



# LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

## **Iowa archaeological reports 1934 to 1939. Volume X, Archaeological survey of Mills County, Iowa, 1938. Number 20, Volume X 1963**

Orr, Ellison

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

<https://digital.library.wisc.edu/1711.dl/X2WZY6WOTTWD49C>

<http://rightsstatements.org/vocab/InC/1.0/>

For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.



IOWA ARCHAEOLOGICAL REPORTS 1934 TO 1939

(TEN VOLUMES)

by Ellison Orr

Volume X: Archaeological Survey of Mills County,  
Iowa, 1938.

EDITORS OF THE SERIES

David A. Baerreis, Chairman  
Stephen F. De Borhegyi  
Thomas N. Campbell  
John B. Rinaldo  
John J. Solon

University of Wisconsin  
Milwaukee Public Museum  
University of Texas  
Chicago Natural History Museum  
University of Wisconsin Press

**R E P O R T**  
**of an**  
**ARCHAEOLOGICAL SURVEY**  
**of**  
**MILLS COUNTY, IOWA.**

**Sponsored by the Iowa State Planning Board,**  
**WPA Project 3600.**

**Charles R. Keyes, Archaeologist for the State Historical Society, Supervisor,**  
**Ellisen Orr, Project Supervisor.**

**Apr. 12 to Dec. 5, 1938.**



### W P A Workmen

Everett Welkins, Tabor  
Ed. Rainey, Glenwood  
Walter Stivers, Glenwood  
Kennith Killmon, Glenwood  
Rolfe Stiles, Glenwood  
Ed. Hall, Glenwood  
Elvin Gulley, Glenwood  
Ernest Kelso, Glenwood  
Wm. E. Rhodes, Pacific Junction  
Harvey Watts, Malvern  
Henry Bowley, Glenwood  
Fred Beyers, Glenwood

The Cost to the Government and the Iowa State Historical Society in making Surveys, Photographs, Maps and Sketches, and other Incidental Expenses, the Field Notes of which, Condensed, Expanded in places and Explained and Commented on, form the Basis of this Report. - Of the Descriptive Matter, Photographs, Maps and Sketches. - may be summarized as follows:

|  |           |
|--|-----------|
| Wages paid 10 WPA workmen for a total of 1280 hours from Apr. 8, 1938 to Dec. 5, 1938 at 40 cts per hour | \$5120.00 |
| Ellison Orr, Supervisor of Field Work  | 1042.50   |
| Incidental Expenses paid Ellison Orr by Historical Society   | 178.09    |

Total

\$6340.59

For writing and Typing one copy of this Report for the State Historical Society no charge was made.

January 15th, 1943.

See Map on Following Sheet

122-A.

Altogether now there are six sites where Mr. Rowe finds enough Woodland sherds to indicate a camp site of people of that culture. The location of these we have indicated on the general map preceding page I of this Volume by the following symbol in red ink:  $\frac{A}{\text{bar}}$  Below the bar is the number of the particular site.

Following is a list of these camp sites with such descriptive matter as we now have:

- $\frac{A}{1}$  On the north side of the east branch of Pony Creek, on the SW SE Sec. 34, T. 73, R. 43 west, in Mills county, Iowa. This is the location where Mr. Rowe found the restored vessel a photograph of which see on page 124 of this report. See also page 121 for description of location.
- $\frac{A}{2}$  On the north wall of the canyon ditch in the bottom of a short, dry ravine coming down out of the bluffs, on the north side of the road down this valley, at about 20 rods from where it joins along the foot of the Bluffs. On the NE SE Sec. 5, T. 72, R. 43 west of the 5th P.M. Here is exposed a continuous ash stratum 16 ft. long and 1 - 4 inches thick, containing a very few roughly flaked flints and small pottery sherds, at 15 ft. below the natural surface into which is cut the 20 ft. deep canyon. Writing on Dec. 24th, 1942, Mr Rowe says, "There is more Woodland exposed there now. It is 20 ft. deep and the bank is now quite hard."  
"Some two rods below (down stream) the exposure ( the one which we saw in 1938, an ash stratum 16 ft. long and 4 inches thick at 15 ft. below the surface, in which we were told a pipe had been found by a Mr. Terry and two Woodland sherds by Mr. Lester Hunt) in a sand stratum I (Rowe) found two 5 X 5 inch Stearn's Creek pottery sherds at about 10 ft. below the surface."
- $\frac{A}{3}$  On the gently sloping obscure terrace on the west side of Pony Creek on the NW NE Sec. 4, T. 72, R. 43 west of the 5th P.M.
- $\frac{A}{4}$  Roadside bank near school house at forks of road on NE NE Sec. 25, T. 73, R. 43 west of the 5th P.M.



$\frac{A}{5}$ 

In a short, shallow valley tributary to Keg Creek. In his letter of Jan. 4th, 1942, Mr. Rowe says of this site on Sec. 14, T. 72, R. 43 west of the 5th P.M., near its center: "There is a small inner gulch in a fork of a big canyon which cuts a fairly large deposit with sherds mostly of the high-necked, notched-rim vessels, mostly rough triangular arrow heads, and others with barbs." In his letter of Jan. 4th, 1943, he says: "The best exposure of Stearn's Creek that I ever saw. A big tree hides part of the site but for 40 or 50 ft. along a secondary canyon inside the bigger one, camp refuse shows 3 ft. or more thick. I guess the exposure to be 8 to 20 ft. wide on each side of the present gully."

 $\frac{A}{6}$ 

On a gentle slope on the north side of a tributary to Pony Creek from the east and on the south side of the east and west highway almost directly south of the Lehse Earth Lodge site. On NW NW Sec. 34, T. 73, R. 43 west of the 5th P.M.

MAP  
of  
Location of Earth Lodge - House Sites  
In Mills county, Iowa.  
From Surveys made by Ellison Orr. 1938

Excepting this mapped rough country, North-west, West, South-west and South of Glenwood, by dilligent inquiry of the older people living in the area, and others who might be able to give information of the "buffalo wallows" or "swales, as they knew them, and extensive personal examinaton, on foot, of likely locations where they might be found, we have been unable to find but four other sites, and these well outside the area mapped, in Mills county. These are: one on a gravel terrace at the foot of the bluffs along the east side of the great bay of the Missouri river bottoms, on Sec. 36, T. 72, R. 43 west of the 5th P.M.; another about 1/4 mile west of Waubonsie creek on a low spur of bluff, on Sec. 25, T. 71, R. 43; the other two on a low terrace in the valley of a tributary to the Waubonsie, on Sec. 1, T. 70, R. 43, in Fremont county.

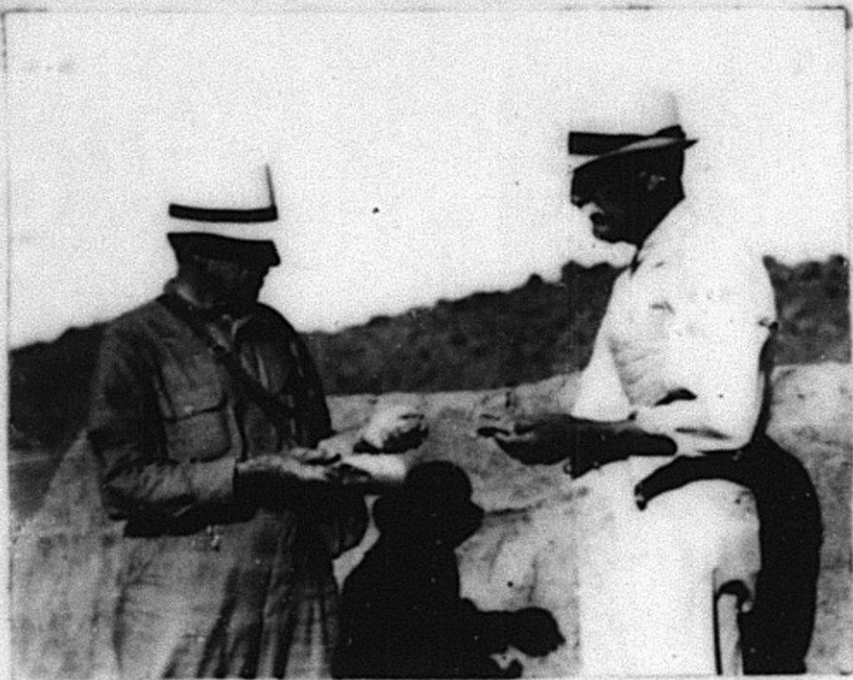
Doubtless there were other sites that have been obliterated by cultivation or forgotten by the older people that may once have known them.

Explanation of symbols.

- - Earth Lodge Sites.
- - Burial Mounds.
- Burial Places not covered by mounds.
- ▲ - Camp Sites - Glenwood=Focus of the Nebraska Aspect.
- ▲<sub>3</sub> - Woodland Camp Site. Exposed 15 ft. below the surface in the side of a deep roadside ditch, on the SE NE Sec. 5, T. 72, R. 43.
- † - White man's Cemetery
- - Roads - in black ink.
- Solid blue lines, - Brooks with water most of the summer.
- Broken Blue lines, - Normally dry, deep ravines.
- "New 40" - NE SW. Sec. 24, T. 72, R. 43
- "Davenport" - SW NW. Sec. 18, T. 72, R. 42
- "Site 34" - SW NE. Sec. 4, T. 72, R. 43
- "Geer Site" - West of Green House - HX-39
- "Jud. Creek" - Sec. 35, T. 73, R. 43 and Sec. 1, T. 73, R. 43
- "Mittelweit Creek" - Sec. 36, T. 72, R. 43 and Sec. 31, T. 72, R. 42.
- ▲<sub>1</sub> ▲<sub>3</sub> ▲<sub>4</sub> ▲<sub>5</sub> ▲<sub>6</sub> Algonquin Camp Sites in Creek Canyons.







**Dr. Charles R. Keyes, Archaeologist for State Historical  
Society, and Supervisor of Project, Left.  
Ellison Orr, Project Field Supervisor, Right.**



INDEX. Vol. 10

| Title.   | Page      |
|--|-----------|
| Review of Situation                            | I - 10    |
| Earth Lodges                                   | 11 - 18   |
| Pottery  | 19 - 36   |
| Flints   | 37 - 42   |
| Bone Implements                                | 42 - 44   |
| Pottery Pipes                                  | 45 - 56   |
| Woodland Pottery                               | 58 - 60   |
| Age of House Sites                             | 61        |
| Axes and Celts                                 | 62        |
| Abraiders                                      | 62        |
| Small Hand Boulders                            | 63        |
| Mortars and Mealing Stones                     | 63        |
| Outside Storage-refuse Pits                    | 64        |
| Fused Pottery                                  | 65        |
| Paint  | 65        |
| Corn   | 66        |
| H.S.A.   | 70        |
| H.S.G.   | 72        |
| H.S.H.   | 77        |
| H.S.X-16                                       | 79        |
| H.S.F.   | 85        |
| H.S.Q.   | 87        |
| H.S.J.   | 89        |
| H.S.O.   | 91        |
| H.S.X.   | 94        |
| H.S.X-10                                       | 100       |
| H.S.X-II                                       | 106       |
| H.S.X-15                                       | 111       |
| Woodland Culture                               | 120       |
| Institution Farm - Excavations                 | 132       |
| Grooved Axes                                   | 137       |
| Celts  | 142       |
| Mound Surveys - General                        | 146       |
| Mound Group 4 - Surveys                        | 149       |
| Mound Group 4, Mounds 1, 2, 3                  | 152       |
| Mound Group 4, Mound 4                         | 155       |
| Mound Group 4, Mound 5                         | 156       |
| Mound Group 4, Mound 6                         | 158       |
| Mound Group 4, Mound 7                         | 162       |
| Conclusions                                    | 170       |
| Mound Group 10, Mound I                        | 171       |
| Mound Group 2, Mound I                         | 172       |
| Mound Group 7, Mound 5                         | 176       |
| Location Surveys of Other Mound Groups         | 182 - 186 |
| Location Surveys of Earth Lodges not Excavated | 188 - 201 |
| Camp Sites                                     | 202       |
| Inclusions - Classified                        | 204 - 215 |
| Sundry Remarks                                 | 216       |

For Kelsoan and Pale Bone Woodland Pottery  
 See pages 171-174

For Plans HSB HSC and HSE, with results  
 of Excavations by Francis McDowell, see  
 see Pages 163 to 180, Vol. XII of Reports

For Plan and results of excavation of H.S. "Dig 13"  
 by Francis McDowell and Lee Swearinge see Pages  
 174 and 175, Vol. XII of Reports

## A Review of the Situation.

Far back in April, 1881, there was published in the American Antiquarian, a reprint of a paper "read before the Academy of Science at Des Moines", by S. V. Proudfit, on the "Evidence of Pre-historic Indian Culture in Mills County, Iowa."

This appears to have been the first report of archaeological work done in the county. In his research work Proudfit was assisted by Mr. Seth Dean then county surveyor, who also in July, 1927, contributed an article to The Annals of Iowa on the Pottawattamias, the last Indians to occupy the south-west part of the state.

Mr. Proudfit located forty-five earth lodges of which he partly excavated "several" by digging trenches across the site down to the lodge floor where he encountered the fireplace, broken pottery and some flints and other artifacts. He does not mention the finding of evidence of the charred remnants of posts supporting the roof or sides.

Two of the sites excavated were of the procession of seven extending for three-quarters of a mile along the crescent shaped divide which the highway from Glenwood to Old Pacific crosses, near the center of the group (string), on the NW SE Sec. 10, T. 72, R. 43 west of the 5th P.M., at one mile west of the former place.

Mr. Proudfit designates this group as "The Tipton Village" after the then owner of part of the land on which it is located.

The "Large Mound", then seventy feet in diameter and ten feet high, which he locates "near the center of the line" of lodge sites, though much dug over by "relic hunters" as well as by him and a previous excavation, has never been brought under cultivation, and still stands, south of the highway at 170 feet from center of road to center of mound. It is now about six feet high. On it are stumps of oak trees over a foot in diameter.

Two of what may have been the seven lodges of the string, we located in a field on the north side of the highway by the basin shaped depressions which still persist though the land has been under cultivation for more than three-fourths of a century. The site farthest north is 2270 feet, and the nearer one, 2040 feet from the center of the large mound. The location of a third site can still be made out at 225 feet south of the mound.

Of all the locations of sites given by Proudfit only the above described three, probably of the Tipton Village, and two, House Site, X-41 and X-48, on the Old Fair Ground on the SW SE Sec. 14, T. 72, R. 43, can now be made out with certainty. Vaguely located they can not now be found.

Mr. Dean at about the time Proudfit's paper was published, made a map showing the locations of the sites discovered, which may still be in existence. If this map could be found, sites which we may not have discovered could then be exactly located.



Dr. Keyes in his archaeological survey of Iowa extending over a period of seventeen years, visited Mills county a number of times and secured from collectors and others, and from his own field work, much information regard to its pre-historic occupation.

Across the Missouri river, Hill, Wedel and Coeper had from as early as 1934 on, or earlier, excavated earth lodges in the valley of the Platte and Elkhorn rivers and on the bluffs bordering the flood plain of the Missouri. The abundant cultural remains found in the lodge sites excavated by them have been designated the Nebraska culture.

Archaeologically it was of importance to determine whether the earth lodge sites shown Keyes in Harrison, Pottawottamie, Fremont, and especially Mills counties in Iowa, were made by people of the same Nebraska culture.

Accordingly approval of a project under the provisions of which such a survey could be made, was obtained, and field work by ten WPA workers under the supervision of the writer was begun April 12th and continued to Dec. 5th, 1938, a total of 928 hours.

Mills county, bounded on the west by the Missouri river, is the first county north of Fremont, the south-west county of Iowa.

For from three to four miles back from the bottom lands of the river, the bluffs, the tops of which rise to a height of two hundred and fifty to three hundred feet, are much dissected by a labyrinth of steep-sided gullies and ravines. In these is a narrow strip of alluvial bottom land, in which deep erosion ditches with vertical canyon-like side walls have been cut.

These ditches, which sometimes reach a depth of seventy feet, with an average of probably twenty feet, extend well up towards the heads of all ravines. The whole area is a dendritic complex of deep ravines separating sharp divides.

The geological and archaeological history of these erosion ditches appears to be, that for a long time there has been going on, an accumulation of silt from the run-off of storm water from the divides on either side, and from the settling and deposit of wind blown dust, with an increasing admixture of humus.

This accumulation, amounting to an indeterminable number of feet, - in places as much as seventy feet deep, down to the underlying Nebraskan or Kansan glacial deposits, - is still in process of deposit, amounting to from a few inches to ten or even more feet since the settlement of the country by the whites.

Later, floods began to cut ditches, backward, up the streams from their openings from the bluffs into the flood plain of the Missouri, then branching and rebranching up the tributary valleys, this continuing up to the present. These erosion ditches had their beginnings in very recent times.

There is abundant evidence showing the occupation of the valleys by pre-historic peoples for a long time prior to the beginning of the cutting of the ditches, and while the filling up was in process.

The greater part of this evidence is of an earlier and different people from the builders of the earth lodges. Ash strata containing pottery sherds, indicating camp or village fires have been found under an accumulation of 10 to 25 feet of alluvial soil deposited before the coming of the whites.

In cutting these ditches the flood water carries away the fine silt, leaving behind as a gravel bar deposit, the boulders of all sizes, from those as large as a barrel to small ones an eighth of an inch in diameter, washed out of exposures of till on which the alluvial deposit rests, and the flints, pottery sherds and other pre-historic artifacts, lost, and all the heavier camp and village refuse from different levels in the alluvial deposit.

These ditches are a prolific hunting ground for the collector of "Indian relics."

The evidence of an old pre-historic culture, found almost exclusively, except in the mounds, in the ditches, will be discussed elsewhere in this report.



View in Canyon-ditch of Bomar Creek.  
On SW SW Sec. 31, T. 72, R. 42, west 5th P.M.  
Four miles south of Glenwood, Mills county, Iowa.  
Height of Wall at Right, 20 ft.



According to the evidence of the oldest settlers now living, all the rough area along the Missouri, with the exception of the sharp crests of the divides near, and steep bluff sides facing, the river, was well, sometimes heavily, timbered. East of the timber the rough country merged rapidly into rolling upland, mostly prairie, across which, flowing south-west across the country in wide valleys were Pony, Keg, Horse, Bomar, Wabensie and Silver Creeks, and the Nishnabotna river.

The Missouri bottoms in pre-historic times appear for the most part to have been well timbered, swampy and mosquito infested, with numerous lakes, parts of abandoned channels.

The earth lodge or house sites, (H.S.) synonymous names, that were the principal manifestations of pre-historic culture assigned us for investigation, are found chiefly on the higher and wider parts of the crests of the divides, at the general upland level, and with but two exceptions, somewhat back - one-fourth mile - from the edge of the bluff line facing the river bottoms.

Of the sixty-eight sites located by us, fifty-five are so situated, seven are on small level benches or terraces on sloping points of spurs of the upland, and the remaining six at or about where the slope of the bluff and the bottom land meets.

At no place are they in close enough proximity or in numbers sufficient, to be considered, a village. The seven lodges of the Tipton Village of Proudfit lie in a long line or "procession", separated by an average distance of one-eighth mile - 660 ft. - Of the three Timmerman sites, H.S.O. is separated from H.S.N. by 868 ft. and H.S.N. from H.S.M. by 778 ft.

Then there are what might be considered nine pairs - the individual houses separated from each other by distances as follows:

H.S.I-19 from H.S.I-20, the Knickman sites, by 403 ft.

H.S.H. from H.S.I., the Williams' sites, by 215 ft.

H.S.I-45 from H.S.I-46, the Barbour sites, by 230 ft.

H.S.X. from H.S.K., the McManigal sites, by 800 ft.

H.S.X-1 from H.S.X-2, the Henderson sites, by 105 ft.

H.S.X-12 from H.S.X-13, the Stille sites, by 587 ft.

H.S.X-10 from H.S.X-11, the Marshall sites, by 570 ft.

H.S.X-21 from H.S.X-22, the Plumer-Case sites, by 205 ft.

H.S.X-41 from H.S.X-42, the Fair Ground sites, by 800 ft.

The fourteen sites excavated by Hill and Cooper north of Omaha the present - 1938 - summer, on an area probably not exceeding ten acres, may very well be considered a village, but it can hardly be said of any of the pairs noted above that they are a village. They might be near enough to afford a measure of mutual defense in case of attack by enemies, making it necessary to attack both houses at the same time if both were occupied.

Each of the remaining forty sites is over one-fourth mile from its nearest neighbor.

The occupants of these lodges were an agricultural people as well as hunters, as we know from the carbonized corn and beans found in the sites.

They may have been strong enough or isolated enough to have had no enemies that they feared which may account for the widely separated sites chosen for their dwellings. Or they may have relied on the fortress-like character of the earth lodges for defense. It would be almost impossible to set these on fire from the outside and difficult to dislodge or destroy resolute defenders. They had no horses, and dogs and other property could be quickly carried inside. Unless the attack were a surprise but little booty could be secured by the attackers except by the most desperate fighting.

Proudfit says: "a single lodge is the exception - a group the rule." Our survey finds the opposite of this true. Forty-seven of the sixty-eight located by us, separated by distances of over half a mile, must certainly be considered singles.

Doubtless a number of sites have quite certainly been obliterated by cultivation or have left no traces of their location, but just as certainly by no means enough to make every single located by us one of a group the others of which have disappeared.

He also states that: "I have yet to find a mound unaccompanied by lodges," and, "I am convinced that the people who built the mounds lived in the lodges." Again the facts determined by our survey are at variance with the findings and conclusions of Mr. Proudfit.

Following is a list of the fourteen mound groups located by us and the distance from each to the nearest lodge site:

|   |              |         |
|---|--------------|---------|
| Mound Group No. 1, Tipton Mound, (1)      | to H.S.X-42, | 225 ft. |
| Mound Group No. 2, Hunt Mound, (1)        | to H.S.J.    | 100 ft. |
| Mound Group No. 3, Terry Mound, (1)       | to H.S.O.    | 1/2 mi. |
| Mound Group No. 4, Terry Group (7)        | to H.S.X-37, | 1/4 mi. |
| Mound Group No. 5, Case Group, (3)        | to H.S.X-22, | 1/4 mi. |
| Mound Group No. 6, Picnic Ground Group    | to H.S.W.,   | 1/3 mi. |
| Mound Group No. 7, Wells Group (5)        | to H.S.Q.    | 1/8 mi. |
| Mound Group No. 8, ----- Group (6)        | to H.S.Q.    | 1/8 mi. |
| Mound Group No. 9, ----- Group (2)        | to H.S.Q.    | 3/4 mi. |
| Mound Group No. 10, Boyce Group (1)       | to H.S.E-24, | 1/4 mi. |
| Mound Group No. 11, Sayle Group No. 1 (2) | to H.S.W.,   | 50 ft.  |
| Mound Group No. 12, Sayle Group No. 2 (1) | to H.S.X-33, | 244 ft. |
| Mound Group No. 13, Wilson Group (1)      | to H.S.X-15, | 1/8 mi. |
| Mound Group No. 14, Barbour Group, (5)    | to H.S.X-43, | 1/4 mi. |

Note that by the above the only mounds that can be said to be in close association with an earth lodge are, the single large mound of the Tipton Group, constituting our Group No. 1 from which earth lodge X-42 lies south, 225 ft.; the single mound, the Hunt mound, constituting our Group No. 2 from which H.S.J. lies 100 ft. north; mound 1 and 2 of Group 11, Sayles Group No. 1, which lie, No. 1, 50 ft. and No. 2, 175 ft. in an easterly direction from H.S.W.; and the single mound comprising Mound Group No. 12, from which H.S.X-33 lies north, 244 ft and H.S.X-34 lies south, 247 ft.

It will be seen then that of the of the fourteen Mound Groups located only four lie near lodge sites. For the remaining ten mounds or mound groups house sites lie from 1/4 to 3/4 mile away, and that there are no mounds to match the remaining fifty lodges.



