet 6

10 When all the foregoing is fully considered certain facts appear to be conclusively proven:

1 - That the Iowa Indians occupied the territory about the mouth of the Minnesota river for an unknown, - probably long - period prior to 1680.

2 - That immediately preceding ~~or~~ after 1680 they were also on the Root and Upper Iowa rivers and occupied a narrow strip along the Mississippi river in central western Wisconsin.

3 - That, as we have no record of any tribe other than the Iowas occupying the country lying between the Minnesota river near its mouth and the Upper Iowa for its entire length, it may be safely claimed that all this territory, as well as the strip across the Mississippi river in Wisconsin, was also occupied by them up to a time not long after 1680.

11 The prehistoric, or perhaps we should say, proto-historic, people of the Onondaga aspect of the Upper Mississippi phase of the Siouan culture must have occupied the valley of the Upper Iowa river late enough to have contacted the white traders to a limited extent, as witness the pieces (4 known), small trader's beads, and ornaments of brass, (beads and bangles) found with a very few of the very large number of the burials of the people of this culture discovered in the valley of that river. But not late enough to acquire iron kettles, guns, axes or hatchets, knives and other white man's implements, weapons or ornaments in any quantity.

On the other hand the great abundance of burials and pre-historic material found in the valley indicates its occupancy by a numerous people for a considerable period of time.

12 Radisson and Chouart traded west of the great lakes in 1654 and 1655 and may have spent the summer of '55 at Prairie or Pelee island in the Mississippi river near Lake Pepin.

- 13 On page 519 of *Aborigines of Minnesota*, Winchell has this to say of this first expedition: "Radisson and his brother-in-law, Chouart, probably spent the year 1654 - 55 in the western country, but owing to the indefiniteness of the narration, it has been impossible to trace his route with certainty."
- 14 Again in 1658 - 59 they were farther north about the headwaters of the Mississippi river, going as far as Hudson's Bay. See *Aborigines of Minnesota*, pages 519 - 22.

The Sioux 15 In 1683 Perrot established a fort on the west side of the Mississippi river near where is now the city of Wabasha. At this fort traded, to whom it was known as Tepeeta. See book quoted above, page 523. This fort was occupied as a trading post for a number of years. The Iowa may have traded here for a very short time just before moving on to the valley of the Blue Earth river where we find them just prior to 1701, according to Le Sueur.

16 It is possible that the people of the Oneota culture got their iron from Radisson in 1655, or quite as likely that it was secured from the traders at Perrot's fort in 1683-4. They were the earliest traders in the Mississippi river valley of whom we have any record. There is also the remote possibility that they got the small amount of white man's goods that they possessed from the far posts at Mackinac or Detroit.

17 In any case they were in the Upper Iowa valley at the same time that tradition and history place the Iowa there. That is the two are one and the same people.

See # 12, sheet # 1

19 When LeSueur reached the Blue Earth river in 1701 he was told by the Sioux Indians which he met there that the the Blue Earth river country belonged to the Dakota, the Iowa, and the Oto who lived a little farther off, and that the Iowa had recently moved towards the Missouri river near the Maha. (Omaha)

20 Father Marest (La Harpe, Jour., 39, 1851) says that about 1700 the Iowa were associated with the Sioux in their war against the Sauk. This does not accord with the general tradition that the Dakota were always enemies of the Iowa and drove them out of the Minnesota country. Nevertheless the name *Nadoessi Mascouteins* seems to have been applied to the Iowa by the early missionaries because of their relations at least for a time with the Sioux.

Per contra, White Cloud, Iowa chief, at the council at Frarie Ga Ghein, 1825, said, "I go upon the lands of our friends the Saes to hunt. We have but one council fire and eat out of the same dish."

- 21 From the Handbook of American Indians, published by the Bureau of American Ethnology, on page 119, we learn that

"According to tradition, some time back in prehistoric time, the Dhegiha (Going against the wind or current) group of the Sioux, "migrated westward from their seat on the Ohio and Wabash rivers, down the Ohio." On reaching the Mississippi the Quapaw, one of the five tribes composing the group, went down that river, the remaining four going up stream, - against the current."

On reaching the Missouri they turned up that river, when there was a further separation, the Osages settling on the stream to which they gave their name, and the Kansas continuing up the Missouri to the Kansas river to which, also, they gave its name, and along which they continued to reside into historic time.