Our excavation of fifteen earth lodges demonstrates it would appear, beyond a reasonable doubt, that they were constructed by a people of the Nebraska, or a phase of the Nebraska, culture.

But, while the evidence is not conclusive, a preponderance of it points to the construction of the mounds by a people of a different and older culture.

Of the mounds accompanied by lodges, or conversely, of lodges accompanied by mounds, only one, the Hunt Mound, contained, like the earth lodges, inclusions of undoubted Nebraska culture, and that may possibly have been intrusive.

Of the other three, the Tipton Village mound, from Proudfit's own description of his and a previous excavator's findings, was quite certainly not built by people of the earth lodges but by an older people, probably of some phase of the Algonquin culture. The remaining two sites, - the Sayles sites No. 1 and 2, - have not been excavated, but from the location and size are more likely to be Algonquin than Nebraskan.

Then of the four instances of mounds and earth lodges closely associated, we have one where the mound is certainly not like the earth lodges, of Nebraska culture, and the other three not beyond question.

Of the remaining ten groups of mounds, excepting group No. 7, none are nearer an earth lodge than one-fourth mile, and conversely, of the sixty-eight earth lodges, sixty-one lie over one-fourth mile from a mound and some as much as a mile.

With one statement of Mr. Proudfit's we heartily concur. He says: "It is true that many 'finds' indicate that this region was peopled at a time when the bluffs were in process of formation."

Mr. Paul Rowe tells me that he finds flints, flakes and pottery sherds in the sides of the road cuts in the divides and in shallow erosion ditches in the fields to a depth of eighteen to twenty-four inches below the surface. At one time when we were riding with him he stopped the car, and going to the side of the road, picked out of the bank a small well made celt, at eighteen inches below the surface. This was about thirty rods east of H.S.X-10, the first Marshall site excavated, at the beginning of the steeper slope on the east side of the divide.

It would be difficult to say whether accumulation by wind blown dust, or erosion from rain fall, is now taking place on the ridges, with the probabilities in favor of the latter.

A study of the walls of H.S.X-15 satisfies us that as much as twenty-four inches of wind deposited earth has been added to the knob-like high point on which this lodge is located. Further description and diagrams of the walls of this Lodge site, justifying this belief, will be given in the description of the excavation of the site.

If it could be determined how long it has taken to deposit the twenty-four inches on the H.S.X-15 knob, or on all the ridges where artifacts are found in the road cuts at that depth below the surface, the problem of the age of these sites would be solved.

As Ft. Crevecoeur was built on the Illinois river in 1680; Ft. Nicholas at Prairie du Chien in 1685; and as Du Luth traded with the Sioux in 1681; and as Nicolas Perrot from 1685 to 1688 built trading posts from the "Lead Mines" to Lake Pepin; and in 1700 LeSueur built a trading post at the mouth of the Blue Earth river; and as, besides the legitimate traders there were the "outlaws", who traded without authority and who are believed to have penetrated farther and earlier into the unknown Indian country and of whose ventures there is no record; and as Indians from as far west as the Mississippi are known to have traded at Mackinac Strait and Detroit, it is not unreasonable to assume that they may have extended their field of operations as far west as the Missouri late in the 17th or early in the 18th century.

Had these traders contacted the earth lodge people of Mills county some of the imperishable things, such as glass beads, copper and iron, would almost certainly have been recovered from the sites excavated by us, but none were found. have

The conclusion then is that the people who occupied them must have abandoned these sites or were driven away not far from two and one-half centuries ago, with the probabilities of it having been still farther back in time.

Reckoning backwards from their abandonment towards the building of the first lodge and settlement of the territory in which we find them, the question of whether all were built and occupied contemporaneously, or after the first erected, perhaps only a few, became unsafe to live in because of age, others were built to replace them, is to be answered.

In the first case the occupation of the area could not have been for long, but in the second a small settlement might have been in existence there for a long period of time.

In the latter case we would expect to find a difference in the culture found in the different lodges, the older sites having a somewhat more primitive type. Perhaps a study of the material recovered and sent in may show differences but they were not noted in the field.

If only a few of the people had the earth lodges, the others living in skin covered tipis, as was the case with the Omaha, this would mean a prolonged occupation of the area.

If on the other hand there was a dense population - all lodges occupied - then there were more people living in territory than there are at the present time if we exclude the town of Glenwood.

All lodges excavated by us had been burned as evidenced by the stumps of carbonized posts and abundance of burned earth. There were no exceptions. Whether they had burned accidentally while still occupied, had been set on fire by the occupants when abandoning them, burned by prairie fires after abandonment, or had been burned by an enemy, there is now no means of knowing.

However the evident carrying away of all valuable property would seem to indicate that the burning did not occur till the occupants had moved out.



Lee Swearingen and Francis McDowell, inmates of the "State Institution" at Glenwood have been and are yet, enthusiastic diggers on the State Farm for Indian relics. In the past years they had found and opened up in an irregular and desultory manner, three undoubted earth lodges and had dug over considerable territory, supposedly camp sites, and had accumulated a very respectable representative collection of Nebraska culture material, including four ollas and a 7 in. celt.

Late the present summer they dug in two lodge sites in a part of the vegetable garden near the garden greenhouse. Neither were fully excavated. Much broken pottery, flints and rough hand rocks were found.

In the first dug, the most northerly, which we have designated H.S.I-38, a skeleton was found near the south-west perimeter.

There were no indications of this lodge burning that we could discover when we visited the place while they were digging and McDowell who did most of it, said there were none.

A plausible explanation of the occurrence of this skeleton would be that the lodge, old and decayed, had collapsed and a person whose skeleton was found was caught under the debris and earth. And that all the wood of the frame had decayed.

The building of an earth lodge required considerable timber of sufficient size and weight to make its transportation for any distance very laborious. This is an additional indication that at the time of the building of the lodges the territory selected for occupancy was well forested, - as it was when the white man came.

The reason why the high ridges were selected for dwelling places is difficult to determine. Such were exposed to the full sweep of the winter winds as we had abundant opportunity to know before we laid off for the season. Surrounding timber would afford an attacking enemy concealment and protection, and there was not the wide outlook believed to appeal to the Indian, - the trees on the slopes cut it off.

There was of course an abundance of fuel but to offset this in most cases no brook or spring from which water could be obtained nearer than a quarter of a mile.

It is possible that at the time of building narrow tongues of grass-land ran out from the prairies on the east along the crests of the ridges and that only the slopes and valleys were timbered, and that for their water supply they depended on artificial water holes supplied by rain water.

Then, too, if the ridges were prairie the breezes in summer would tend to keep them free from the pest of mosquitoes in the timber and on the bottoms.



Photograph of Surface Basin  
of House Site X-19, - the <sup>W</sup>Lohse Site.  
on SE NE Sec. 33, T. 73, R. 43  
Looking South. Sept. 26, 1938.



Surface Basin of House Site X-26 on the SW NE Sec. 10, T. 73, R. 43 west of the 5th P.M., Mills county, Iowa, in a large body of timber belonging to Charles C. Plumer, south-east of a rustic ledge.

This is apparently an outlier of the main settlement north-west of Glenwood. Except a small site on a low spur projecting into a wide shallow valley to the east, one-fourth mile south, there are no other known sites nearer than H.S.X-25, two miles due south.

The timekeeper, Everett Walkins, stands in the center of the surface depression which is thirty-five feet in diameter and thirty inches deep in the center. It extends to his right to the tree at the extreme edge of the picture, and to his left to the brush at the edge of the picture on that side.



### Some Possible Additional Earth Lodges.

Paul Rowe who probably knows more about "the lay of the land" in the Earth Lodge territory than anyone else, in a letter dated Feb. 13th, 1941, locates, for the most part pretty indefinitely, by a concentration of surface finds of material, or by what he considers reliable information from those who by ownership or familiarity have knowledge, what he believes to be additional sites, indicated on the map on preceding page by the following symbols:

- - 1R - at 10 paces south and 75 paces west from HS-E
- - 2R - SE cor of Sec. 14, T. 72, R. 43
- - 3R - a short distance north of 2R
- - 4R - 2 sites near the center of Sec. 14, T. 72, R. 43
- - 5R - near the center of NE NW Sec. 14, T. 72, R. 43
- - 6R - in center of NE NE Sec. 10, T. 72, R. 43
- - 7R - west of the center of SE NE Sec. 10, T. 72, R. 43
- - 8R - on SE NW Sec. 3, T. 72, R. 43
- - 9R - on NE MW Sec. 3, T. 72, R. 43
- - 10R - large site near the center of SW Sec. 4, T. 72, R. 43
- - 11R - on SW SW Sec. 33, T. 73, R. 43
- - 12R - on NE NE Sec. 33, T. 73, R. 43
- - 13R - on NE NE Sec. 34, T. 73, R. 43
- - 14R - 2 sites on NW NE Sec. 34, T. 73, R. 43
- - 15R - on NW NW Sec. 34, T. 73, R. 43
- - 16R - 2 site on SE SE Sec. 27, T. 73, R. 43
- - 17R - on NW SE Sec. 28, T. 73, R. 43
- - 18R - on SE SE Sec. 21, T. 73, R. 43
- - 19R - on NE SE Sec. 21, T. 73, R. 43

These surface concentrations of material may or may not be indications of the site of earth lodges. They may be the sites of more or less temporary camps.

See Map preceding.

## EARTH LODGES

In as much as it was believed that that the earth lodge or house sites of Mills county would yield a large amount of evidence, and that it was in them that we would find the most abundant manifestations of pre-historic culture, it was on them that the larger part of our excavation work during the summer of 1938 was done.

In the general plan of their construction we found the earth lodges of south-western Iowa, including Mills county, which we excavated, to be much like those found just across the Missouri river in Nebraska in which excavation work had been done and of which reports had been made.

In building an earth lodge, after selecting a site, a pit, twenty-five to forty feet square, averaging thirty-two feet, and oriented approximately with the cardinal points, was dug to an average depth of twenty-four inches, the earth excavated being heaped around the margin of the pit.

An upward sloping entrance, four feet wide, sometimes reaching a length of over thirty feet, was dug, usually running out at right angles to the south side.

The bottom of the pit dug was the floor of the lodge or house to be constructed over it. This floor was basin-shaped, - from six to twelve inches lower in the center than on the sides.

Usually, too, at six to eight feet from the sides there was, for twelve to eighteen inches, a sharper slope.

The line of meeting of the house floor and the earth that fell in upon it when the structure finally collapsed we found usually easily made out.

Between the center and the sides four large posts, ten to twelve inches in diameter, were set at approximately the corners of a square, diagonals of which, from corner to corner would run north-east and south-west and North-west and south-east. In some houses other heavy posts were set in line midway between the corners, - sometimes as many as four additional. Occasionally there was one or more set irregularly probably to strengthen weak places in the logs supporting the roof.

At somewhat irregular intervals around the sides of the pit, were smaller posts, four to six inches in diameter, usually thirty inches apart. These posts were set so as to form a slightly rounded corner for the house, the one to four posts at the corner being larger than those along the sides.

The evidences of posts and their locations were the carbonized pieces of the part smothered by the falling in of the earth-covered roof, just above the house floor, and the post holes or moulds in which they had been set to a depth of twelve to twenty inches. These moulds were filled in part with loose earth consisting in part of the entirely decayed wood, mixed with infiltrated loess containing bits of charcoal.



The felling of these posts is believed to have been in part accomplished by a small fire around the tree at the surface of the ground and that as a result charred wood adhered to the butts of the posts and that this charcoal persisted after the rest of the wood of the post had entirely decayed.

Earth lodges built by the Pawnee in historic or proto-historic times had forks or crotches at their tops in which logs to support the roof were laid horizontally. On these, sloping from the outside up to the center, slender willow or other sapling trees were laid and on and in them smaller sprouts and prairie grass was laid or woven. (See pages 13, 14 and 15 following)

The sides of the lodges in Iowa are believed to have been made in the same manner.

After the framework and thach was completed, with an ell or porch over the entrance, the earth thrown out of the pit was heaped or banked against the sides and over the roof, except a small smoke hole in the center, to a depth of around a foot, completing the structure.

But the house grew old and unsafe to live in and was abandoned, or perhaps the occupants were driven out by enemies. Invariably they were set on fire and the combustible frame and other material inside consumed except pieces of the logs and smaller wood, smothered and carbonized by the earth sides and roof that fell in on them when their support was gone. Usually the fire made a pretty clean sweep, leaving only fine charcoal sparsely and unevenly spread over the original house floor.

In the exact center is always a thick bed, four to six inches thick, of ashes, under which was an equal thickness of earth burned very red. This was the communal fireplace.

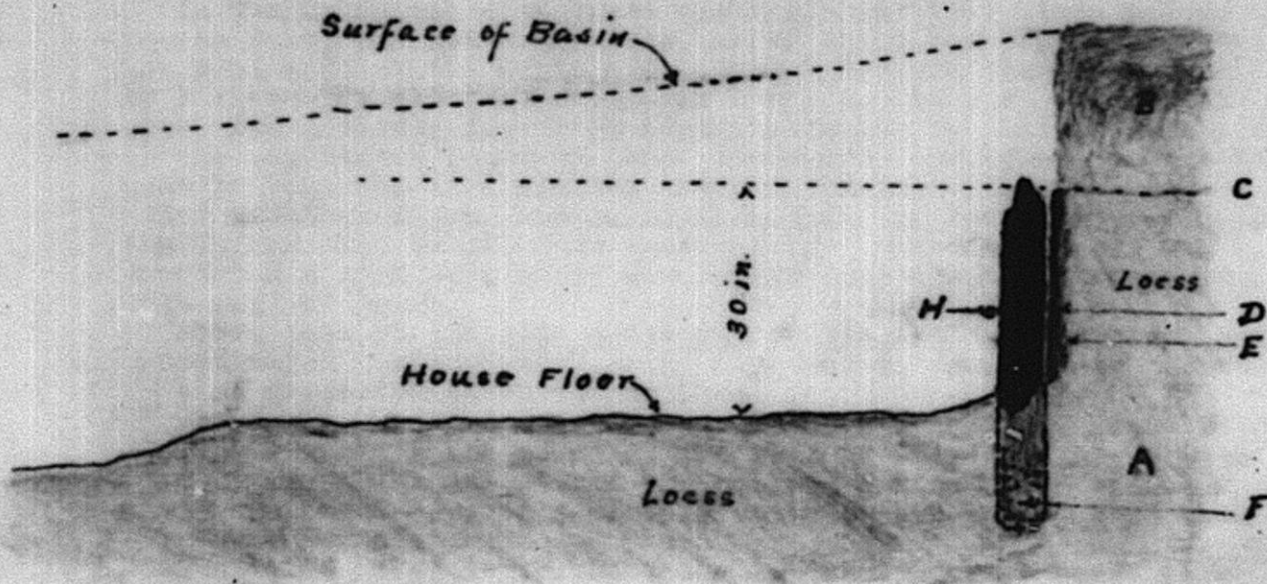
On most of the house pit walls there were patches of grayish hard clay plaster, three-fourths to one and one-half inches thick, This was never burned red like the loess walls back of it against which it was plastered. In a few of the houses this gray, hard clay, showing abundant impressions of the stems and leaves of the "turkey foot" prairie grass, (Anropogon) - wattle and daub - was found scattered thickly over parts of the floor, indicating that it had been used also on the roof.

The use of this clay plaster, but without an admixture of grass, was shown best on the pit walls of H.S.X-15, the Henry Lohse site, still covering the walls for a height of twenty-four inches entirely around. The pit walls of H.S.X., the McManigal site, were also about 50% covered to the same height. Other houses showed only a trace of this coat of wall plaster.

In H.S.X-15, post moulds with bits of charcoal were around thirty inches apart. Probably all were found. (See house plan of H.S.X-15) Above twenty-four of the fifty-eight were carbonized pieces of the posts, twelve to twenty-four inches long, - an unusual number.

**Cross Section of a part of House Site X-15**

The diagram below, drawn to a scale of one-half inch to the foot, will show what the excavation of this site showed.



- A - Original Loess.
- B - Wind Blown Deposit since House was Built.
- C - Natural Surface when House was Built.
- D.- Clay Plaster on Side of Original Pit.
- E - Burned Clay (Loess) back of Plaster.
- F - Post Mold or Hole.
- H - Remnant of Post changed to Charcoal. (Carbonised)

Scale, Vertical and Horizontal, - One-half inch = One Foot.



Around the entire house, except the entrance, was a continuous belt of the plaster, one to one and one-half inches thick, extending from the floor twenty-four inches vertically.

When the posts had been set close up against the pit wall as dug, the plaster coat curved into it. When the post set out from the pit wall the plaster did not curve. The top of the belt was level all around, sometimes spreading out over what was then the natural surface.

Above this plaster belt was a darker colored clay, eighteen to twenty-four inches thick, to the present surface.

In the McKanigal site there was a similar belt, twenty-four inches wide, but not continuous, above which, on the north, west, and west side of the south sides, which had not been disturbed by work on the old road which ran close to the east side of the site, was a twenty-four inch deposit similar to that in H.S.I-15.

The conditions found in these two sites, confirmed to some extent by remnants of a similar twenty-four inch plastered wall found in other sites, appear to show that the house pit, as originally dug, was twenty-four inches deep. When the house was completed a coat of plaster was spread over the twenty-four inch high wall of loess.

Above this on the side posts was wattle and daub, against and around which, through the years, eighteen to twenty-four inches of wind deposited earth accumulated.

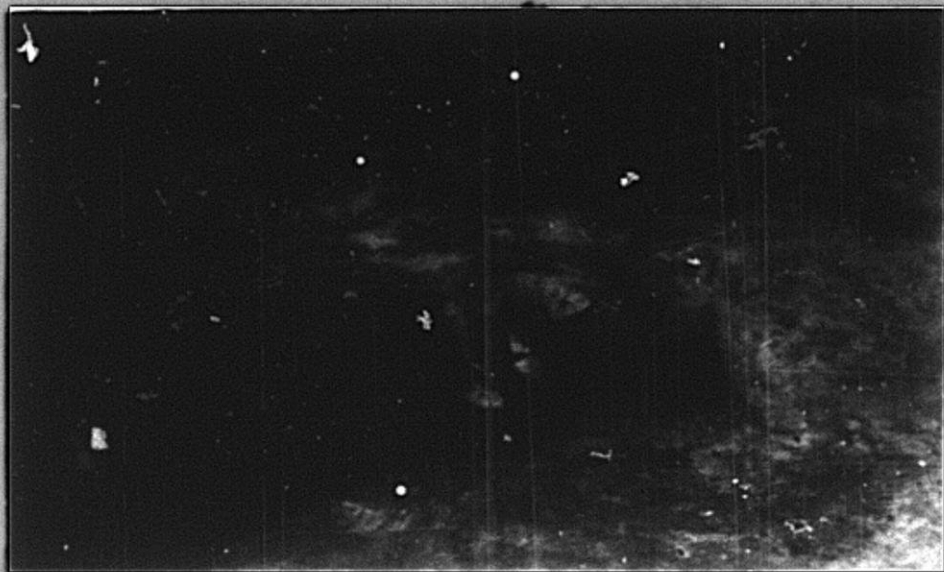
The earth thrown out of the pit apparently was all used in banking the sides and covering the roof as there was but little sign of an embankment around the surface basin. The banked sides and earth-covered roof apparently always fell inward when the house burned.

Scattered irregularly about the interior of each house were from one to as many as thirteen storage-refuse pits in the floor, twenty-four to forty inches in diameter and twelve to forty-two inches deep. None of these were nearer to the fireplace than six feet.

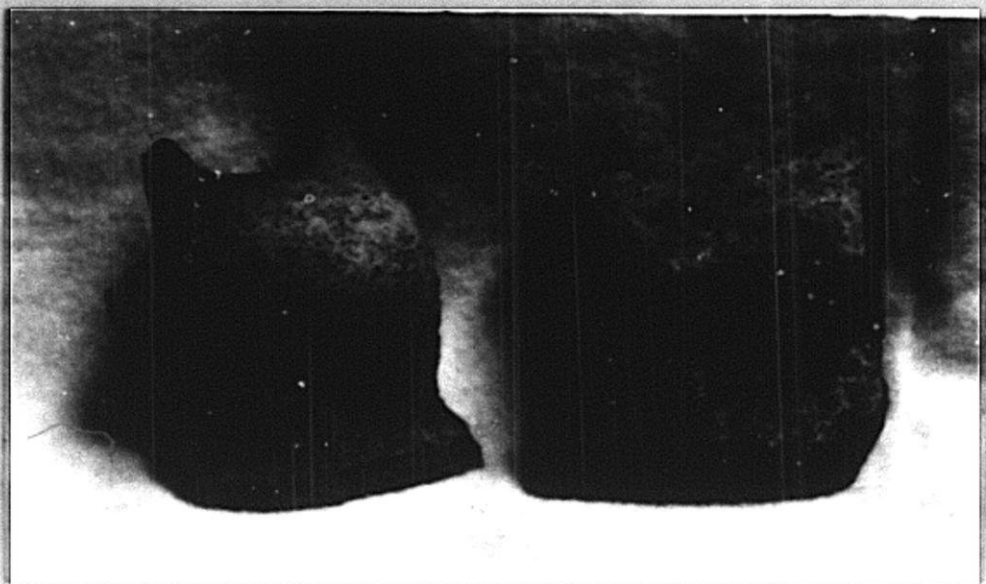
Other parties engaged in excavation work in Nebraska and the Dakotas have found numbers of these pits outside the houses.

As the owners of the land on which we worked invariably objected to the necessary extensive trenching or digging to determine whether these outside pits were accessory to the Mills county, or not, we were unable to settle the question. (We failed to get permission to excavate several promising sites because of the owners' objection to having their land dug up.)

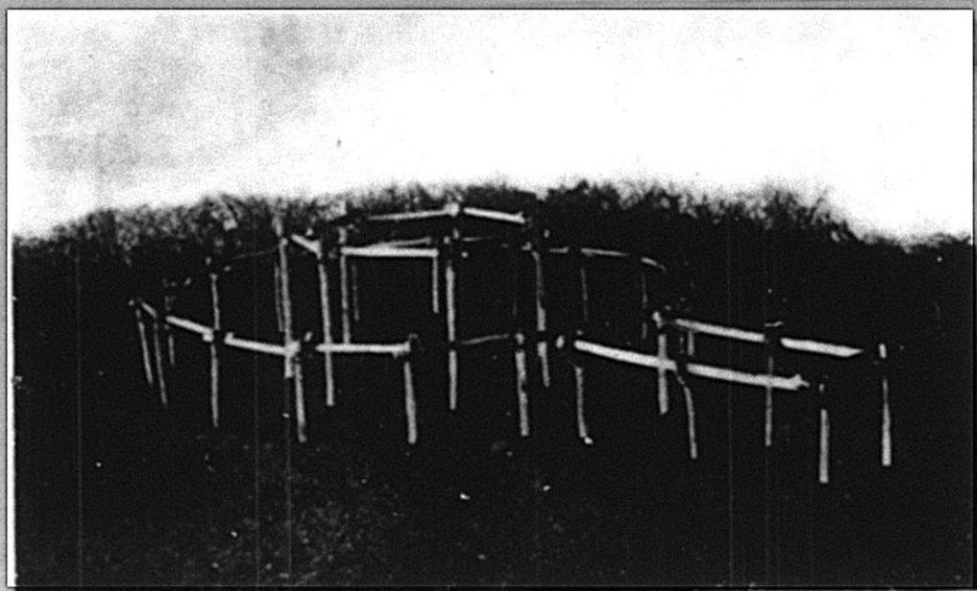




Pieces of almost Complete Large Pot, in situ, Inverted  
on Floor in South-west Part of H.S.X-10.  
Looking North-west.



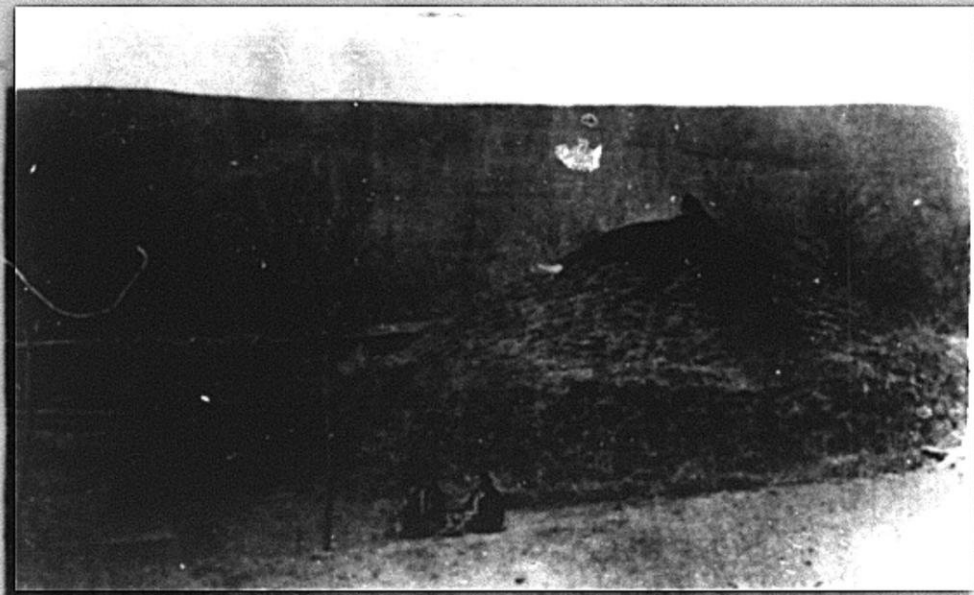
Handles with Horns or Ears attached to Vertical or Re-  
curved Rims.  
Right from Entrance Floor H.S.X-II  
Left from Storage-refuse Pit # 3, H.S.X-II



**Main Frame of Omaha Earth Lodge. Note Shallow House Pit.**



**Complete Frame of Omaha Earth Lodge, ready for Covering with Earth.**



Complete Omaha Earth Lodge. Covered with Sods. Note  
Entrance at Left.





Omaha Village. (About 1860) Note Earth Lodges at Left and Right Margins of Picture.

## POTTERY

In part of the storage-refuse pits and on the floors of the houses an abundance of pottery sherds were found, especially in the pits.

The sherds on the floors were not scattered uniformly over them but here and there, irregularly, there would be foci where occasionally there would be found enough of one pot to make a good restoration, but usually there would only be something like a cache of pieces of several vessels.

Such assemblages of sherds were often more or less embedded in the floor. Occasionally one would lie in a heap on, not in, the floor, like one found in the south-west part of House site X-10.

Much the same conditions prevailed as to pottery locations in the pits. In pits where there were inclusions there would be many single pieces of body, rim or handle scattered indiscriminately through the filled in earth and ashes at any depth or in any part of the pit and generally one or more foci in any part.

With very rare exceptions every vessel was quite certainly broken before throwing it in a pit or burying it in the floor.

We found but two very small whole ones - toy pots.

It is possible that burials were made in the floor in accordance with some superstition, instead of throwing them in a refuse pit.

Earth Lodge pottery was of two general types. One with eglared rims, the other having them vertical or recurved outwards.

The bodies of both types were approximately globular with rounded pot-like bottoms, and in part having quite sharp angled shoulders.

The rim diameter was large, probably averaging approximately two-thirds of that of the body, with rare exceptions when it might not equal one-third. (See photograph on page 29)

Some vessels probably had a diameter of twelve inches - possibly more - but the average was quite likely less than ten inches.

The shaping seems to have been done by holding one hand inside and with the other beating it with a cord wrapped paddle, or, with some of the best ware, rubbing it very smooth without using a paddle. On vessels shaped with a paddle the cord marks were usually in part, or wholly obliterated by smoothing before the firing was done.

Except in very rare cases no effort was made to decorate the body with stamped, trailed or incised figures or patterns. Impressions made by the paddle evidently were not considered decorative.

A few pieces of a hard, smooth, light colored ware, <sup>were</sup> tempered with very fine sand. All earth lodge pottery was grit tempered, the tempering material ranging all the way from sand so fine that it is difficult to see it without using a magnifying glass, up to grains of crushed granite one-tenth of an inch in diameter.

This latter ware was easily crushed while the former had good tensile strength.



Collared rims are found, from crudely made examples, hardly recognizable as such, to those showing very fine workmanship.

Seventeen per cent of this type found by us, characterized as plain, are without ornament or decoration of any kind. The photograph at the bottom of page 36 is of this pattern.

The remaining eighty-three per cent are ornamented with indentations on the shoulder of the collar with the finger end or with some implement, which may be either vertical or diagonal and of varying size or depth. (See photograph on page 25, top of page 24, and both photographs on page 27.)

Rarely the face of the collar is ornamented with incised, horizontal, parallel or zig zag lines. (The upper photograph on page 27 is of this pattern.)

Of the four hundred and twenty-three vertical rim sherds found by us, seventy-four per cent were plain, the remaining twenty-six per cent had the outer lip of the rim indented like the shoulders of the collared rims, only the indentations were smaller.

Of the recurved rim sherds found, seventeen per cent had indentations on the outer lip of the rim, the remaining eighty-three per cent were plain.

Three plain collared rims had strap (jug) handles attached to the shoulder of the collar and top of shoulder of body. Eleven collared rim sherds with indented shoulders also had similar handles.

Twenty-nine of the plain vertical sherds of the 423 had strap handles attached to the top of the rim and the shoulder of the body. These handles rose flaring, and round on the outside, usually to well above the rim. Expanding sub-cylindrical handles were the rule. Only one with a vertical groove was found.

The lower ends of many were certainly riveted to the body shoulder.

Of vertical indented rims six of the 146 had strap handles attached. Fourteen of the seventy-three recurved rims also had strap handles. (See photo on page 25, upper photo on page 26, and of pot with small neck on page 29)

Eight vertical rims had lugs, - semi-circular - "half moon" - vertical or flaring projections of the rim with drilled or punched vertical holes. There were also vertical thick lugs attached to the outside of recurved rims, through which was drilled or punched a round hole. (See photo on page 21)

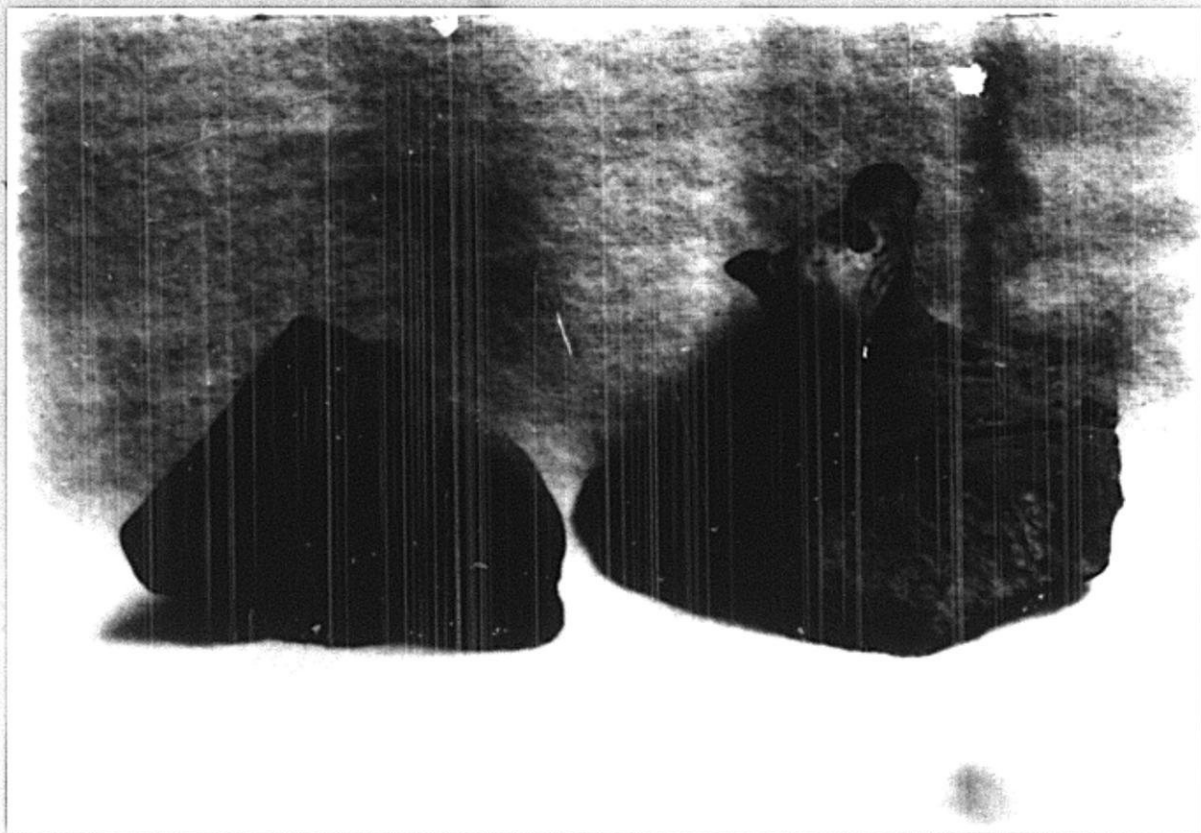
In two instances animal heads, dog, fox or wolf, took the place of plain lugs. (See photos on page 21 and 22)

Six vertical rims were ornamented with incised parallel lines entirely around below the lip.

There were twenty-four strap handles with but little of the attached body or rim, or none at all.

Two handles with horns or ears are shown in photo on page 15 and 23, and two photos of a recurved rim handle with a slim right arm, hand and fingers running in relief at right angles out from the base, on the shoulder of the bowl, the lower photo showing a similar left arm and hand which appears to have been connected in the same way with the base of handle of a vertical rim.

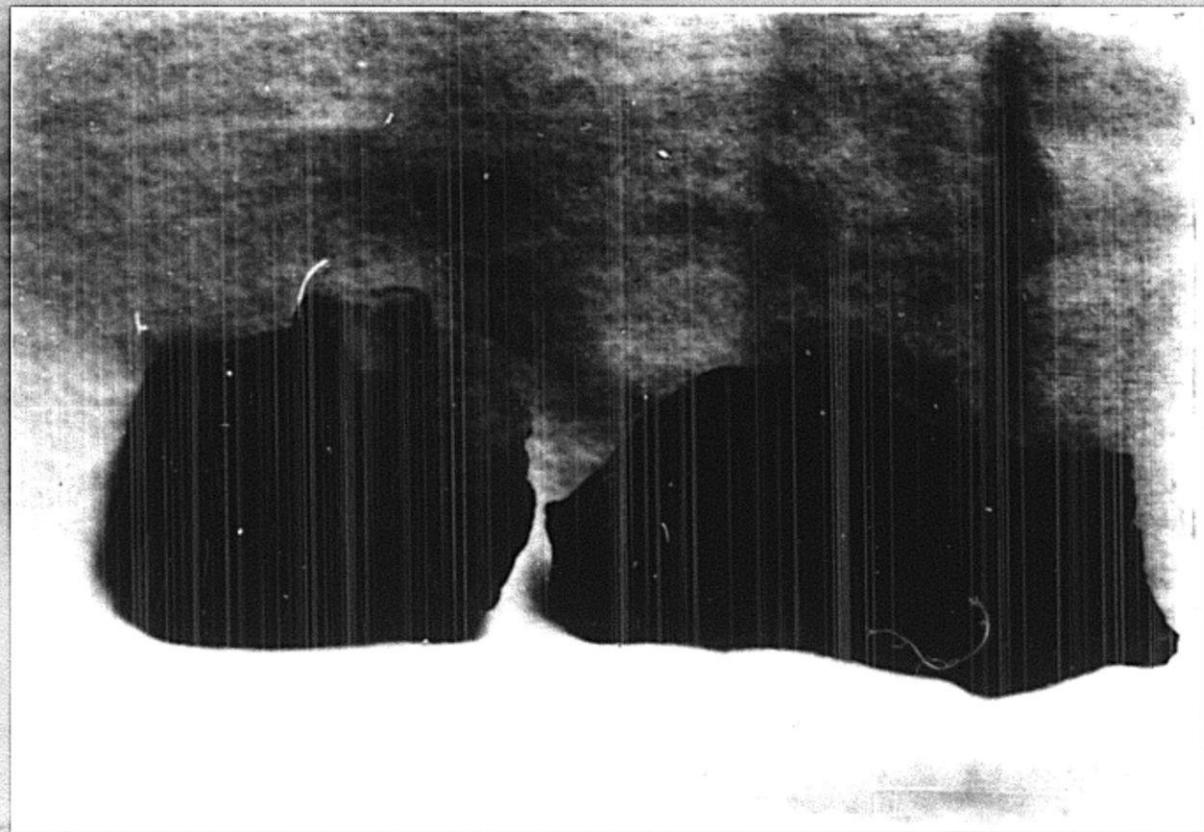
In addition to all the foregoing there was sent in other unusual and unique pieces, and 6000 body sherds, a total of 7248.



**At Right.** Photograph apparently of a Vertical Rim Half Moon Lag terminating in a Canine Head. Note Incised Line below Head. Actual Size. From H.S.X-15

**At Left.** Photograph of Thick, Circular Lag with Horizontal Hole through the Center, Attached Vertically to Vertical Rim. Actual Size. From H.S.X-II

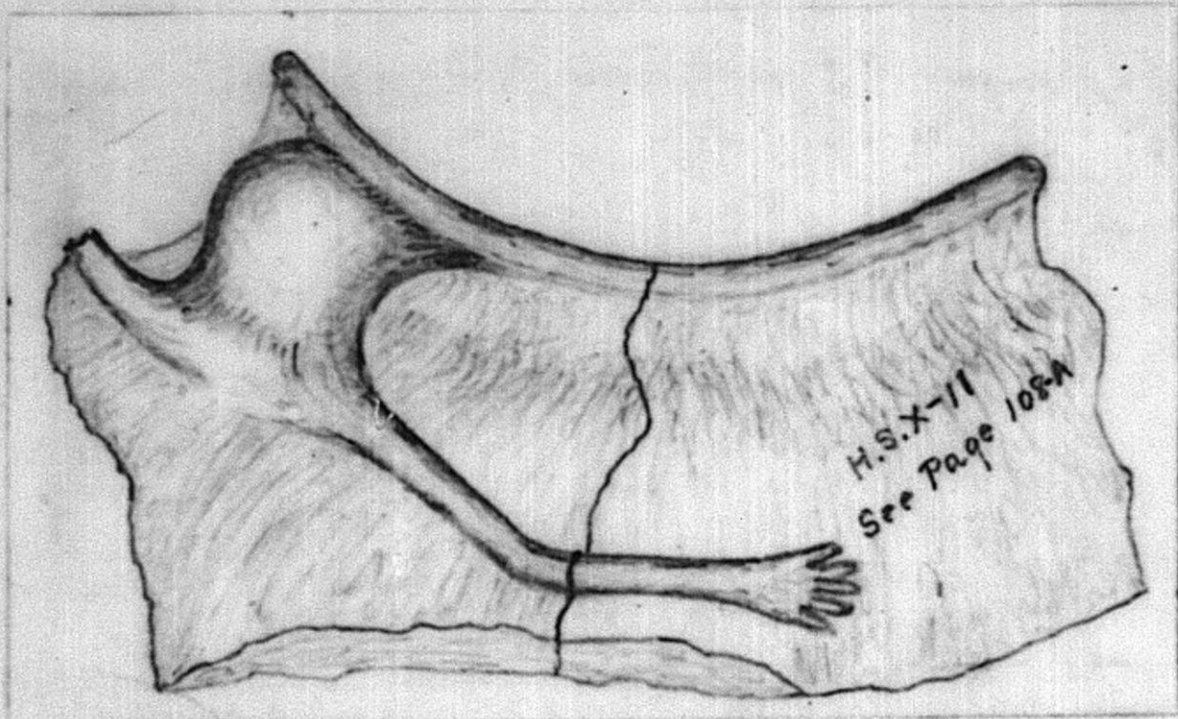




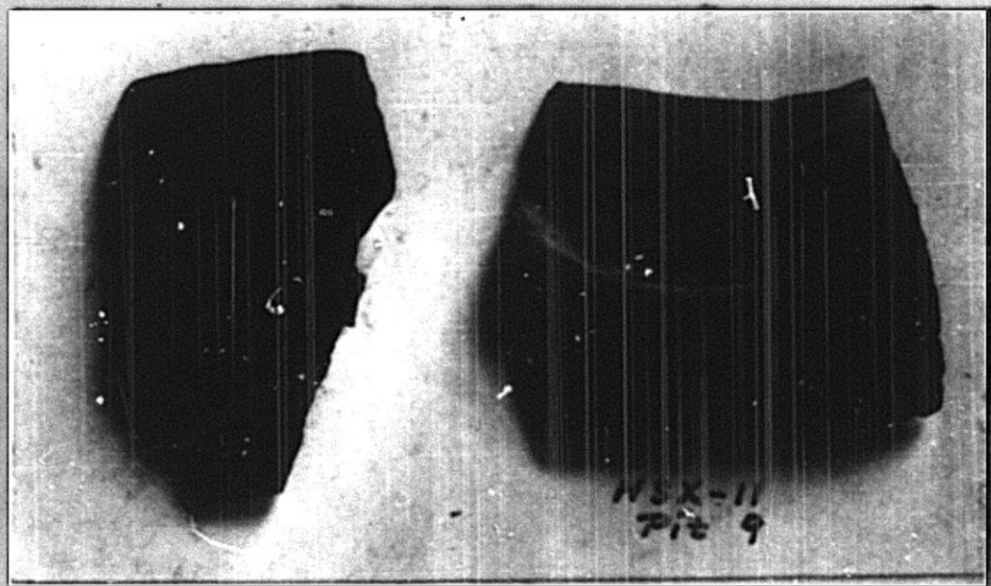
**At Right. Half Moon Flaring Lug, Extension of Recurved,  
Indented Rim. Actual Size. H.S.X-10.**

**At Left. Vertical Rim with Attached Canine Head Lug.  
Actual Size. H.S.X-16.**

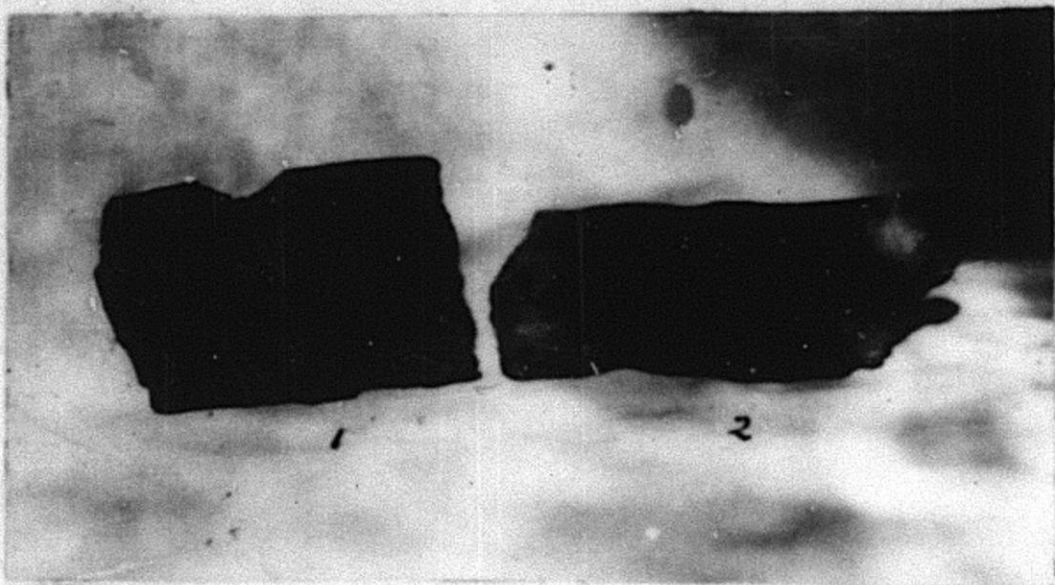




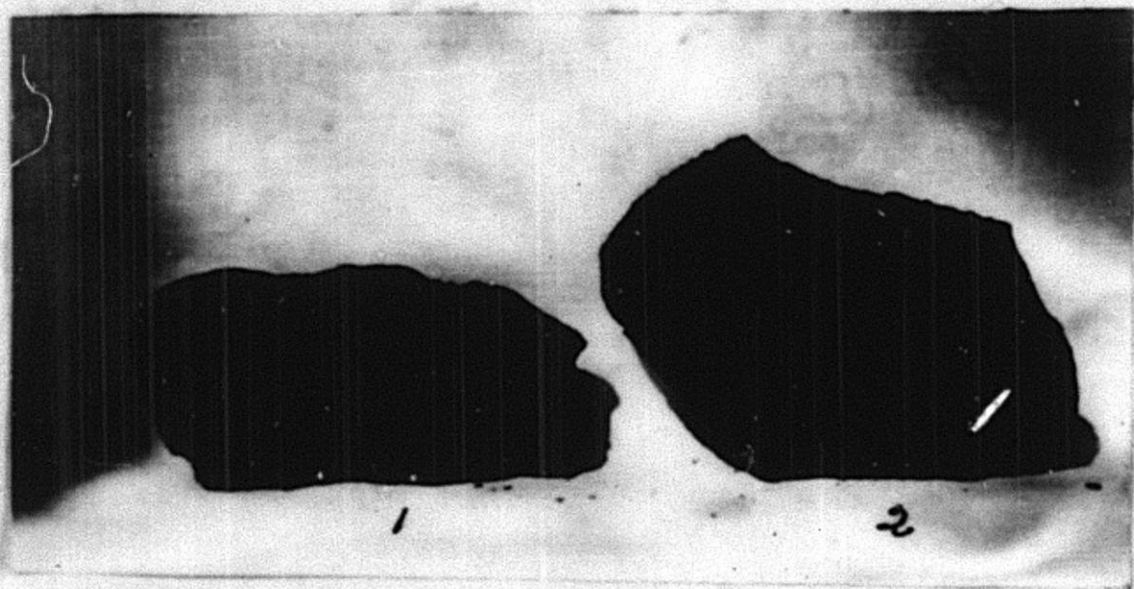
Photograph of recurved rim Handle with a slim right arm, hand, and fingers, laid on the body shoulder, in relief decoration, connected with and at right angles to the base of the handle.



Photograph of a similar left arm and hand, in relief decoration, which appears to have been connected with the base of a handle attached to a vertical rim. Actual size.

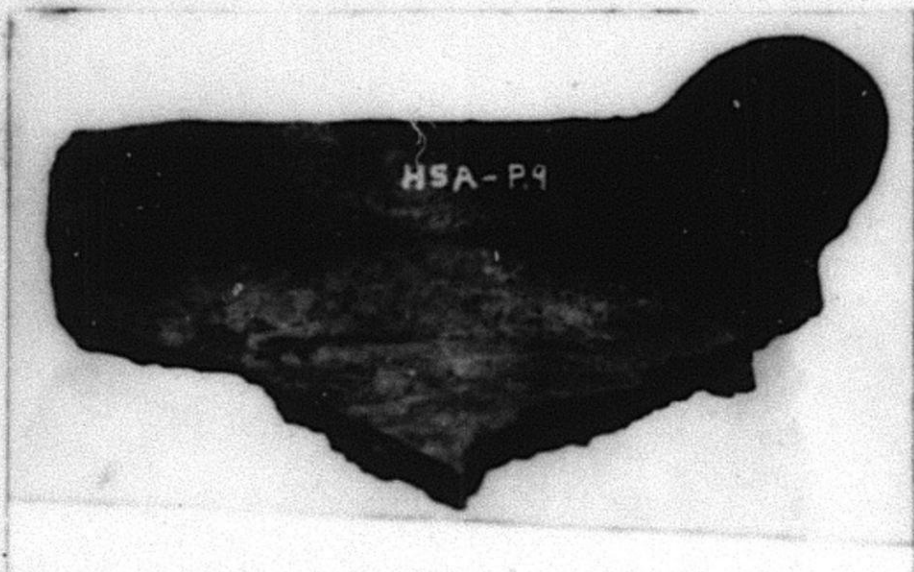


Number 1. Fragment of Collared Rim with Incised Shoulder.  
 In Paul Rowe collection. 1/2 actual size.  
 Number 2. Fragment of Collared Rim. Shoulder indented with  
 Finger End, From floor of H.S.X. 1/2 actual size.