The Omaha and Ponca crossed Iowa, probably following the Des Moines river, to the vicinity of the Pipestone Quarry, from which they were driven back by the Sioux.

"They appear in 1761 (Jeffrey) to have been for a time north of the Missouri and west of the Big Sioux."

"In 1804 Lewis and Clark found them on the south side of the Missouri opposite Sioux City."

Going back to the Iowa.

- 22 It appears that they were always to the south and south-west of Ft. L'Hullier, for some time following 1700.

From the work above quoted, we find the following on page 613:

"It is probable that in 1700 when Le Sueur furnished them (the Iowa) with their first firearms, the Iowa resided on the extreme headwaters of the Des Moines river."

But it appears from this explorer's journal that they and the Oto removed and established themselves towards the Missouri river, near the Kaskaskia, who were on the west side of the Missouri.

"Jeffreys (Fr Dom. in Am., 1761) placed them on the east side of the Missouri, west of the sources of the Des Moines river, above the Oto, who were on the west side of the Missouri, below the Omaha."

- 23 The Iowa apparently occupied or ranged over a considerable area in northwestern Iowa for a period of around forty or more years. This may account for the occurrence of Onondaga culture pottery sherds in O'Brien, Lyon and other counties in that section of the state.

24 When we next learn of their whereabouts, they were, in 1804, according to Lewis and Clark (Orig. Jour., VI, 91-92, 1905) located 18 leagues up the (Little) Platte, a small river flowing into the Missouri from the northeast, in a single village of 200 warriors, or 800 souls, though they formerly lived farther up the Missouri.

It is quite likely that this village was only a part of the tribe, as Lieut Pike, in his narrative of a Voyage to the Sources of the Mississippi, published by Lawrence and Co., 1809, in Denver,

says under date of Aug. 5th, 1805:

- 25 "We this day passed the river Iowa, and encamped at night on a prairie marked Grant's Prairie." ----- "the Iowa river bears from the Mississippi, southwest, and is one hundred and fifty yards wide at its mouth." ----- "About ten miles up the Iowa river on its right bank is a village of the Iowas."
- 26 On his map of the Mississippi Pike also places an "Ayouwa" village on the left bank of the Des Moines, about 65 miles almost due west from the mouth of the Iowa river.
- 27 At the end of his narration, in his tabulation of the "Nations of Indians residing on the Mississippi river and its confluent streams from St. Louis to its source," he locates the Iowas on the Des Moines and Iowa rivers. Notes them at war with the Chippewa and at peace with the Sauks and Foxes, Winnebago, Sioux, Osage, Pottawottamies, Menomines, and all nations of the Missouri.
- 28 On page 125 he says: "The Iowa (1805) reside on the rivers Des Moines and Iowa in two villages. They hunt on the western side of the Mississippi, the river Des Moines, and westward to the Missouri. Their wars and alliances are the same as those of the Sacs and Reynards under whose special protection they conceive themselves to be. They cultivate some corn but not so much as the two latter nations. Their residence being on the small streams in the rear of the Mississippi, out of the high road of commerce, renders them less civilized."
- 29 The Sacs, Reynards and Iowa, since the treaty of the two former with the U.S., claim land from the entrance of the Jauflione, on the western side of the Mississippi, in Missouri, up the Mississippi to the (Upper) Iowa above the Prairie des Cheins and westward to the Missouri, but the limits among themselves are undefined.
- 30 The occupation of the country and the location of the two villages on the Des Moines and Iowa rivers may account for the location of the Onecta village site at about one mile north-west of Toolshore, in Louisa county, Iowa.
- 31 From 1805 on the Iowa appear to have occupied different sites across the state not far ~~nor~~ north or south of its north *South* boundary line.
See following mentions from Ft. Crawford and the Old Frontier, by Bruce E. Mahan:
- 32 On page 187. The Iowa traded at Prairie du Chien in 1820. - Recollections of Antoine Grignon in Proceedings of the State Historical Society of Wis., 1913, page 124.
- 33 On page 92. In 1825, Clark meets Iowas at Ft. Edwards and at the rapids of the Des Moines, enroute to the Council at Prairie du Chien.
- 34 On page 154. In 1830, Clark arrives at Prairie du Chien with deputations of Oto, Iowa and Sac and Fox.
- 35 In 1820, (Report of the Secretary of War) the Iowa were still on the Little Platte, 15 miles from the Missouri state line.
- 36 Schoolcraft (1853) placed them on the Nemaha river a mile above its mouth. This was the site excavated by Hill and Wedel, 1936.