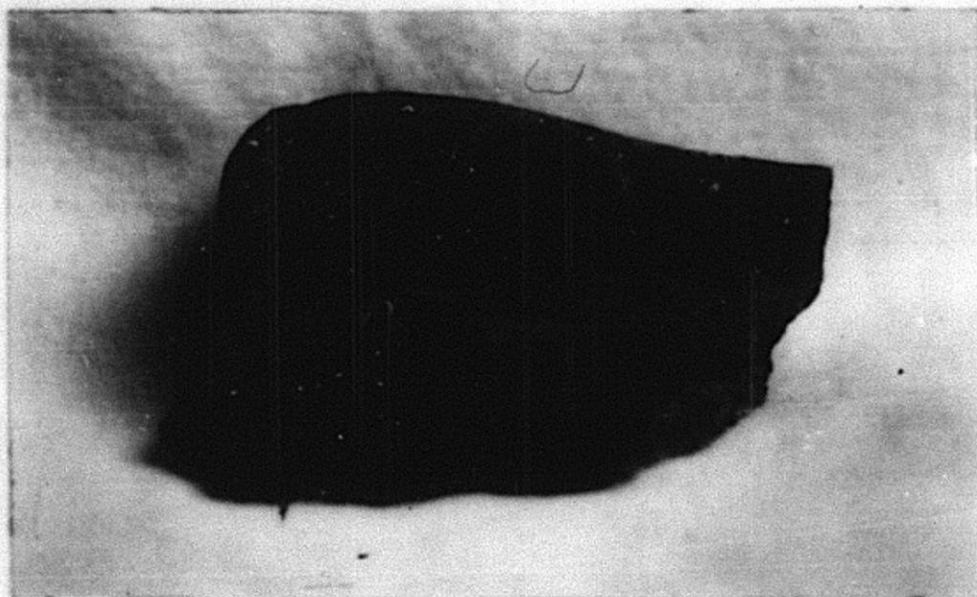


Number 1. Wattle from H.S.X-10. Quantities of this material  
 were found in some of the houses. 1/2 actual size.  
 Number 2. Body Sherd with twisted cord impressions. From H.S.X.  
 1/2 actual size.

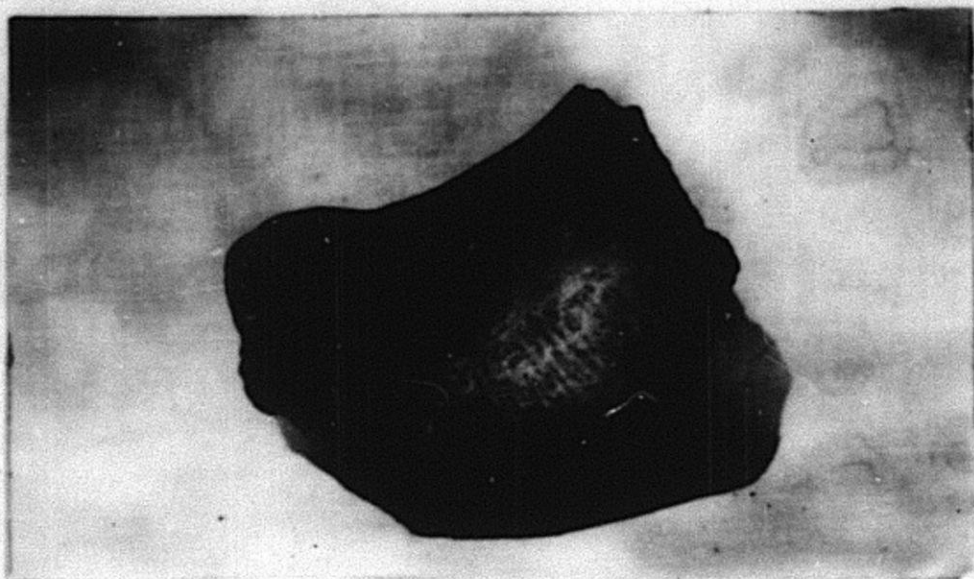




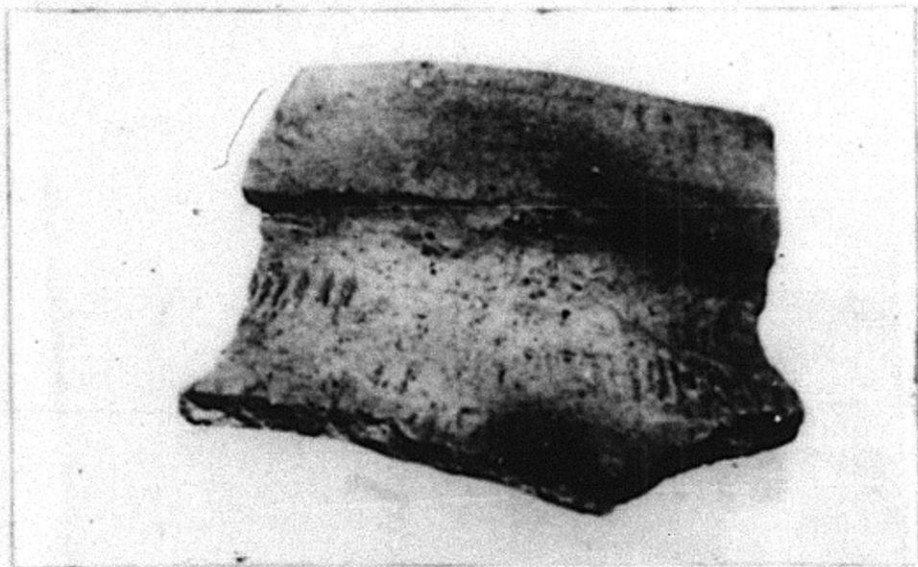
Rim Sherd with Obscure Collar. H.S.A Pottery focus 9.  
Actual Size.



Vertical Rim Sherd with attached Handle fro Floor of House  
Site A. Actual size

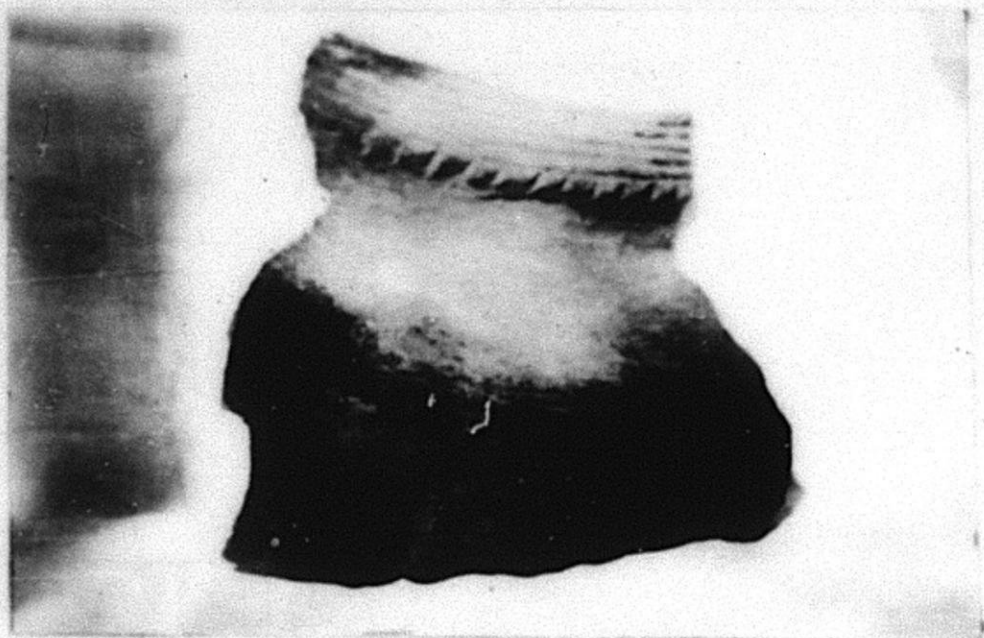


Vertical Rim with Handle and indented outer Lip. From H.S.X  
Actual Size.

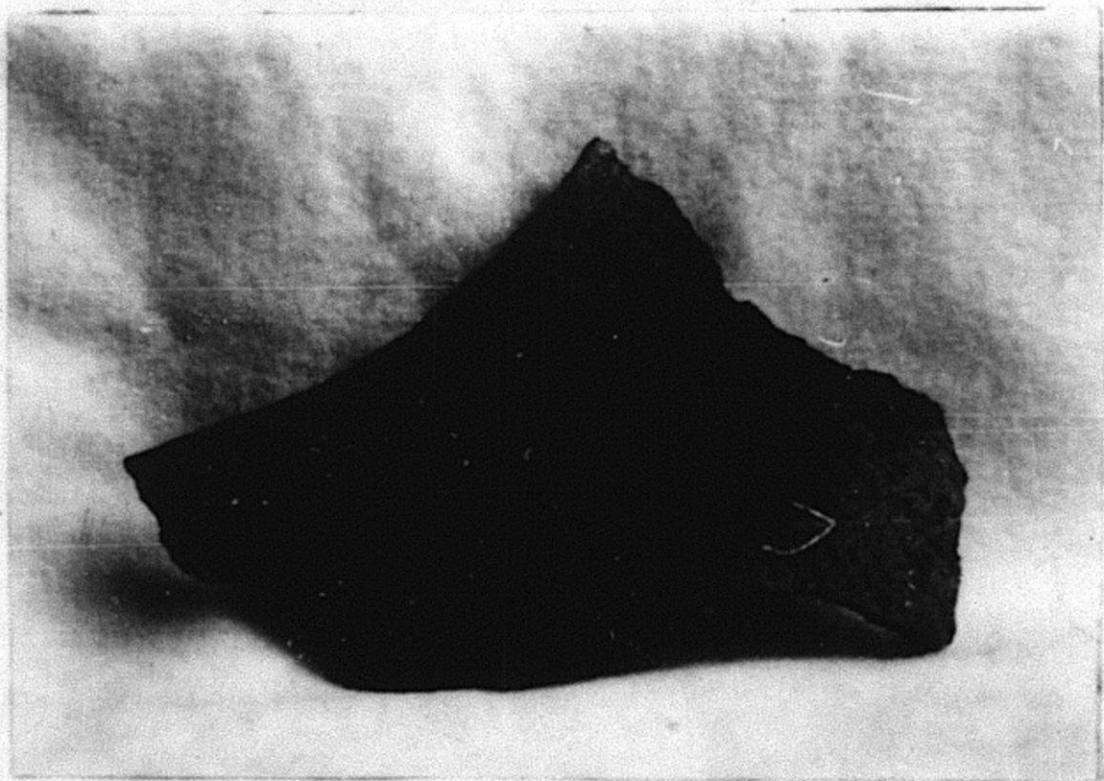


Rim Sherd with Plain Collar. From H.S.X.

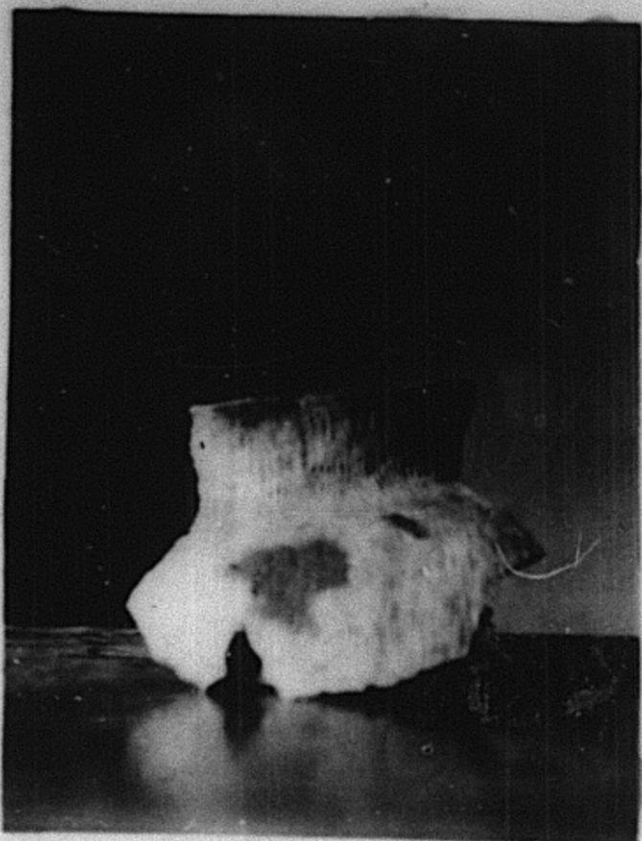




Collared Rim Sherd with Indented Shoulder and Incised Parallel  
Horizontal Lines on Face of Collar. Large Portion of Body attached.  
H.S.X-10 About 1/2 actual size.

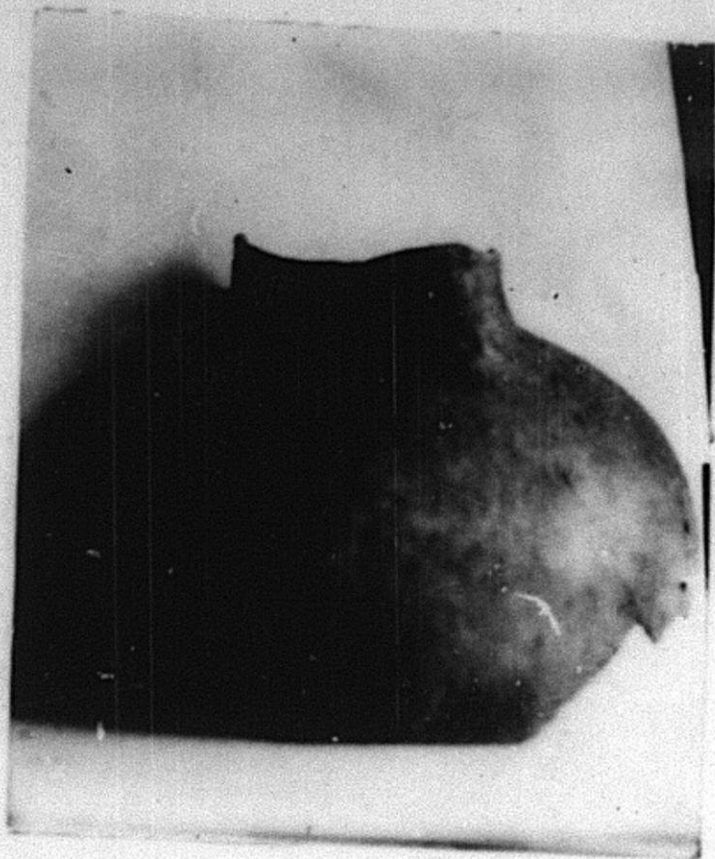


Collared Rim Sherd with part of Body attached. From house  
floor of H.S.G About 1/2 actual size.

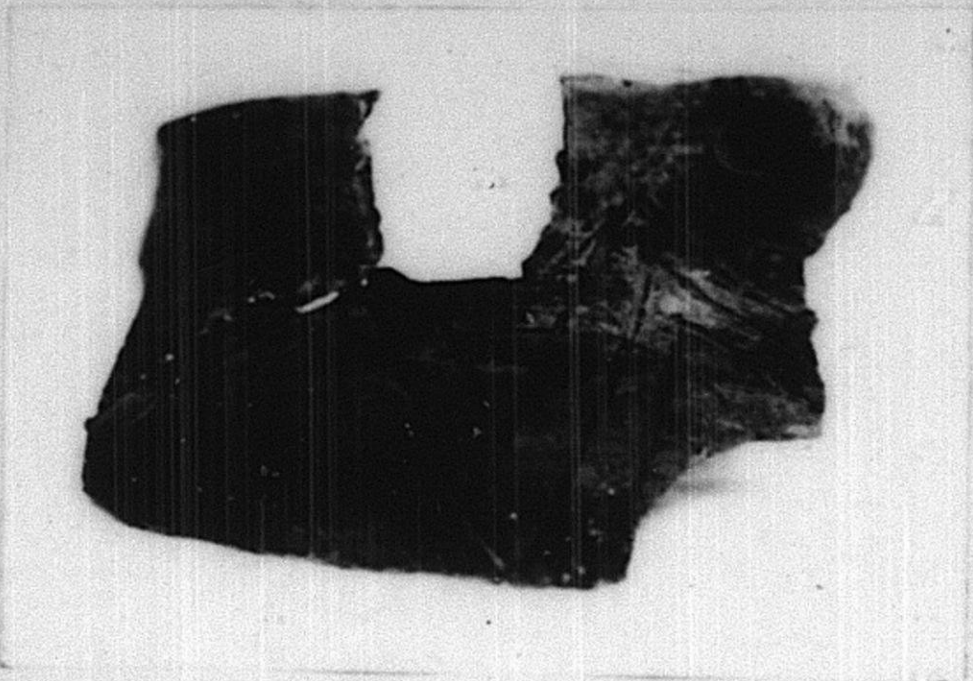


Vertical Rim Sherd from house floor of H.S.O., S 45 W, 7.5 ft.  
from its center. About  $\frac{3}{5}$  actual size.  
Note unusual height of neck and profuse twisted cord impressions on both body and neck





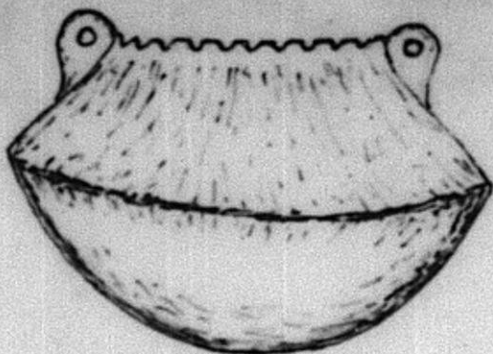
Vertical Rim with attached Handle and large portion of Body,  
from H.S.X-II. About 3/5 actual size. Not quite in focus.



Vertical plain Rim with attached Handle with horizontal drilled or punched hole.  
Three incised parallel lines form a zig zag decoration pattern on body above shoulder, extending up on neck.  
From H.S.F., S 80 E, 12 ft. from center, on floor.  
Actual size.



POTTERY  
CROSS SECTIONS.



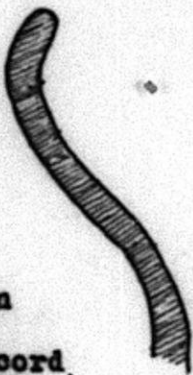
Whole Pot from Pit # 3, H.S.G.  
2.8 in. diam. at shoulder,  
1.4 in. diam. of rim, .2 in.  
high.  
1.6 in. deep.

Rim on the outside has inden-  
tations .15 in. long and .1 in.  
wide at every .2 in.  
Handles on opposite sides .2 in.  
wide and .4 in. long, standing  
out from bowl .3 in., are pierc-  
ed by a horizontal hole .1 in.

in diameter. Shoulder midway between lip and bottom is angular  
(almost a right angle) instead of rounding. No body decoration.



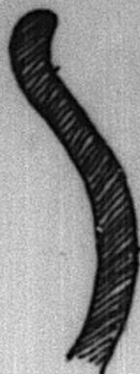
Plain vertical rim sherd showing slight  
outward curve. From H.S.G.



Recurved Rim from Refuse Pit  
# 9, H.S.I-II  
Probable diameter of Bowl,  
about 6 in.

Diameter of Lip, 2.9 in.  
Small grit tempered sherd with plain  
recurved neck approximately .5 in.  
high. Body with vertical twisted cord  
impressions somewhat smoothed out and  
incrusted with soot.

## CROSS SECTIONS of POTTERY from H.S.O.

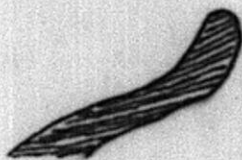


Small Shell Tempered Rim Sherd

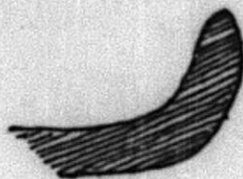
Plain Recurved Rim Sherd



Plain Vertical Rim Sherd.



Plain Vertical Rim Sherd.



Plain Vertical Rim Sherd.

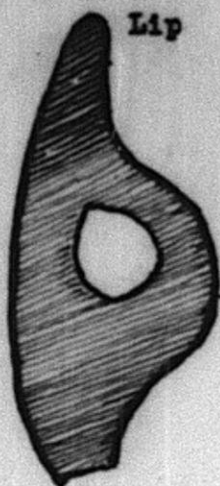
Recurved Rim Sherd with Handle.



All above Actual Size.



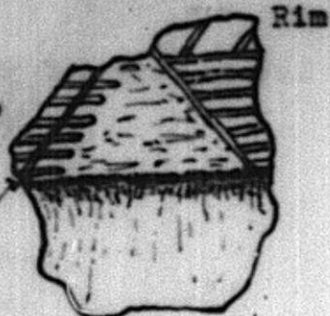
Cross Section of Rims from House Site O.



Lip

Collared Rim with Handle.

Incised Design on the Face of Collar.  
Shoulder



Lip

Collared Rim with Handle.



Lip

Collared Rim with Handle.



Lip

Plain Rim with Indentations on Outer Margin of Lip.

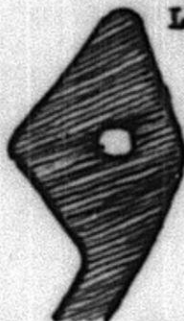
Collared Rim with Handle



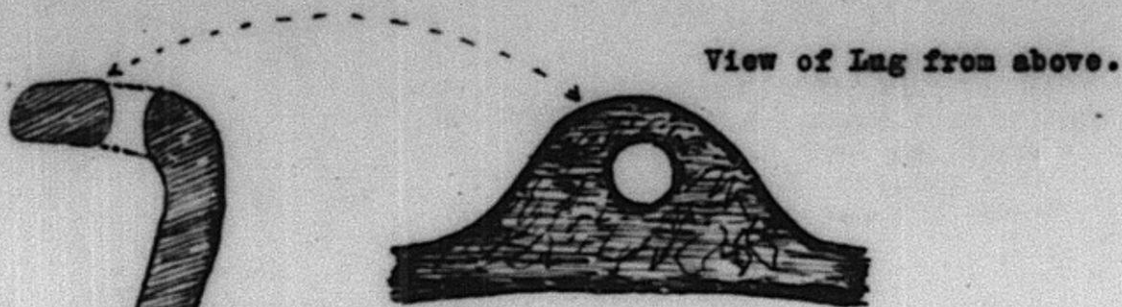
Lip

Collared Rim with indentations on Shoulder of Collar

Indentation



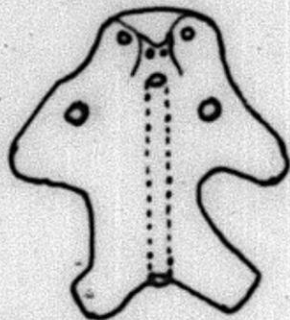
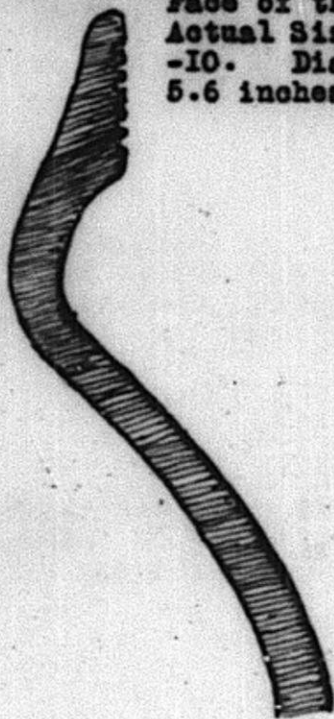
Lip



View of Lug from above.