Additional to paragraph 8 .

- 37 Actually the Upper Iowa is 230 miles in an air line from the mouth of the Illinois river. Following the curves of the main channel would add not far from 100 miles to that distance.
- 35 Franquelin's Map, 1689, See page 29, Aborigines of Minnesota, shows the Arcounous (Iowa) on the upper waters of R. des Arcounous, (Root) river.
- 37 Winchell commenting, page 70, Aborigines of Minnesota, says: "There is much reason to believe that the Iowa were in early times closely associated with the Winnebago, and that together they controlled the southeast part of Minnesota, and that later, they, with the Omaha, (and the Oto) occupied the southwest part of the state (Minnesota) See paragraph 8.
- 40 From Aborigines of Minnesota, Page 40.
"Mounds 2 miles west of Winona, - a group of 14, - pottery found was of shell and clay." (Sioux)
- 41 Iberville, 1700, (See Handbook of American Indians, page 165) says that the Oto and Iowa were then with the Omaha between the Mississippi and Missouri rivers about 100 leagues (300 miles) from the Illinois.

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In the description and history of the Disk Pipe found by W.F. Dresser, about 1887, with an Oneota burial on Burke's Mound - part of the glacial terrace along the Upper Iowa River, south of the junction of Bear and Waterloo Creeks, on the SW SE Sec. 35, T. 100, R. 6 west of the 5th P.M., West, in his Pipes and Smoking Customs of the North American Indian, says, "Ceremonial Disk Pipes are occasionally taken from the sacred bundles of the Iowa Indians."

This find would seem to be a further confirmation of the identity of the Iowa and Oneota culture Indians, as this pipe was from a grave at the west end of the terraces on which were the Oneota villages.

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- 42 Trading Post at St. Louis.
In 1762 Gilbert Antoine de Maxent and Pierre Laclade Ligeist, merchants of New Orleans, organized a firm which obtained from the French Governor of Louisiana a license to trade with the Missouri Indians.
On Feb. 14th, 1764, a party of workmen headed by Aguest Chateau, landed at the site selected by La Glade for his trading post and the following day began work. At the end of the first year forty families were living at the post.

It appears to be quite well settled that when the Winnebago first occupied the territory about the head of the Green Bay, the Iowa, Oto and Missouri formed a part of that "Nation."

According to the traditions of the Iowa the three last above named tribes here separated from the Winnebago, who, "attracted by the abundance of fish," remained, the tribes that separated "continuing southwestward to the Mississippi."

"Here another band, the Iowa, separated from the main group, and received the name of Pahoja, or Gray Snow, which they still retain, but are known to the white people by the name of Ioways or Aiacues."

"The first stopping place of the Iowa after parting from the Winnebago, as noted in the tradition, appears to have been on the Rock river, Ill., near its junction with the Mississippi."

See p. 45, Sheet 9

"In 1848 a map was drawn by a member of the tribe showing their movements from the mouth of the Rock river to the place where they were then living. According to this their first movement was to the banks of the Des Moines river, some distance above its mouth; the second was to the vicinity of the Pipestone Quarry in southwestern Minnesota, although on the map it was placed erroneously high up on the Missouri; thence they descended to the mouth of the Platte river, and moved successively to the head waters of the Little Platte river, Mo.; to the west bank of the Mississippi, slightly above the mouth of the mouth of the Des Moines river, a short distance farther up on the same side of the Mississippi; again southwesterly, stopping on Salt river, thence going to its extreme headwaters; to the upper part of Chariton river; to Grand river; thence to the Missouri river, opposite Ft. Leavenworth, where they lived at the time the map was drawn."

"These successive movements, which are of comparatively recent date, are generally accepted as substantially correct."

Unless there was an early movement of this tribe, for which the above tradition does not account, it, prior to its account of the movements following the termination of the northward movement terminating in the vicinity of the Pipestone Quarry, can not be made to agree with the seemingly conclusive evidence of the occupation by this tribe of southeastern Minnesota from the mouth of the St. Peter, (Minnesota) west to the Blue Earth, and south to the Upper Iowa rivers for a considerable period ~~of~~ of time terminating about 1700.