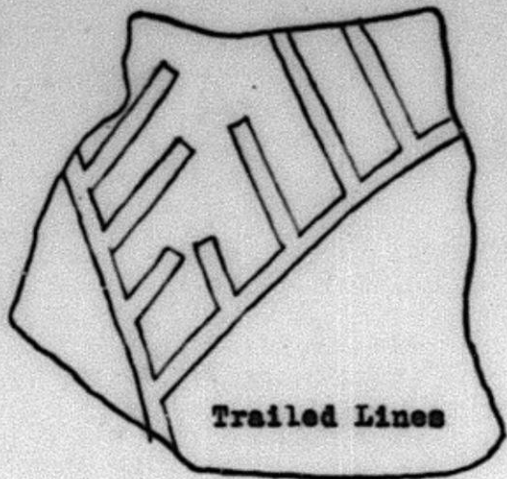
Cross section of Recurved Rim with Horizontal, "Half Moon", Lug with vertical .4 inch hole  
From Refuse-storage Pit # 5, H.S.X-10.

Cross Section of Collared Rim with Parallel, Horizontal lines on the Face of the Collar. Actual Size. From H.S.X-10. Diameter of neck, 5.6 inches.



Outline - front - view of Clay Effigy, actual size. Hole representing mouth connects with anal aperture. Eyes and nostrils represented by small, round, deep punctures. Remaining two holes entirely through figure, insertion of string. From house floor in H.S.X-16. Rainey.

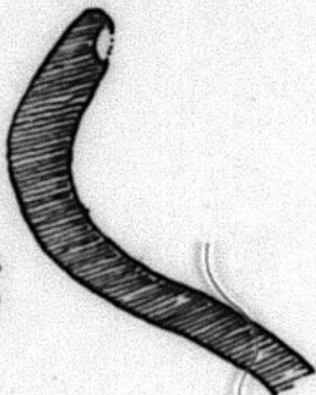




Shell tempered sherd from H.S.O.  
Actual Size. Trailed Lines  
forming part of Pattern made  
with Flint "Tooling Implement"

Trailed Lines

Recurved Rim Sherd, decorated with  
Finger tip impressions diagonally across  
sloping outside margin of lip, .35 in.  
apart. Attached part of body with cord  
wrapped paddle impressions, nearly oblit-  
erated by narrow smoothing tool of flint.  
From H.S.K. Actual Size.

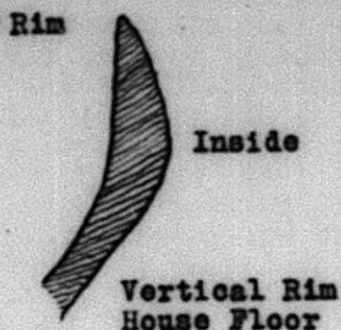


Rim Sherd with attached Handle. Rim extends  
.4 inches above handle through which a round hole  
has been punched. A few other of this type of han-  
dle have been found. From H.S.F. Actual Size.

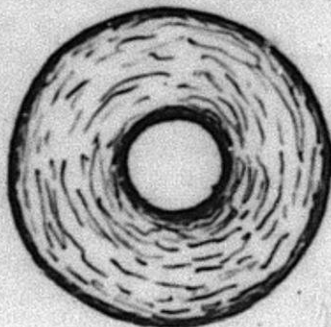
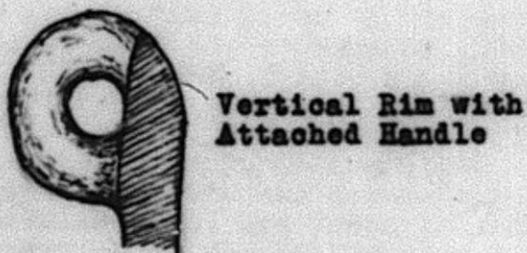
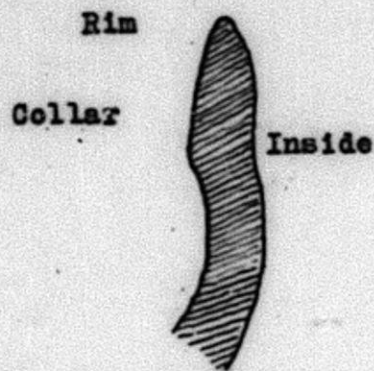
Plain Rim Sherd with outward flare. .15 in.  
holes, .5 in. below rim and .8 in. apart all  
the way round the rim. H.S.F. Actual size.



.15 in.  
hole



Cross Sections of Rim Sherds  
from House Floor of House Site A  
Actual Size.



A circular piece of fine pottery, 1.7 inches in diameter and .2 inches thick, slightly dished in the center, through which is a round hole, .5 inch in diameter. This is the outer disk of a spool-shaped ear ornament. The inner side shows where the cylindrical part which connected it, through the pierced ear, with the inside disk, was broken off. Actual Size. From House Site X-15.



## FLINTS.

Compared with the abundant broken pottery found in the earth lodge excavations that we made, there was a disappointing scarcity of flaked or chipped flints.

A very few thin, finely wrought, square base triangular arrow points with from one to three small notches on either side, and not so often, one in the base, of the best dark Nehawka flint were recovered. It is quite likely that, because of their small size, not often exceeding an inch and one-half in length, and dark color, many were missed by the diggers.

Because of the large amount of extra work that would be required, it was decided that the results likely to be obtained would not justify the additional expenditure necessary to screen the earth where points might be found.

This triangular notched projectile point is believed to be a typical product of the people of the earth lodges.

Then there was another larger triangular point with a square base, without notches, and of an inferior grayish flint, quite as common. (See page 40)

Besides the points of these two types there were others, larger and crudely made of the grayish flint, with rarely one of quartzite or other material, some of the smallest of which might have been used as projectile points, the others as lance points or knives.

Other than the notched triangular arrow points there was not a single fine piece of chipped material. No large knives, spear-heads or ceremonial pieces.

The Nehawka flint, which was the material almost exclusively used by the people of the earth lodges, is of several shades of color, -gray, brown, and the finest, of an almost translucent lead color approaching black. This flint was once supposed to have been obtained across the Missouri river in Nebraska, but nodules of it are found in some of the strata of the "Rye Bin" quarries on the Nishnabotna river north-west of Stennett, in Montgomery county, Iowa.

It is also found sparingly in large nodules in the quarry beside the road at the foot of the bluff at Palsom and just above the bottoms north-east of Bartlett, where large quarries have been opened to obtain crushed rock for road surfacing, all in Mills county.

The geological formation from which it is obtained is the heavy bedded limestone of the Mississippian of the Upper Coal Measures. It may be known by the great numbers of the fossil, *Fusulina cylindrica*, which it always contains. This small fossil is very abundant at some levels in the limestone rock in which the flint nodules are found. We were told of a location north-west of the "Rye Bin" quarry where nodules were much more abundant and rock much broken up by weathering, making their quarrying less difficult.

In H.S.A., H.S.G., and H.S.F., long curved flakes of the finest quality of Nehawka flint, triangular in cross section, were found. (See page 38 for outline and cross section.)

These skillfully struck flakes of dark Nehawka, apparently a product of the earth lodge people are certainly objects of beauty. They were not found north of Keg Creek.

"Snub nose" scrapers were the most common flint artifacts found. Usually they were of the poorer quality, the brown or gray, Nehawka.

There was an abundance of flakes, some of the larger with one or more edges chipped, and others with narrow chisel shaped points, (tooling implements) very evidently used for making the trailed lines that formed decorative figures, the wider ones for smoothing the outside of pottery.

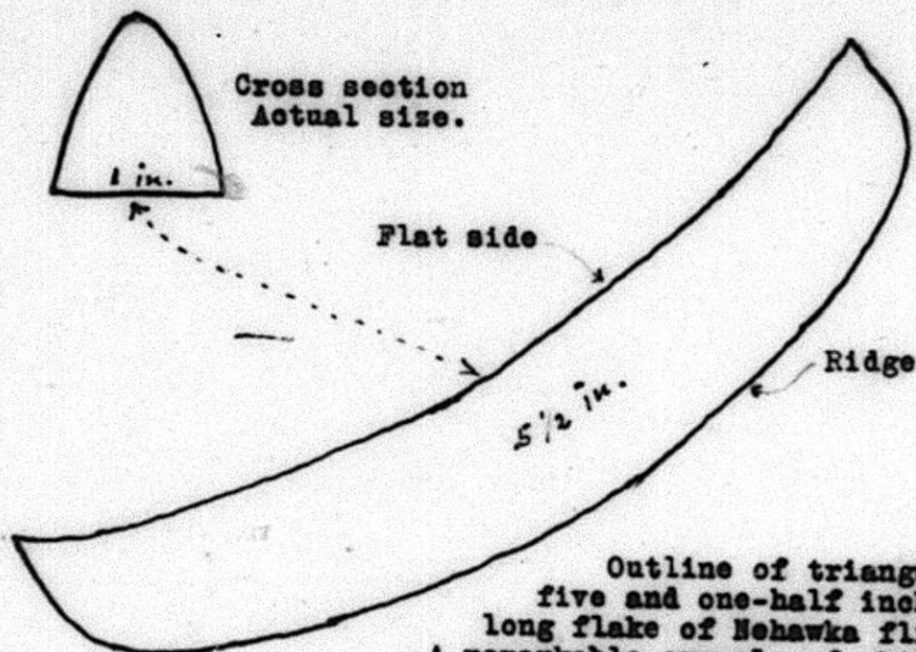
Others chipped to a more pointed end were undoubtedly used for perforating.

Only a few stemmed pieces were found, - all too large for arrow points.

Occasionally there was a chunk, just as it came from the quarry, of the the unworked material.

In lodge H.S.X-10 a flaked triangular piece with a very blunt point and rounded base, of a gray material, 5 X 2.2 X 1 inches, resembling the Acheullean Coup de poing of European culture, was found on the floor.

And in H.S.X-15, two similar but smaller pieces of the same material, 3.2 X 2.0 and 2.7 X 2.4 inches respectively, were found on the floor.



Outline of triangular five and one-half inches long flake of Nehawka flint. A remarkable example of skilled flaking. A number of this type, but not so long, were found in House Sites A, G, and F.

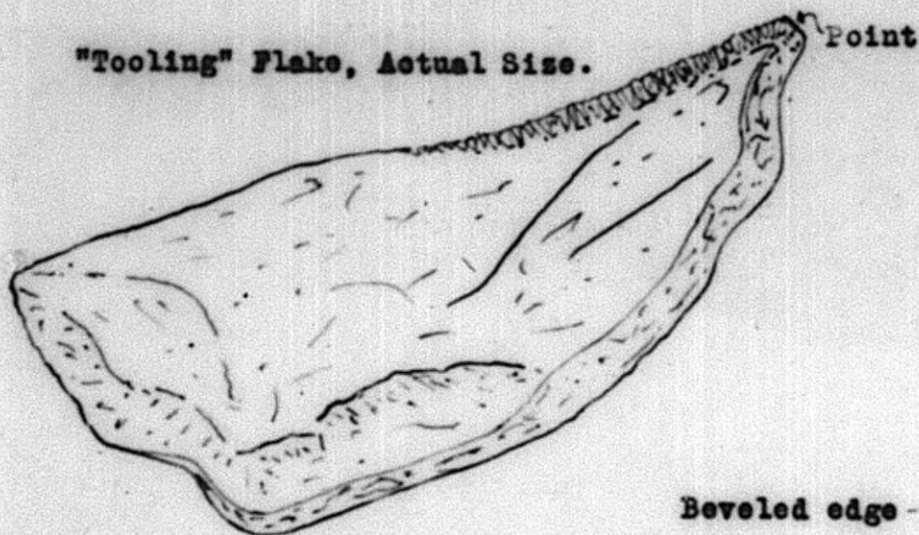




Worked Flints from H.S.X-II, Pit # I. Actual size.  
# 1,- tooling flint.  
# 2, 4 and 5 - scrapers  
# 3,- knife  
# 6,- arrow point

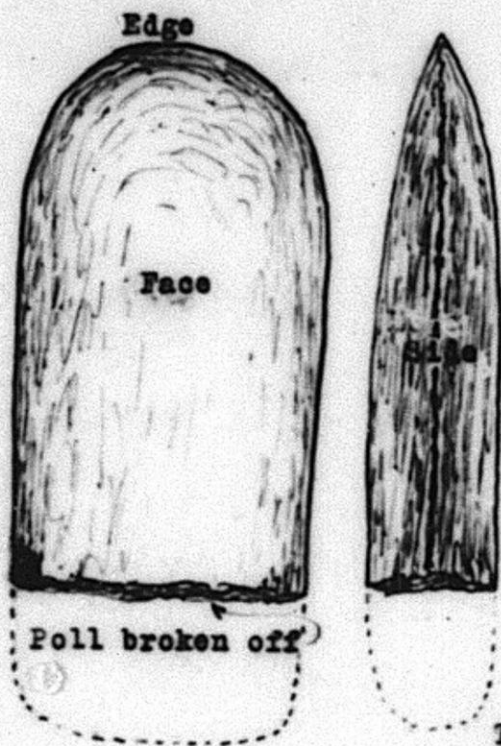
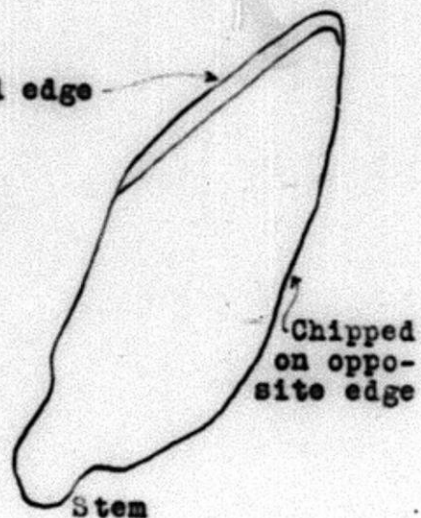
## FLINTS.

"Tooling" Flake, Actual Size.

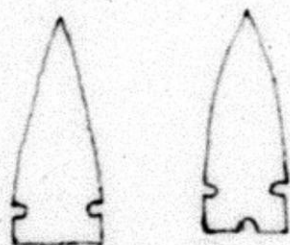


Beveled edge

Stemmed Knife with edge beveled  
to left. Nehawka Flint.  
Actual Size. From H.S.K.

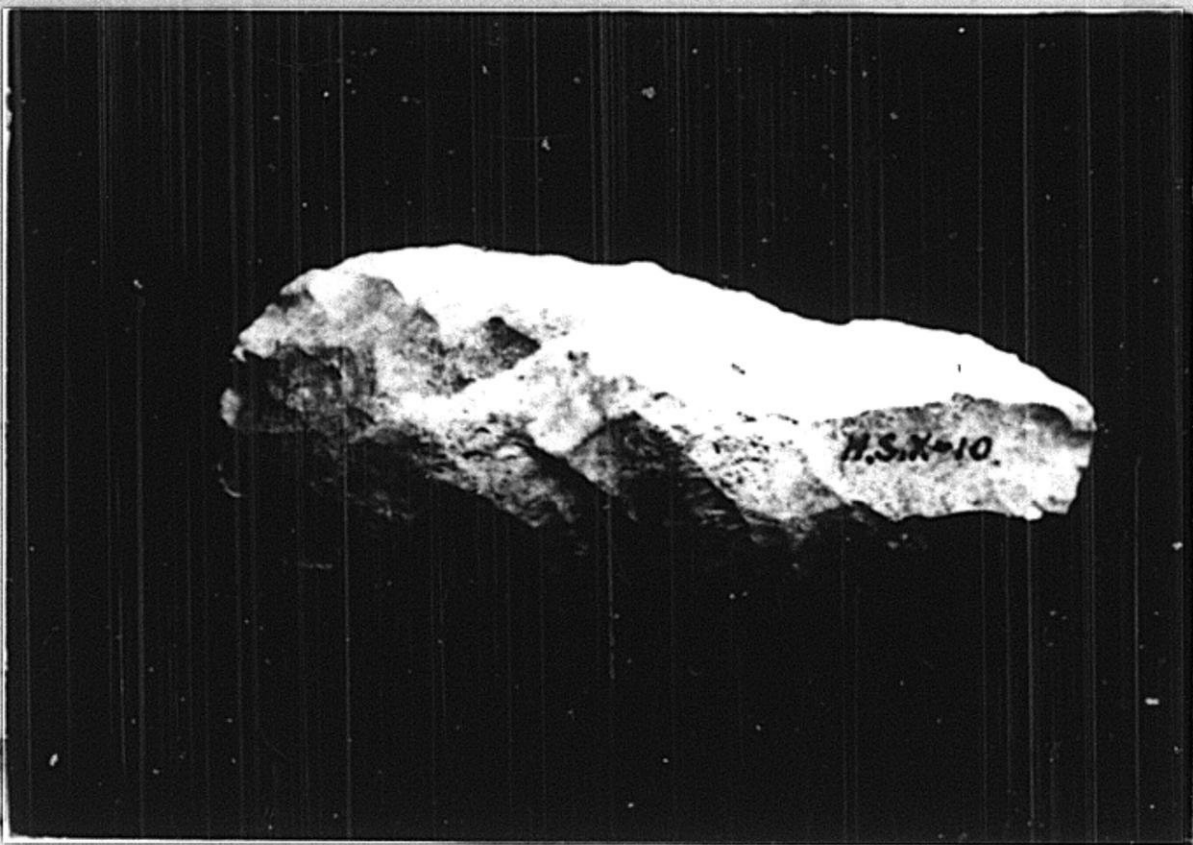


Face and edge of Celt  
with poll broken off.  
3.3 in. long, 1.3 in.  
wide, .1 in. thick.  
From H.S.F.  
Two celts from this  
site.



Tracings of two notched triangular ar-  
row points of dark Nehawka Flint. From  
H.S.F. Actual Size.





Hand Axe of gray flint. Actual size. From H.S.I-10



Two Hand Axes or Celts of gray flint. Actual size.  
From H.S.I-15



### BOUNE IMPLEMENTS - CLAM SHELLS.

An occasional bone awl or piercing implement of the two types shown on page 44, a very large bone bead, a few long bones with the ends cut off, and the ends, and in every house one or more digging implements fashioned from the scapulae of the buffalo or elk, were found.

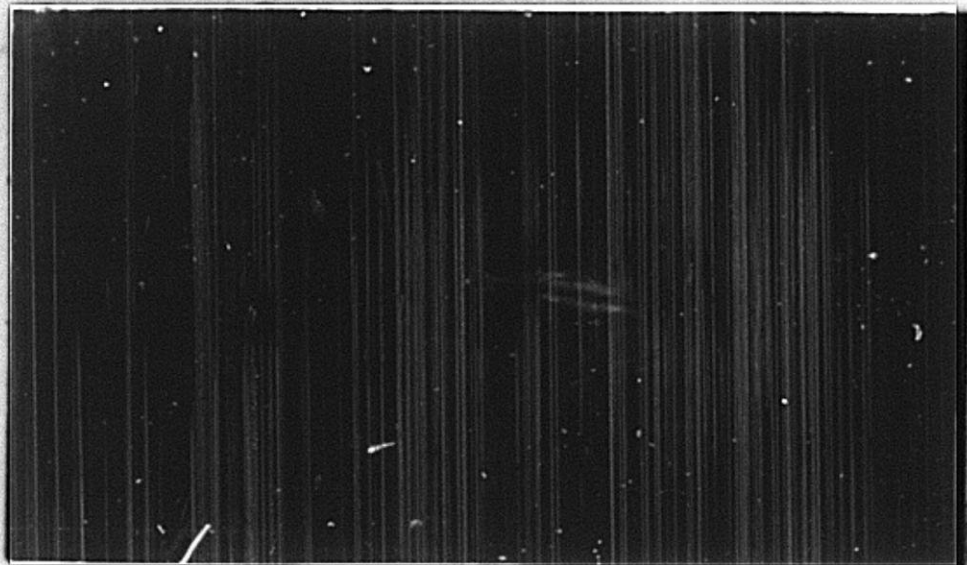
Two very perfect specimens of these last, and nothing else, were found in storage-refuse pit # 6, H.S.X-II. See photograph below.

A very interesting piece of round bone showing the manner in which fish hooks are cut out, two at a time, was found in pit 9, H.S.X-15. It was in an excellent state of preservation. One perfect and half of two bone hooks without barbs were found together on the floor of H.S.X-15, near the wall in the north-west corner.

Curiously no bones, refuse of the daily consumption of either large or small animals or of birds or fishes, were found in the pits or on the floor.

The very few small fragments of burned bone found were negligible.

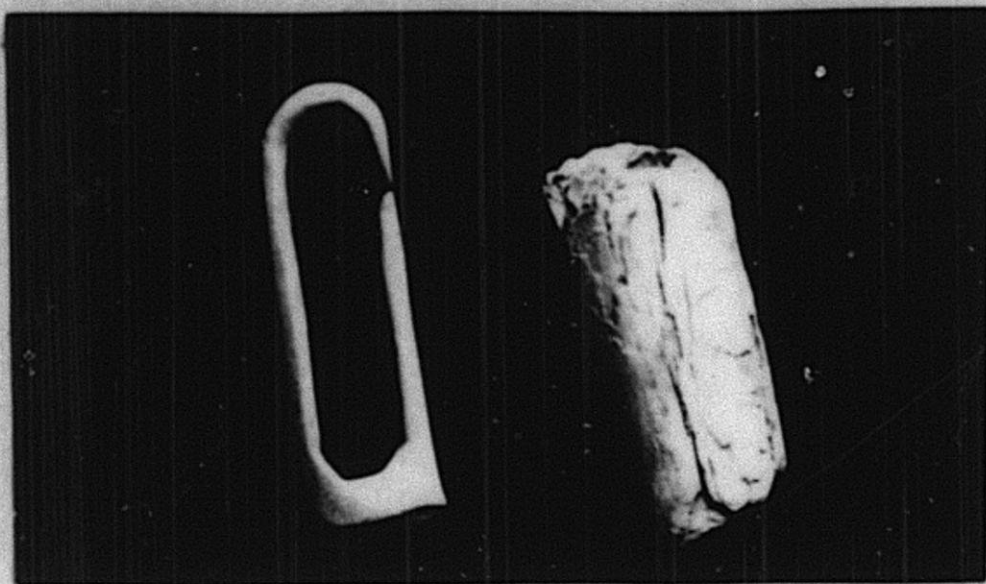
The shells of a number of species of river clams were found in every house. A total of 299 well preserved were sent in. There were perhaps as many more too soft to handle. Only one was worked.



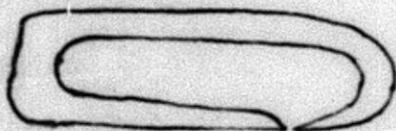
Shoulder blade digging implements in situ on bottom of Storage-refuse pit # 6, H.S.X-II

No. 1 - 12 inches long. Cutting edge, 5.8 inches wide. Articular end, 1.5 X 1.3 inches.

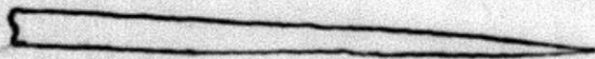
No. 2 - 13 inches long. Cutting edge, 6.5 inches wide. Articular end, 2.6 x 2.0 inches.



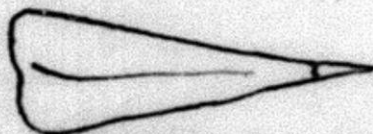
Photograph of two Fishhooks in the making from a round bone and a bone bead. See sketch below.  
1.18 times Actual Size.



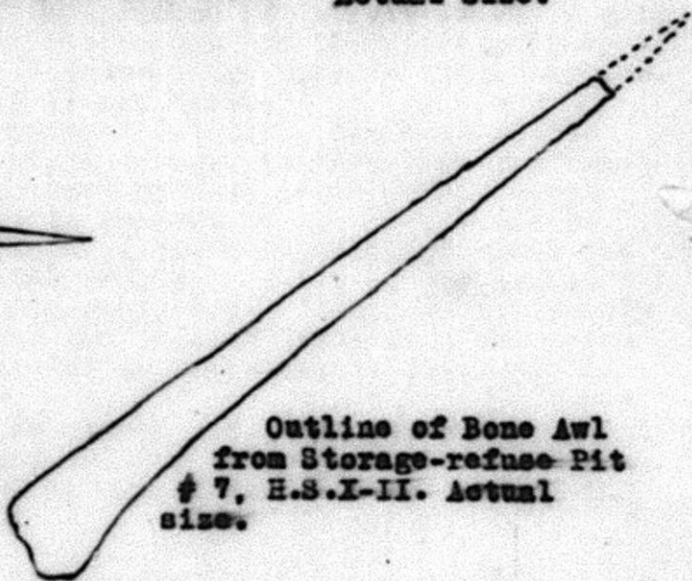
Outline of Two Bone Fish Hooks in the making. From Storage-refuse Pit # 9, H.S.X-15. Actual size.



Outline of Bone Awl from Storage-refuse Pit # 9, H.S.X-II. Actual size.



Outline of Bone Awl from Storage-refuse Pit # 7, H.S.X-II. Actual size.





## POTTERY PIPES



Photograph of a plump bird effigy pottery pipe found just below ( 2 in. ) the floor ( it must have been cached there ) of the earth lodge, - H.S.A., at N 40 E, 14 ft. from the lodge center and 38 in. below the surrounding natural surface.

On NW NE Sec. 24, T. 72, R. 43 east of the 5th P.M., at 3/4 miles south of the State Institution.

The head had unfortunately been broken off before it was placed where we found it, and a piece was broken off the right side by the workman who uncovered it. However the pipe is still serviceable for the purpose for which it was made.

As we found it it has a length of 3.6 in. The bowl at the top is .5 in. in diameter, - which appears to have been the regulation size of the pipe bowls used by the people of the earth lodges, - but deep in the body it expands to .75 in., - and is 1.5 in. deep. From its bottom a .2 in. hole, through which the smoke was drawn, runs through the body to the tip of the tail.

The breast had been stained a robin red. The legs apparently are not represented. What the two incised lines from the crissum to the primaries were intended to represent is difficult to determine.

Photograph actual size. Excavated Apr. 14th, 1938.

Besides this bird effigy and the "cross" pipe an additional pottery trumpet pipe was found by one of the workmen in refilling the site.

## POTTERY PIPES.

Pottery "Cross" Pipe from Earth Lodge Site A, in the southeast corner of the NW SE Sec. 24, T. 72, R. 43 west of the 5th P.M. On crest of divide and at the general upland level between the valleys of the tributary branches of Keg Creek.

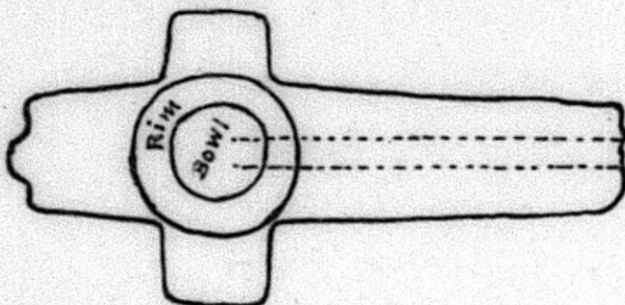
On the State Fair of the Institution for the Feeble Minded, about three-fourths mile south of the buildings.

From 2 in. above the earth lodge floor, S 37 E, 3 ft. from the center of the lodge and 34 in. below the natural level of the surrounding surface.

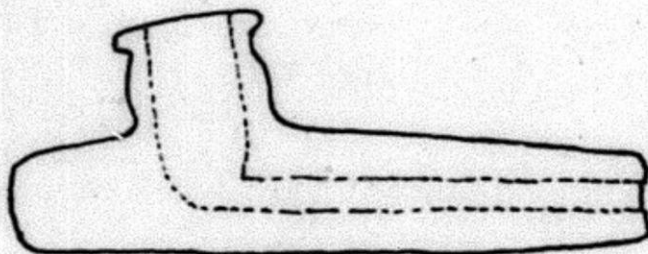
Photograph and outlines, - vertical and horizontal from above, - actual size.

Total length, 3.5 in. Projection of stem in front of bowl, .7 in. Diameter of stem, .6 to .8 in. Height of bowl, .6 in. Outside diameter of bowl, .9 to 1 in. Inside diameter of bowl, .5 in. Diameter of stem hole, .25 in. Length of the projecting arms of the "cross", about .5 in.

As with the trumpet pottery pipes, no additional stem of wood could be used with this pipe. The end of the pottery stem was held against, not between, the lips.

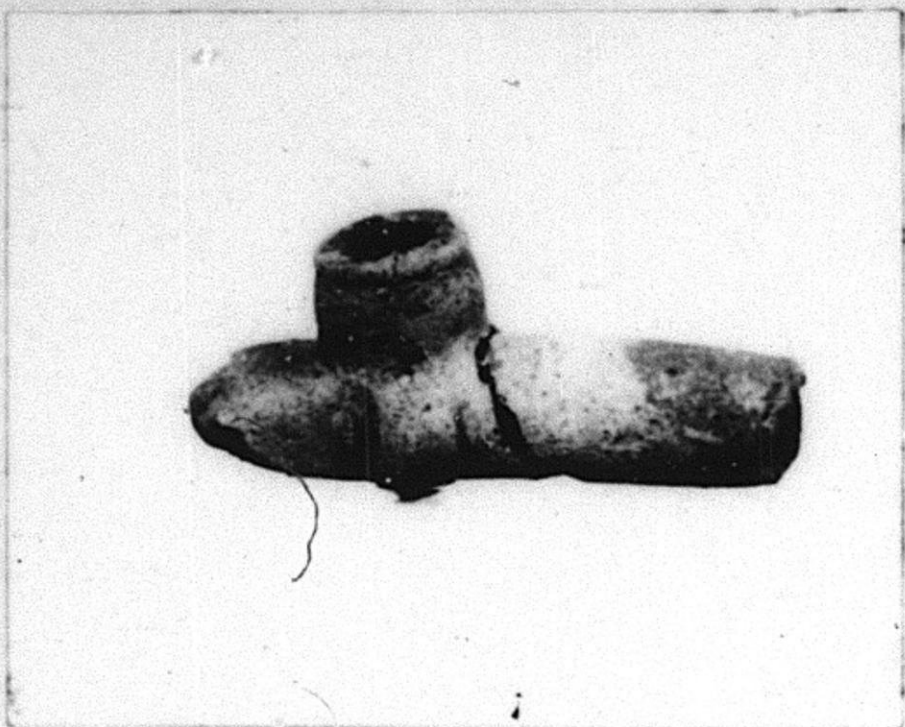


Horizontal outline of Pipe from above.

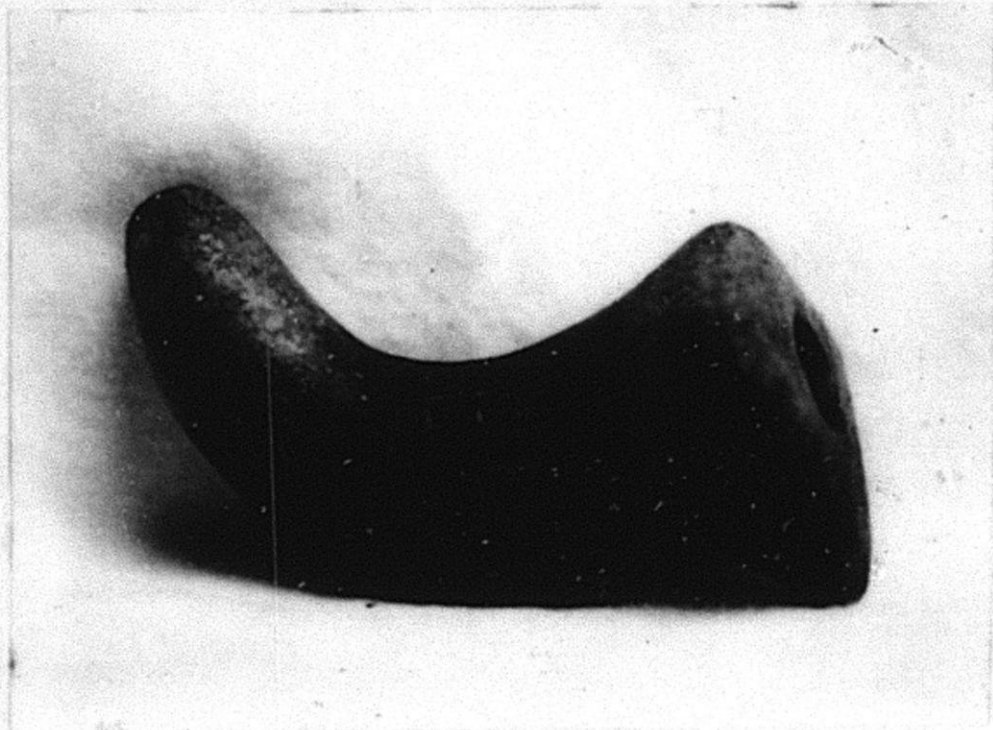


Vertical Outline of pipe





Photograph of the "Cross" Pottery Pipe. Actual Size.



Photograph of the Trumpet Pottery Pipe. <sup>1/2</sup> Actual Size.

## POTTERY PIPES.

Pottery Trumpet Pipe from Earth Lodge Site G, Storage - Refuse Pit 3, N 75 E, 11.5 ft. from the lodge center and 22 inches below the floor, - 58 inches below the surrounding natural surface.

On the crest of a divide between the valleys of branches of Keg Creek, at the general upland level. On the NE NE Sec. 25, T. 72, R. 43 west of the 5th P.M.

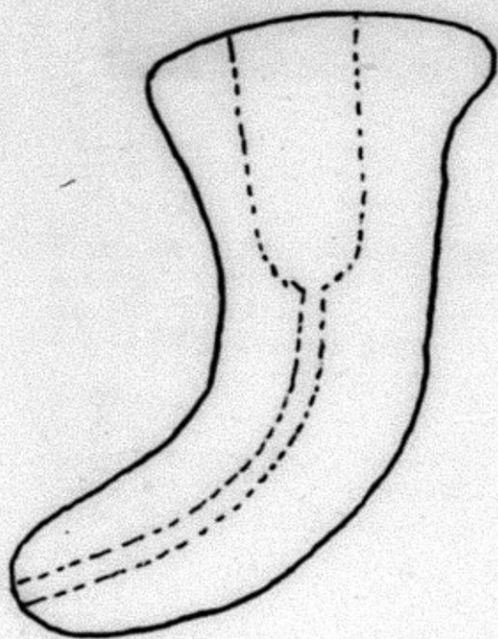
This was a robust, trumpet shaped pipe, 5 in. in length when measured around the lower and front of the curve. The stem end at 1.25 in. from the end applied to the lips, was 1 in. in diameter.

Around the half inch bowl opening it flared out sharply to form a kite-shaped end, approximately .5 in. across from side to side.

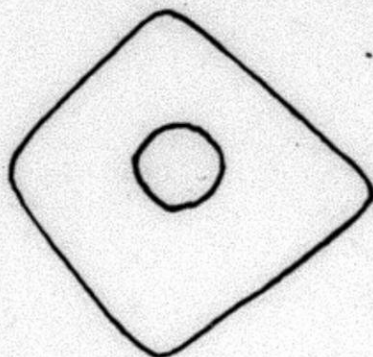
H.S.G., the lodge site in which this fine pipe was found, is 1.75 miles south of the State Institution, but not on the State Farm.

Photograph and outlines, actual size.

Fragments of five other pottery pipes were found in this Lodge Site.



Outline of Pipe, - actual size.




Front

Outline of kite-shaped top of Bowl.

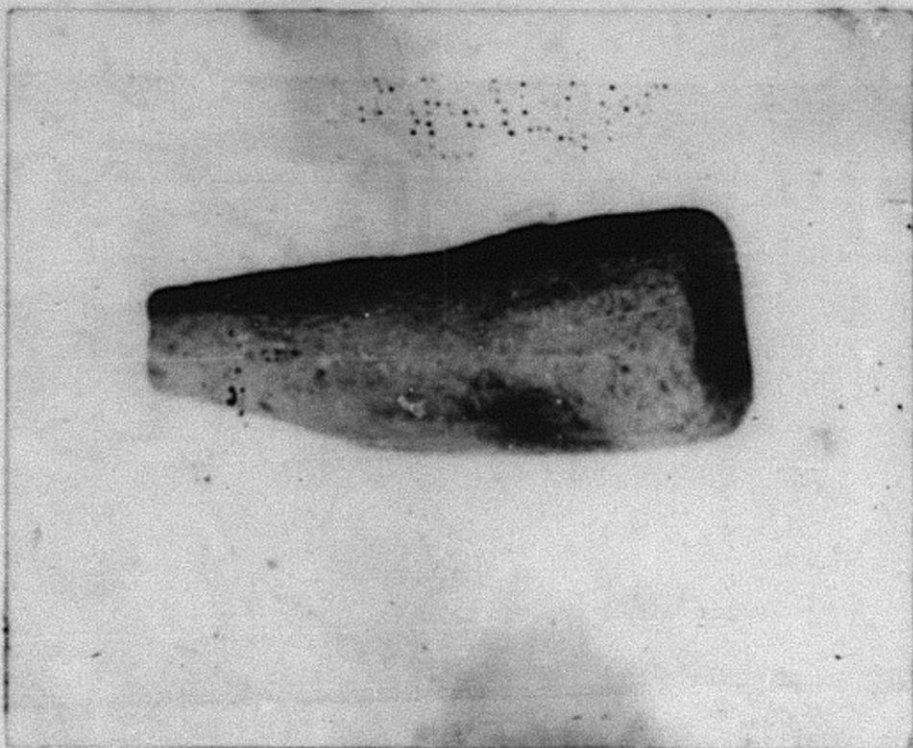




Elbow or Trumpet Clay Pipe, probably made from a Blue Clay, a lump of which was found in same House Site. Tempering matter uncertain. From Storage-refuse pit # 6, House Site X-II.  actual size. Hall, finder.

|                                |        |      |
|--------------------------------|--------|------|
| Length                         | 3 1/2  | inch |
| Height                         | 2 7/16 | ..   |
| Diam., Inner Bowl at Top       | 3/4    | ..   |
| Diam. of Stem at Opening       | 3/16   | ..   |
| Diam. Bowl, Outside to Outside | 1 1/8  | ..   |

## POTTERY PIPES



Photograph, actual size of a pottery Tube Pipe, 3 inches long, found in storage-refuse pit No. 9 in H.S.X. - II, the second of the Marshall sites excavated, on the SW NE Sec. 34, T. 7E, R. 4E west of the 5th P.M.

At the bowl end, - in which the material for smoking was placed, - the opening had a diameter of .7 inches, the total diameter of that end being 1.3 inches.

At the stem end the diameter was .6 inches.

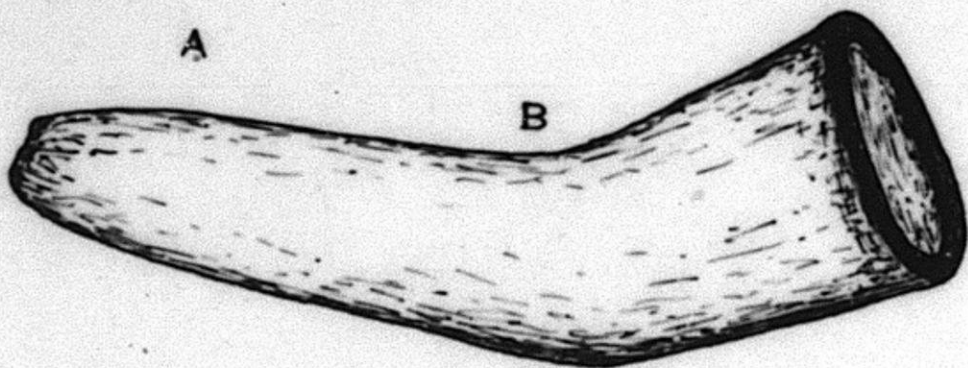
These pottery tube pipes had no wood stem, no hole large enough to insert one in having been drilled in the pottery stem.

They, like all earth lodge pottery pipes, show no signs of ever being held between the teeth and their thickness would seem to prevent their comfortable use by being held between the lips.

They were in all probably held against the lips when smoked.

Pottery pipes appear to have been almost exclusively used by the earth lodge people of Mills county.



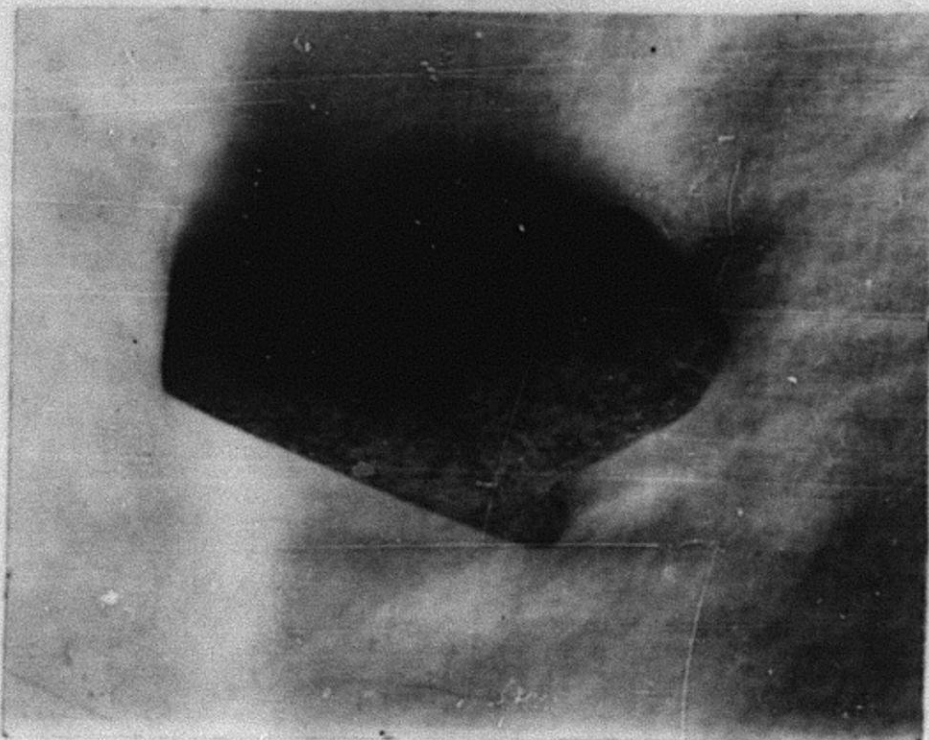


**Clay Trumpet Pipe  
From Grave in Arkansas.  
Actual Size.**

Length, 4.6 inches.  
Stem diameter, at A, .85 inches.  
Stem diameter at B, 1.10 inches.  
Bowl diameter, outside, 1.60 inches.  
Bowl diameter, inside, 1.30 inches.  
Angle of bowl to stem, 149

This Sketch of Pipe from Arkansas is inserted here for  
comparison with Glenwood Culture.

## PIPES OF STONE.



The Pipe of which this is a photograph and which appears to be made of a white stone, has a stem, which with the small prolongation in front of the bowl, is 2.4 inches long, and .7 inches in diameter.

With this, the bowl, 1.3 inches long, and with an outside diameter of .9 to 1 inch, is joined at an angle of  $30^{\circ}$  to a line perpendicular to it.

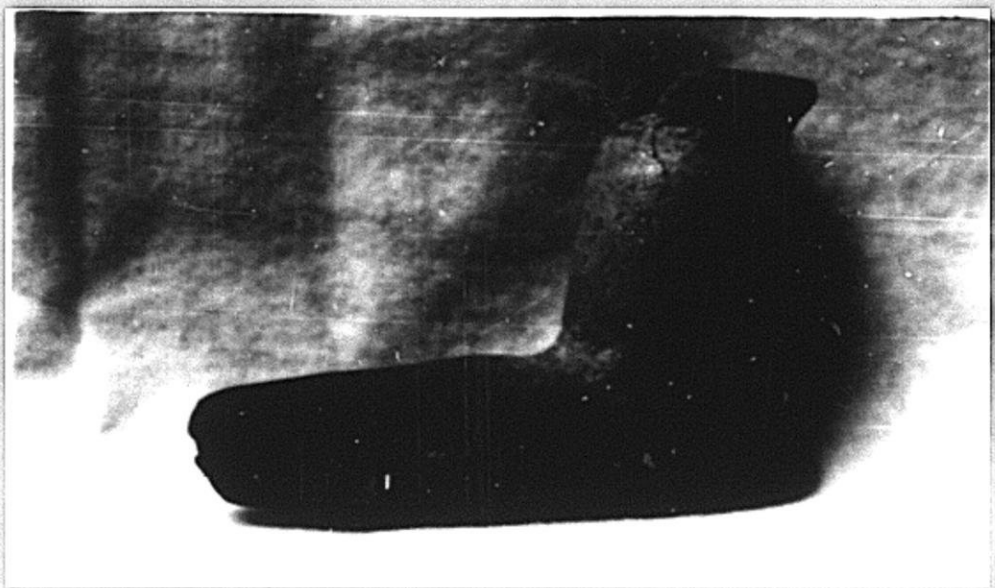
The inner diameter of the bowl is .55 inches and has a depth of 1.4 inches.

In the smoker's end of the stem is drilled a hole .35 inches in diameter in which to insert a longer one of wood.

The pipe was found on the floor of H.S.G, at N 30 E, 12.5 ~~xxxx~~ feet from its center and 48 inches below the surrounding natural surface.

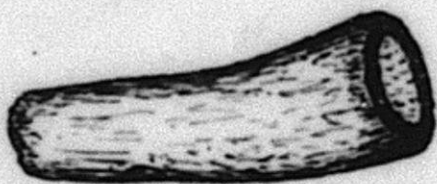
H.S.G. is located on the NE NE Sec. 25, T. 72, R. 43 west of the 5th P.M.





Elbow Clay Pipe from Pit # 9 in House Site X-15. 1.04 Actual Size. This Pipe like all Earth Lodge Clay Pipes was smoked by Placing the End of the Clay Stem against the Lips.