See foot notes of authorities.

When all the evidence is considered it seems quite conclusive that from a time not long after their separation from the Winnebago, the Oto and Iowa occupied at different times and for varying periods, southeastern and southwestern Minnesota, extending somewhat over the line into northeastern Iowa; over northwestern,

western and southern Iowa along the Missouri line and extending over that line into the latter state, up and into historic time.

This territory resembles in shape a gigantic letter O with the opening towards the east, the two ends reaching the Mississippi river.

The interior was occupied in pre-historic times by the Illini, from which they were driven by the Sacs and Foxes not long before the advent of the whites.

Authorities for conclusions reached on page 7:

- Perrot, - Bellin's Map, in *Aborigines of Minnesota*, p. 47
and *Memoirs*.
Winchell, - *Comments on map, Aborigines of Minnesota*, p. 26.
Winchell, - *Comments on Franquelin's map, Aborigines of Minnesota*, p. 29.
Pond, - *Aborigines of Minnesota*, p. 70.
Fr. Membre, - 1689.
Le Sueur, - *Memoirs*, 1701.
Winchell, - *Conclusions, Aborigines of Minnesota*, p. 613
Winchell, - *Conclusions, Aborigines of Minnesota*, p. 67.

Winnebago Indian village, Wisconsin, visited by Jean Nicolet,

Sault Ste Marie, by St. Lussan	1634
Mississippi river, discovered by Marquette and Joliet	1671
Ft. Grevecoeur, Ill., by LaSalle	1673
Mouth of Mississippi, by LaSalle	1683
Nicols Perrot, trader from the lead mines, north.	1685
	to 1689
Expedition to central Iowa	De Noyelle 1734

Fort St. Nicholas built at Prairie du Chein by the French, 1685

On page 27 of the *Aborigines of Minnesota* is an old Dutch map, based on the discoveries of Marquette, 1673. The east side of the Mississippi river, north of the river Mesconsin (Wisconsin) it shows as occupied by the Sadowessen (Sioux).

On page 28 of the same, *Aborigines of Minnesota*, Hennepin's map shows the Ixati (a tribe of the Sioux) on the east side of the Mississippi above the mouth of the St. Peter (Minnesota) river.

On page 52 of the same book we are told that the Ottogamies (Foxes) occupied territory bordering on the Mississippi and Chippewa rivers, and on page 56 the map shows the Ottogamies north of the Wisconsin on the east side of the Mississippi.

Bulletin 30, Part 2, Bureau of American Ethnology, page 958, we have:

"The Winnebago have been known to the whites since 1634 when the Frenchman, Nicolet found them on Green Bay, Wis., at which time they probably extended to Lake Winnebago. They were then wedged in by the Sauk and Foxes and Menominee. To the west they were in intimate with a kindred tribe, the Iowa, who in turn were neighbors of the Oto and Missouri."

In 1840 the Winnebago were moved from their territory east of the Mississippi, which they in 1837 had ceded to the whites, to the Neutral Strip. In 1848 they were removed to Long Prairie, Minnesota.

Appendix A

In a letter dated Apr. 13th, 1944, in answer to our inquiry, Mr Henry Matthys (not Matthews) writes us that for several years he did concrete and carpenter work for the farmers living in the valley of the Upper Iowa river, and others near by.

That he "stayed with Mr. Fred Kumph who lives near a mound (an isolated butte) called the Elephant.

That he "has a collection of Indian relics that came from the New Galena and O'Regan benches (terraces) and some that I (he) found down the river towards New Albin."

"I (he has) have a mastodon tooth that I (he) found in the spring of 1915. It weighs about nine and one-half pounds. Measures eight and one-half by six inches. I (he) found the tooth on Silver creek, a mile from the Iowa river, on a riffle in about twelve inches of water, on the Miss McCormick land."

The NW NE Sec. 8, T. 99, R. 5 west of the 5th P.M.

He doesn't think that the water had washed it very far as, if it had, it would have gone to pieces.

He says that "the tooth on its face is corrugated and slightly on a curve." (Concave)

This is most likely a tooth of *Elephas primigenius*.