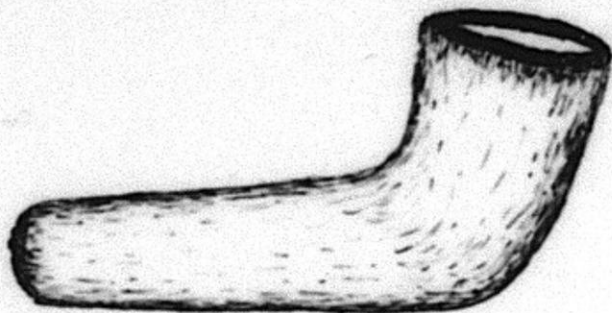
|                             |        |
|-----------------------------|--------|
| Length                      | 3 1/4  |
| Height                      | 2 3/16 |
| Diam. of Bowl at Top        | 1 1/8  |
| Diam. Bowl at Center        | 1 1/16 |
| Inside Diam. of Bowl at Top | 1/2    |
| Diam. Stem Hole             | 3/16   |



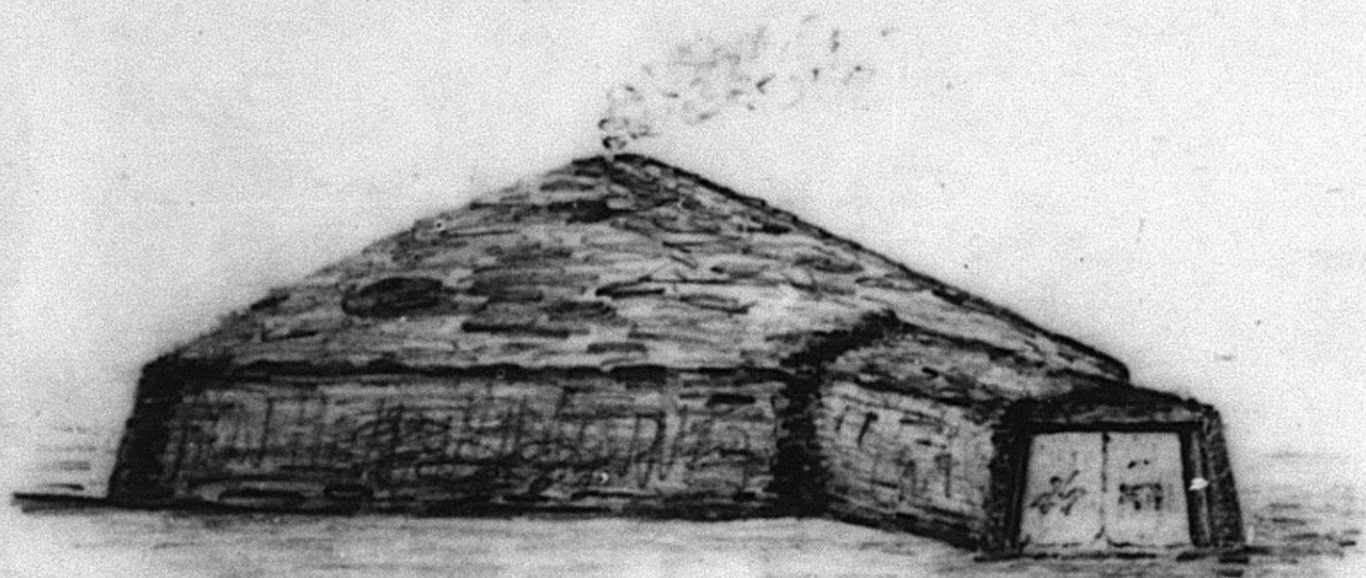
Sketch of nearly Straight Trumpet Pipe,  
Two and one-fourth inches long. From  
Storage-refuse pit # 2, House Site  
H.S.I-16 Kelso.

Carbonised Corn and Beans also found in  
this Pit.





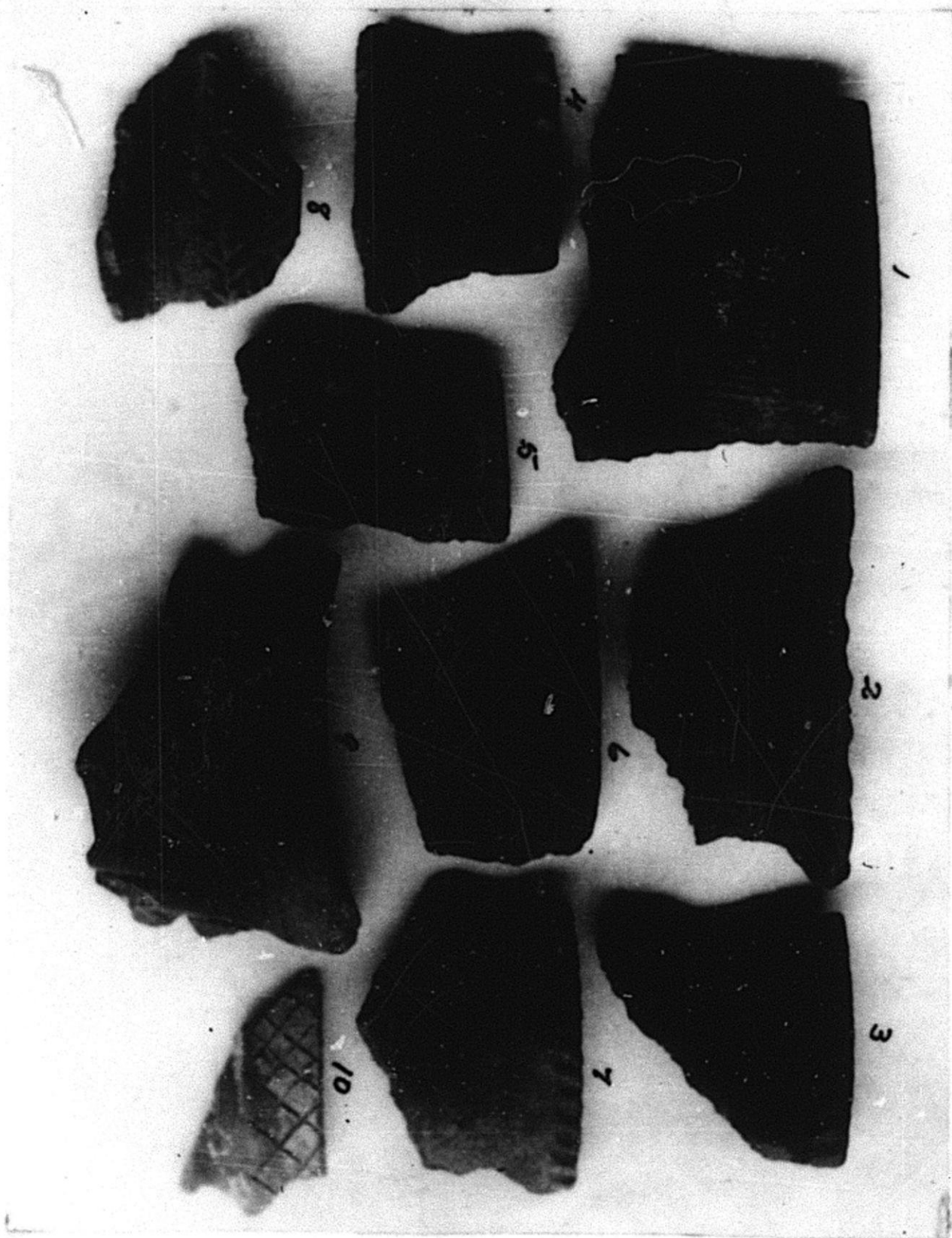
Clay or Elbow Pipe from Floor of House Site J.  
Actual Size.



IDEAL SKETCH OF EARTH LODGE.

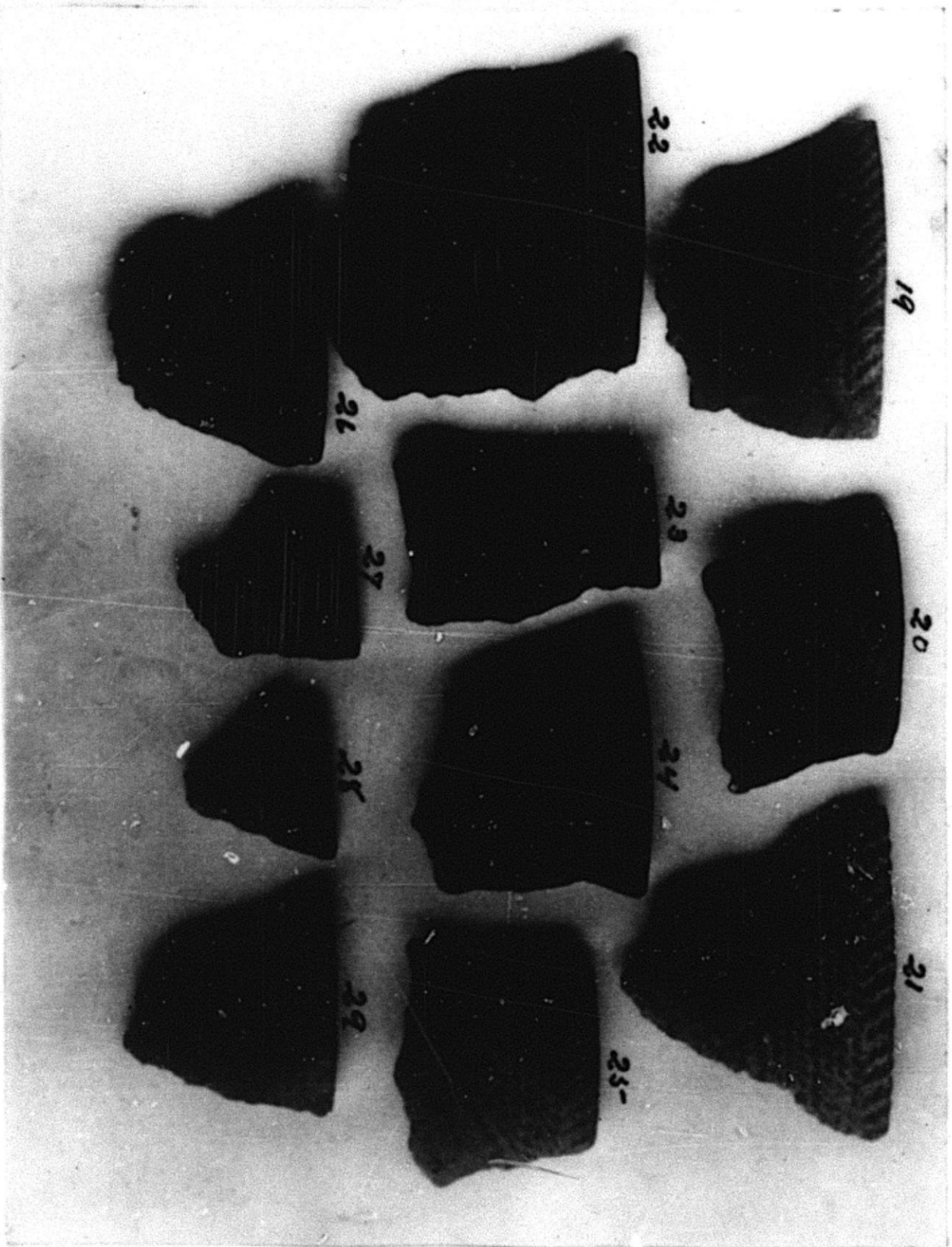


Two-thirds Actual Size.



Photographs of Woodland Pottery Sherds from Paul Rowe Collection

## Photographs of Woodland Pottery Sherds from Paul Rowe Collection



Two-thirds Actual Size.



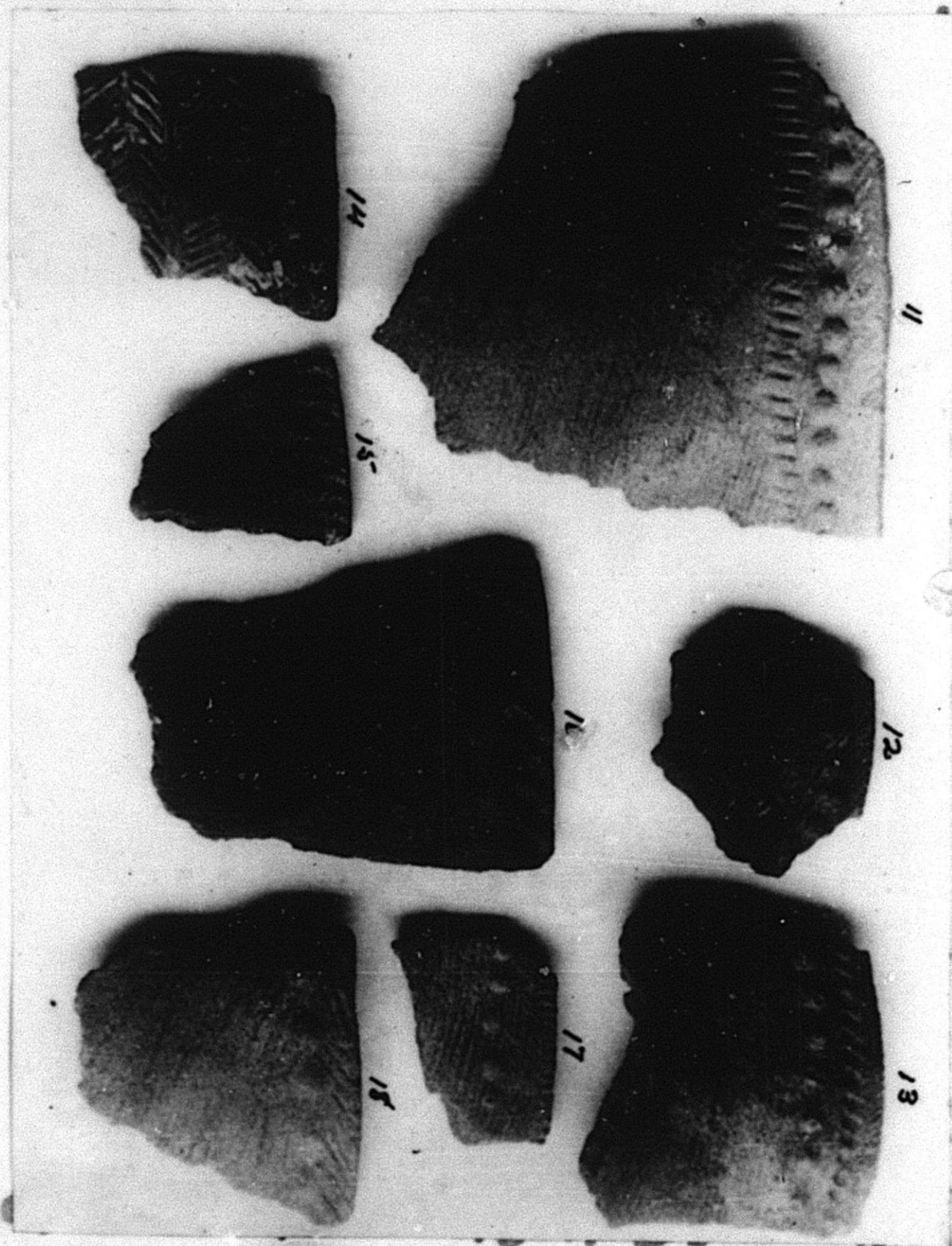
Photographs of Rim Sherds of Woodland Pottery collected by Paul Rowe in the creek gulches tributary to the Missouri, in Mills County. Two-thirds actual size.

All were found buried deeply, often more than ten feet in the alluvial soul in which the deep canyon-like ditches were cut, or washed out of the sides, in the gravel beds forming the bottom.

These twenty-nine sherds have the following characteristics:

- Grit tempered - all sherds.
- Irregularly subspherical in shape - all sherds.
- Bottoms - very bluntly pointed.
- Shoulders - round, not angular. All sherds
- Necks - elongated, generally flaring like a trumpet. All sherds.
- Lip - plain rounded. No. 9.
- Lip-sloping on outer side and decorated with diagonal finger tip or trailed lines.  
Nos 3, 4, 5, 6, 7, 14, 15, 16, 17, and 18.
- Body - smoothed and cord roughened. Nos 3, 4, 5, 6, and 7.
- Body smoothed - not cord roughened. No. 12, 13, 14, 15, 16, 17, and 18.
- Trailed lines on Neck forming triangular patterns. No. 8, 9, 10.
- Triangular patterns on necks made with roulette wheel.  
No. 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.
- Rouletted horizontal lines entirely around the neck between the lip and triangular decorations.  
No. 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.
- Horizontal lines of embossing. Nos 11, 12, 13, 14, 15, 17, and 18.
- Herringbone decoration. No. No. 14.

## Photographs of Woodland Pottery Sherds from Paul Rowe Collection



Two-thirds Actual Size.



## Age of the House Sites and Abandonment by the Builders.

The paucity of worked flints in the fourteen Lodge Sites excavated that yielded results, when compared with the abundant pottery sherds found, argues for an unhurried departure of the occupants. They apparently had plenty of time to clear out everything that they valued from the old lodges.

A similarity in the general appearance of these lodges may possibly indicate a general but not rapid exodus, -(that is that all were occupied, and all left at the same time) - of the settlement or colony on the Iowa side of the Missouri river.

Iowa, as far back as we have any information, either historical or traditional, was a vast hunting ground occupied by no powerful or warlike tribe like the Iriquois.

The permanence of the earth lodges, the evidences of agriculture, and the presence of abundant pottery sherds indicating much use of it, leads to the belief that no enemies were feared and that a long residence was intended by the builders and occupants.

With seemingly no danger to be feared from the east, or a probably closely related people on the west across the river, the question arises; what was the cause of their apparently unhurried leaving, and how long ago did it occur? And why or how came all the houses to be burned? Did the people who occupied them, after all, in fear of some strong tribe of which we have no knowledge,

decide to put the river between them? Was it the enemy that burned the houses or did they themselves?

Or did they for some other reason decide to emigrate, and if so, which way did they go? As there are no earth lodges up or down the river or to the east, they must have gone, either driven away or emigrating voluntarily, across the river to the country of their relatives. It seems to us that there is no evidence of their having been exterminated.

How long ago was this exodus? It must have been farther back in time than a possible contact with the white traders 250 years ago. In written history we have no account of a people living in earth lodges east of the Missouri after that date.

Then when we consider the accumulation of wind blown dust that has accumulated on the crests of the divides since the building of the houses, that, unless we conclude that the area was occupied by this people for a long time, - the houses, as fast as they became uninhabitable, being replaced by new ones, - we must conclude that it was a long time ago.

Whether the the period of occupancy of the area was short and the exodus consequently long ago, or whether it was long and the exodus comparatively recent, this accumulation of dust blown earth makes it reasonable to believe that the settlement and first building of houses was many hundred years ago. It seems to us that we are studying the history of some very old residents of Iowa.

And before these beyond question were the people of a still older culture, the Woodland, or some phase or aspect of the Algonquin, and far back of these, perhaps others.

## Axes and Celts.

There are three very distinct types of axes found in Mills county. (See pages 138, 139, 140 and 142) Supposedly one of these types was made and used by the people of the earth lodges, but of this we have no means of knowing certainly as none have been found in their dwelling places.

Neither can we say that any are the product of their predecessors, believed to be Algonquins. Then, did one of these cultures make two types, or was there a third pre-historic culture?

Or possibly did the Pottawattamies, who for a time occupied a reservation which included this territory, in historic times, still use the stone axe?

If we had found, as we did of celts, one or more specimens of one of these types in a house site, it would be pretty conclusive evidence that they used and probably made it. Also, if an axe were found in one of the ash strata, found in the sides of the erosion ditches, supposedly the remains of Algonquin camp fires, we would be warranted in believing that they used and quite likely made it. At any rate, that it was of an older culture than that of the earth lodges.

Of the six or more diorite celts, whole or broken, found by us in the house sites, no two appear to be exactly of the same type or pattern. Either there was considerable traffic in celts, one tribe acquiring those made by others, or they were acquired as the spoils of war, or else the shape given a celt in the making depended somewhat on the shape of the block of raw material out of which it was made, and that, except for those on which for some particular reason, much work had been expended, it is not easy to say that any celt is a type of any particular culture.

Had we found in the house sites excavated, say for instance, twenty round, triangular celts with wide bits and blunt pointed polls, symmetrically shaped and with only either side of the bitt well polished, like one we found in house site F, we could say with little fear of contradiction, that they were typical of the Glenwood culture. On the other hand if all the twenty had been somewhat different, one from another, we would be forced to conclude that though they possibly had made them, they had no typical celt.

---

## Abraiders

In eight of the sites excavated, <sup>was</sup> a total of forty-nine small pieces of dark-brown sandstone, which Nebraska archaeologists told us was Dakota Sandstone. As we have never seen this rock in natural exposures we are not able to verify their identification.

These pieces were usually two to three inches long with four approximately rectangular sides, the ends roughly square, three-fourths by one and one-eighth inches. In the sides were V-shaped or half round grooves, not always straight, three to seven-eighths inch wide, and three to five eighths deep. A few larger pieces were found in which there were no grooves.

These abraiders were used, it is believed, to sharpen or smooth bone or other pointed implements and to smooth arrow-shafts, and



to reduce sinews to a uniform diameter.

They appear to be of the same material as the large, - up to 9 inches long, and 2 inches wide and  $\frac{1}{2}$  inches thick, arrow-shaft smoothers, used in pairs, found in the valley of the Upper Iowa river.

As there is no Dakota Sandstone east of the Missouri river, this material must have been traded to long distances. Moorehead shows in Vol. II, page 314, a pair of these arrow-shaft smoothers found on a N. Dakota mound. On page 92, Vol. I of Bulletin 30, - Handbook of the American Indian, - Bureau of American Ethnology, a pair from British Columbia is illustrated. And on Plate 7 of Bulletin 112, Wedel's Introduction to Pawnee Archaeology, three pairs and four singles are illustrated. We found in one house site part of one of a pair.

---

#### Small Hand Boulders and Other Unworked stones.

In all the houses, especially in the storage-refuse pits, there were numbers of scattered hand boulders of from two to four inches diameter, very irregular in shape, unworked, of granite, diorite, quartzite and other rocks from the drift with which were quite a number of limestones.

A few that might have been used as smoothing, rubbing or grinding stones, or hammers, were sent in. The remainder, including the limestones, some of which had apparently been in a hot fire, whether in a fireplace or when the house was burned could not be determined, were thrown out on the dump. In H.S.X-10, while excavating it, we made a pile of all these rocks that we came upon, and when the work was completed there were 250 in the heap.

The other larger houses probably contained between one and two hundred. What they were all used for is a conundrum. Only once did we find anything like a cache.

---

#### Mortars and Mealing Stones.

In all the houses we found but one so-called mortar, a small thin circular stone, 8 to 9 inches in diameter, and besides the one found by Swearingen and McDowell on the state farm, (See page 142) a very fine wheel-shaped piece with flat sides, - which may have been used in gaming, - we found only one flat, symmetrical biscuit shaped muller.

Water-worn drift hand boulders could have been and probably were used for grinding, crushing or cracking corn or other food, but I expected something better from a people that had the skill and energy to build the earth lodges that they did.

I was disappointed, too, in not finding some of the large quartzite or granite mealing stones in the houses, but the only one which I did find, a fine large rectangular quartzite rock, 3 to 4 inches thick with a scooped or worn area in one side, was on a gravel bar in the thirty foot deep canyon of Bomar Creek, on the SE NW Sec. 31, T. 72, R. 42 west of the 5th P.M.

Paul Rowe and other collectors in Mills county have found a very few of these mealing stones, but so far as I could learn or see they were inferior to mine, and were all found like mine in the the ditches or in no way associated with the earth lodges.

In the area along the Little Sioux river, once occupied by the people of the Mill Creek Culture, a few of these stones are found.

We are still at a loss as to what culture they probably belong.

We have always believed that it was very doubtful if the small, circular, trimmed stones, from six to twelve inches in diameter, and with a thickness of from 2 and 1/2 to 3 and 1/2 inches, of quartzite, diorite and granite, with the shallowest of basins on one or both sides, common on the camp sites in the valley of the Upper Iowa River and occasional in other places, usually designated as mortars, were actually used for grinding or crushing corn or other foods. Some of those found on the Upper Iowa I know were used to grind paint. The evidence was plain. (*discoidal*)

We were told by Hill and Cooper to look between the entrance and the central fire for evidence of a large log set on end in the floor of the house, in the top of which, at about two feet from the ground, a deep basin had been hollowed out and used as a house mortar.

We found the charred stump of one such large post or log only in H.S.X-15. This was also midway and in a line between the SW and SE main posts, and as there was also one in a similar situation on the north between the NE and NW main posts, while on the east and west there were also extra supporting posts but not so well lined up or so uniformly spaced, all of which tends to raise a doubt as to whether the stump between the fire and the entrance was not also a post supporting the roof instead of a mortar.

Failure to find evidence of a post or log similarly located in any other house confirms the doubt.

---

#### Outside Storage-refuse Pits.

Work parties on some of the Nebraska sites, and on the Mitchell Indian Village Site in S. Dakota, report that such outside storage-refuse pits were found by them. Outside of House Site # 1 at Mitchell there were nine pits grouped around the entrance on the south side, and outside House # 2, seven on the east side of the entrance and eight on the west. These exterior pits contained but little else but rubbish.

As the owners of the land on which we excavated sites were reluctant to permit excavation outside of these because of real or imaginary damage to fields, and as practically as much again ex-



cavation would be necessary at each house site, to a depth of 30 inches, we made no effort to discover any outside pits. We lacked both the money and the time.

---

#### Pottery Fused by Great Heat of Burning House.

In excavating House Site X-10 we found among the pottery sherds two pieces of scoria. This volcanic slag is very porous and floats. It is believed that the pieces in question were carried down from the mountains or from the "Bad Lands" by the Missouri river, and were brought to the lodge by the finder.

Later in House Site X-16 we found numerous pottery sherds of which a part, usually the necks and handles, appeared to be of this material while the remainder of the sherd was of the usual unmodified sand tempered clay.

At first we were inclined to believe that the potters had mastered a process of using scoria for a part of their vessel and uniting it with the remainder, of ordinary material.

Then we noticed that it was found only in places where there was much burned earth, an indication of great heat, and it dawned on us that it, instead of being scoria, might be the ordinary clay pottery fused by the great heat of the burning timbers of the house.

A test of sherds in a blacksmith's forge showed this to be the case.

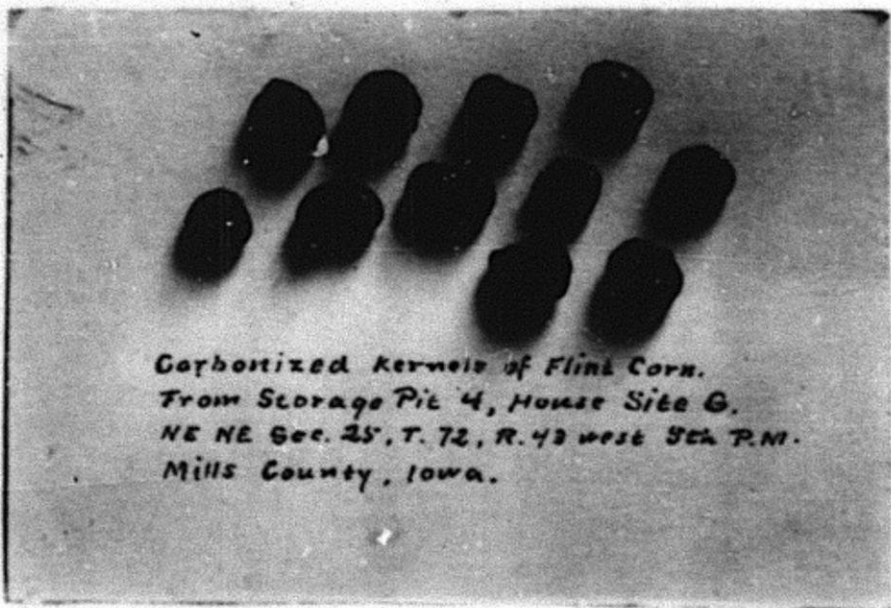
---

#### Paint.

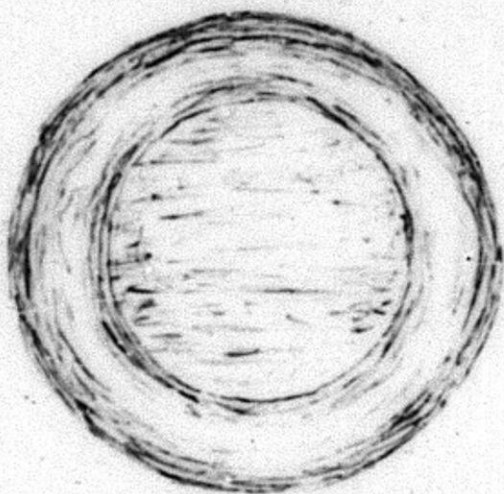
In all the House Sites we found a few scattered pieces of soft iron ore from an inch to two inches in diameter or thickness.

This ore was undoubtedly brought from a few counties to the east where there is much of it disseminated through the rocks of the Carboniferous formations. In the areas where the ore is found crude celts were made of the harder pieces of it.

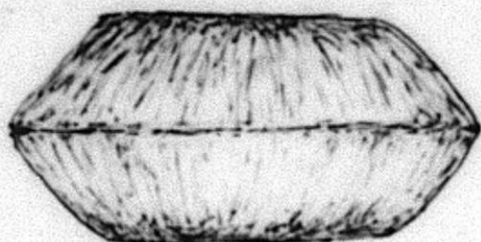
Paint for body decoration was made by rubbing these pieces of iron on stones, and some of the hand boulders are found stained with it. Pieces of pottery are also found colored by it.





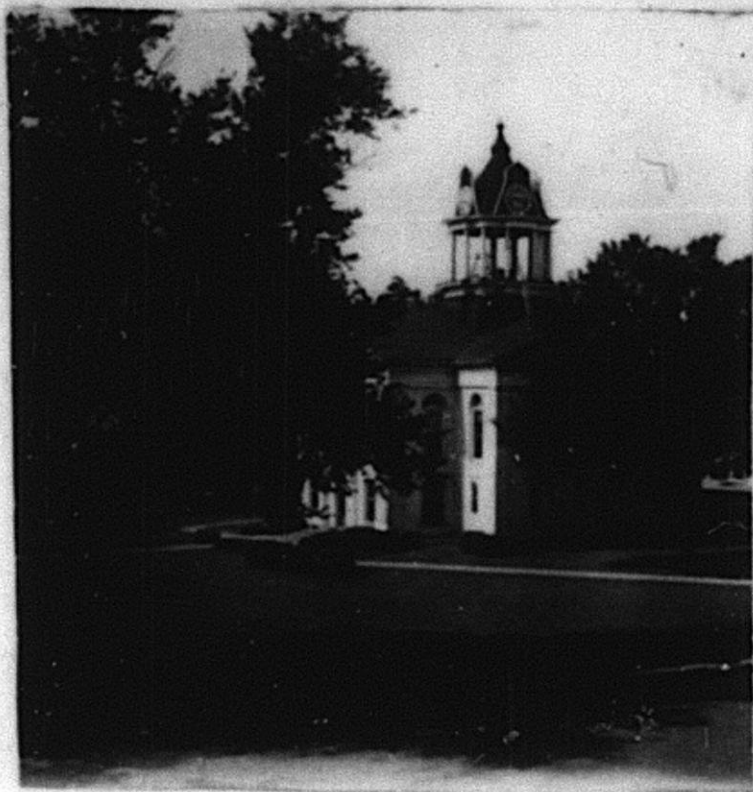


Top View



View of Edge

A symmetrical, circular Artifact of Granite, not so well polished, with opposite flat sides. Two and five-eighths inches in diameter and One and one-half inches thick. Resembles the "door knobs" of the Mill Creek Culture. From House Site A, at level of floor, thirty-six inches below the surface.  
Actual size.



Court House at Glenwood from Window of Hotel, to North-east.



Dr. Keyes at Right. Ellison Orr at Left.



**EARTH**  
**LODGE or HOUSE SITE (H.S.)**  
**EXCAVATIONS**

### Earth or House Site A (H.S.A)

Work on WPA Project 3600 was begun on H.S.A. on April 12th, 1938 with ten WPA workers as helpers.

The center of this site is 40 ft., N 21 W of the south-east corner of the NW NE Sec. 24, T. 72, R. 43 west of the 5th P.M., on the State Institution Farm, and three-fourths mile south of Glenwood, Mills county, Iowa.

The surface indications were a circular basin-shaped depression, the center six inches below the natural surface, and 35 ft. in diameter. Surrounding this was a flat embankment 4 inches high and 8 ft. wide, a remnant of the earth originally thrown out of the house pit, over which the house was erected.

Excavation was carried on by removing the earth one spade deep over the entire pit, and continuing in the same way down to the house pit floor, at the central fireplace, at 40 inches below the natural surface. However the men on some sections reached the floor one and two spadings before others.

No inclusions except the charred (carbonized) stumps of twenty posts, until within four inches of the floor. Three of the main posts were located beyond question, - two almost due north and south, respectively, from the central fireplace, and one due east.

The central fireplace in this house was large, - an oval, 5 X 6 ft. in diameter.

The locations of these main posts showed the orientation of the house to be N 45 E. The entrance which should be on either the south-east or south-west sides could not be found.

Before taking charge of the work on this project we had seen the surface indication, the bowl-shaped depression, of but one Earth Lodge south of Murray, Nebraska, and so far as our information went, believed that all earth lodges were round as indicated by the surface features of basin and embankment, and that the location of the posts was easily found, either by charcoal stumps or by the holes which they once occupied filled with dark earth.

Then after we had about completed the excavation of H.S.A. and were working at cleaning up the floor, we were told that we should expect to find the houses square with round corners, as they were just across the Missouri in Nebraska, and were given no worth while information on how to locate the earth filled post holes.

One thing we learned without being told was that very few of them were filled at the level of the house floor with other than the yellow loess clay exactly the same as that forming the house floor.

In every house site there is quite sure to be the charcoal stump of at least one of the main posts. Then, having the distance and direction from the central fireplace, which we never had difficulty in finding, the approximate location of the remaining three or more could by calculation be fixed. Then it was a matter of shaving off an area of floor, half an inch at a time, sometimes to a depth of six inches, until we found the post hole, filled with loose dark earth and in which would be bits of charcoal. (We preferred the shaving method of locating to boring with an auger.



Similarly if one or more of the charred stumps of the wall posts could be found and its location with reference to the central fire and the main posts considered, the approximate location of the house pit wall could be located and followed till another stump was encountered. Then, as we presently learned, we would find between them post moulds spaced around 25 to 32 inches apart, and we could follow the same method to locate them exactly.

The outlines of some of the storage-refuse pits showed plainly on the house floor, especially where their walls were plastered with clay. Others were not found till we had done extensive skinning on the floor. On the McManigal site we skimmed the entire floor three times and I am not certain that we then found all of them.

In cleaning the floor of H.S.A. broken pottery was found abundantly entirely around the outside of the pit, in a belt area, about 8 ft. wide. None was found inside this belt.

It occurred in foci on the house floor, partly buried in it, and just above it in the fallen in earth that had formed the roof. Over 40 of these foci were noted. They usually contained one or more rim sherds and several body, seldom all of the same vessel. A few foci contained enough sherds of the same pot for a foundation for a restoration.

In this site, as in G and F, all south of Horse Creek, fine large flakes, in two instances cached, of dark Nehawka flint, and a number of curved flakes of the same material, 3 to 5.5 in. long and triangular in cross section, real works of art.

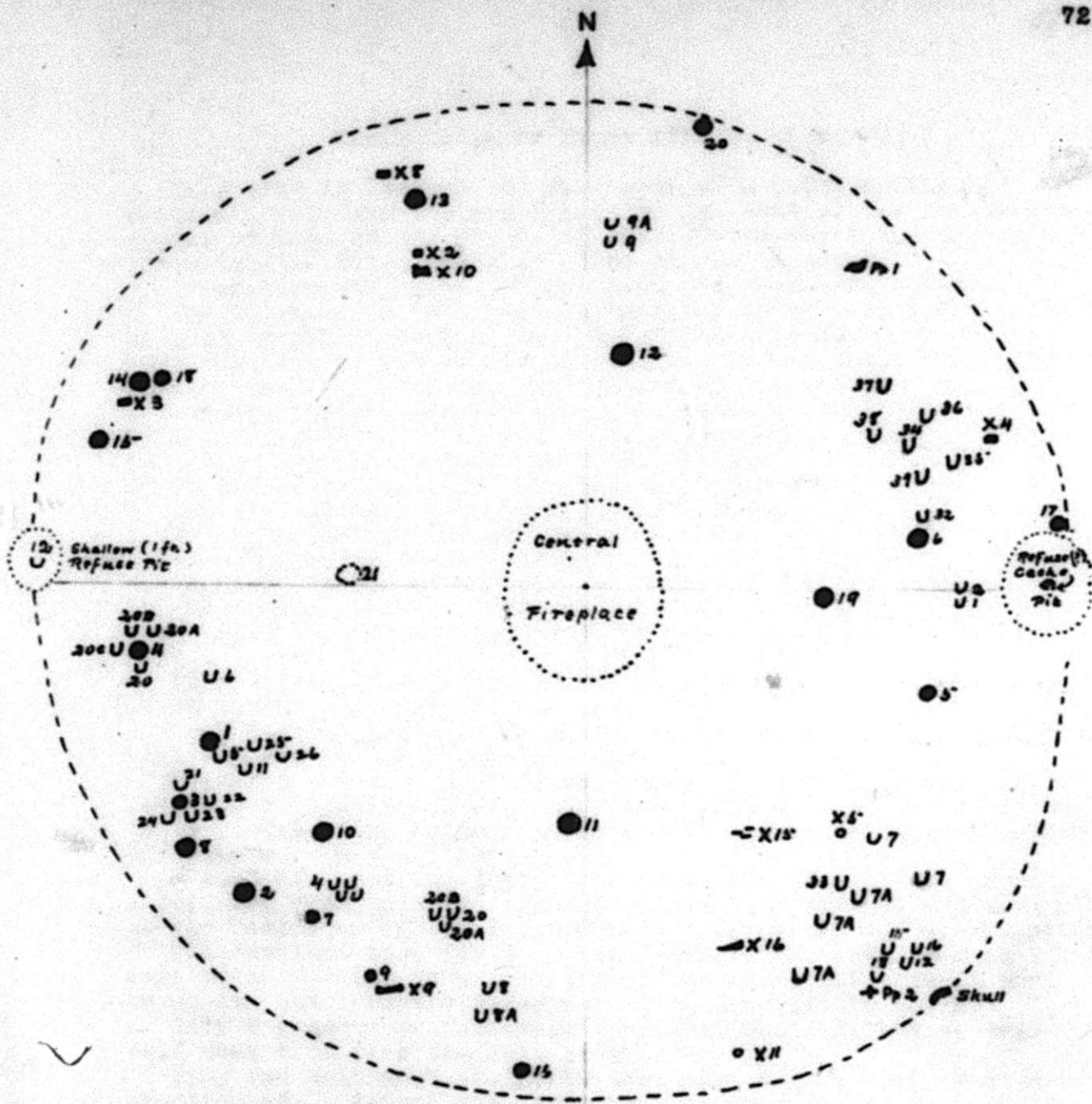
The striking of a curved flake of the length, size and symmetry of these pieces must have required great skill. We have seen no account of similar pieces being found elsewhere.

A bird effigy pipe minus the head, with the bowl in the back and stem hole in the end of the tail, one with a straight stem with wings or projections on either side, in the form of a cross, with the bowl vertical at the point of intersection, and a trumpet pipe, all of clay, were found at different places on the floor.

Also, at the floor level, a lens-shaped, well polished "door knob" of granite, 2.6 inches in diameter and 1.3 inches thick, and in other different locations, shoulder blade implements, abriders, clam shells, and a very few animal bones.

In the south-east part in the edge of the pit was a badly decayed, flattened skull cap, 6.5 inches long, at 18 inches below the natural surface.

Altogether we sent in from this site 402 pieces, a few unique. A comparative laboratory study of all this material will be made, consequently nothing in the way of the large amount of detailed description necessary will be attempted in this report.



### PLAN of HOUSE SITE A.

SE Cor. of NWNE Sec. 24, T. 72, R. 43 West 5th RM.  
One Mile South of Glenwood, Ia. on State Farm.

- - Post.
- U - Rim Pottery Shard.
- - Sandstone Chert.
- - Shoulder digging implement. X 10
- - Buffalo Horn. X 16
- - Leg bone of Elk. X 9
- - Bird effigy pipe. Pp 1
- - "Cross" pipe. Pp 2

Excavated by Ellison Orr  
Apr. 12-15, 1938



### Earth Lodge or House Site G. ( H.S.G. )

This site is located 100 ft. north of a point on the 1/8 section line, 1320 ft. south and 840 ft. west of the north-east corner of Sec. 25, T. 72, R. 45 west of the 5th P.M., one and three-fourths miles south of Glenwood, Mills county.

Excavation was begun on Apr. 25th and completed May 5th.

The location is in a pasture that has never been under cultivation, on which there is much brush and some standing elm and burr oak timber, and on the crest of an upland spur between two ravines running north and opening into Horse Creek.

Surface indications are a surface basin having a diameter of 40 ft. and a depth of 18 inches below the natural surface, with an encircling flat embankment 6 inches high.

On the south margin of the embankment is a living burr oak, 20 in. in diameter, and the stump of a double elm in the basin 9 ft. south-west of the center, 26 in. in diameter.

An old pasture fence crosses the center of the basin, north and south. In one of the posts a bluebird had her nest, and soon became so accustomed to the presence of the workmen that unless some unusual move near the post was made, would not leave the nest.

The central fireplace, not far from the nest post, was 44 in. below the natural surface.

Some digging had been done some years ago in the south-west part and some pottery sherds found.

Sticking out of the south-east part of the embankment was a fine curved flake implement of Nehawka flint, 5 in. long and .7 to .9 inches wide, triangular in cross section, with ends broken off square. Not chipped.

A central north and south trench was dug down to the house floor, and from this the excavation was carried east and west to the perimeter of the depression. Orientation was north and south.

Pottery foci were found at the floor level, located much the same as in H.S.A., in a belt around the wall, the central part for 8 ft. out from the fireplace being practically barren.

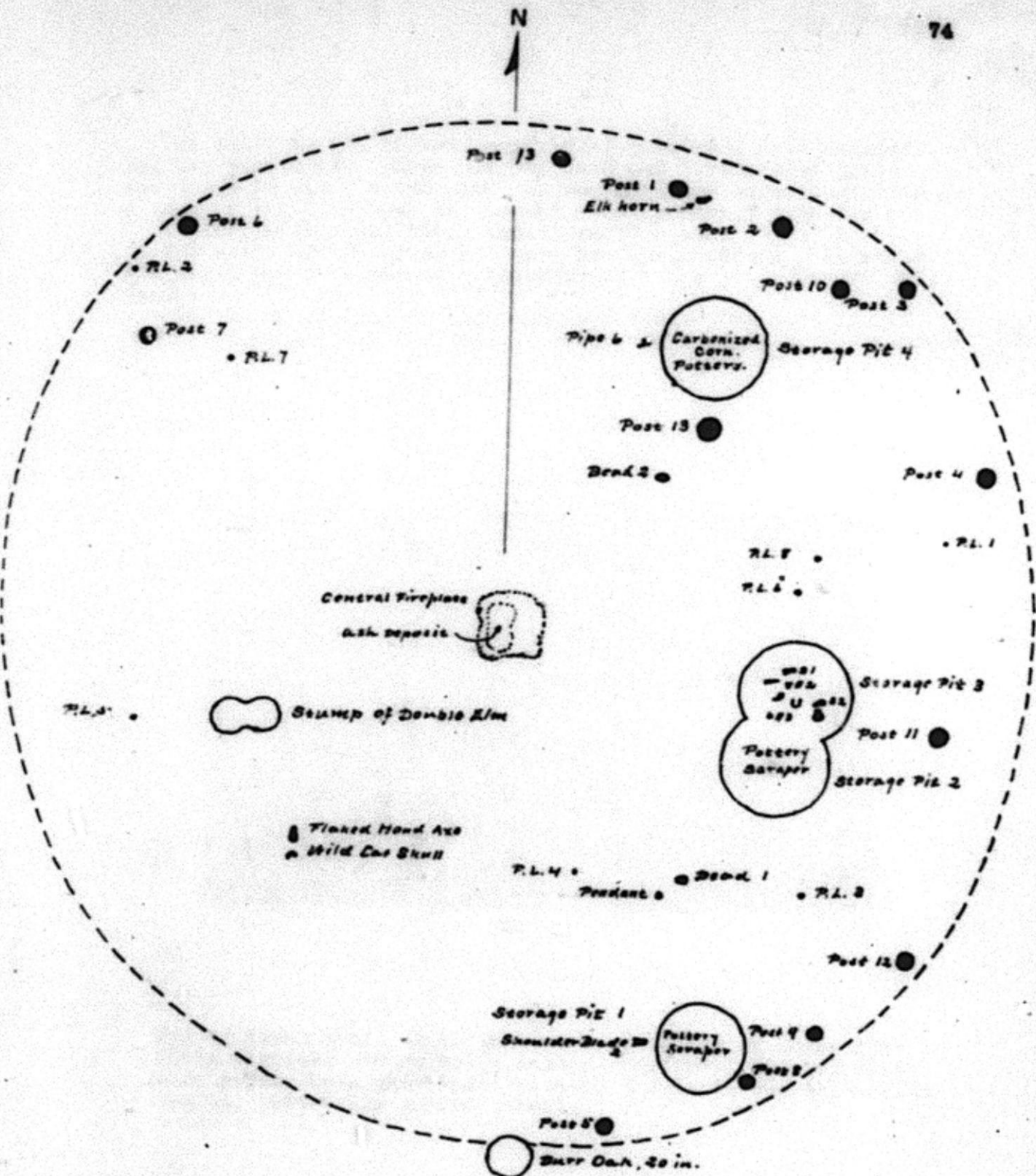
Only 8 pronounced foci were found but abundant sherds were well scattered over the belt area.

Only one main post, the north-east one, a large charred stump, was located. Around the perimeter, at the edge of the surface basin, 13 carbonized stumps of smaller posts were found, outlining half of the circumference of a circle. Try as we may, we are unable to draw a diagram that will show these posts forming part of the wall of a square house.

Among the other than pottery sherd finds on the floor, were 1 perfect stone pipe and parts of 3 others made of clay, a shoulder blade digging implement, a flaked hand axe, a stone pendant and 2 large stone beads.

Four storage-refuse pits were located in the east half of the pottery belt. All afforded much broken pottery, and in # 3 an unusually large and perfect "trumpet" pipe and part of the bowl of another. In this same pit was a perfect toy pot, 2.7 in. in diameter and 1.8 in. high.

N



PLAN of HOUSE SITE G.  
 NE NE Sec. 25, T 72, R 43 west.  
 2 Mi. S. of Glenwood, Iowa  
 Scale, 5' ft. to Inch

Excavated by Ellison Ott, Apr. 26-May 3, 1936

In Storage Pit 3.  
 S1 and S2 - Shoulder-blade.  
 S 2 and 3 - Fragment of Pipe.  
 — - Bone Awl.  
 U - Pottery Shards.  
 P - Truncated Pipe.  
 B - Complete Pot.

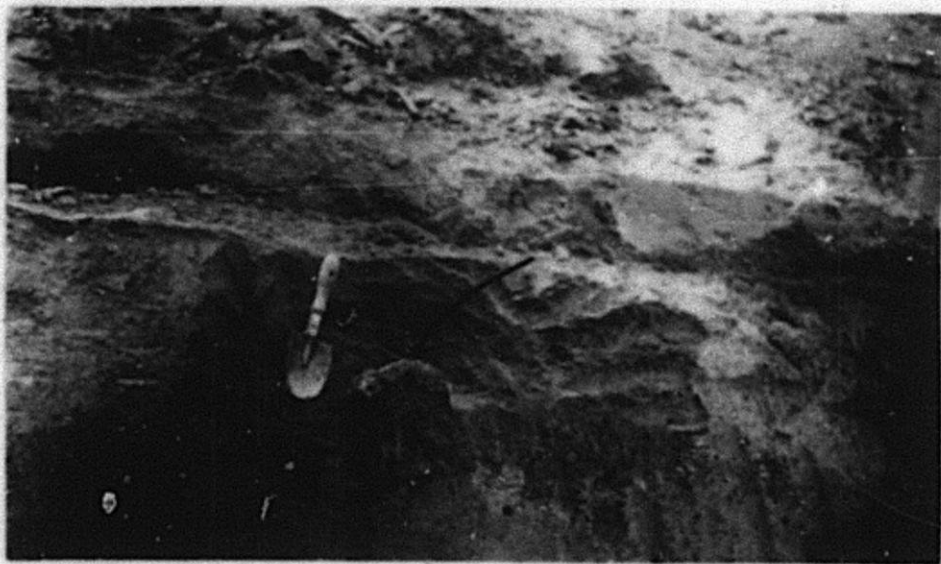


The walls of all the storage-refuse pits were well defined but not plastered. Much charred bark and turkey-foot grass was found in pit # 4 and much carbonized 8-row corn, including a lump, 9 X 4 X inches, the kernels well cemented together.

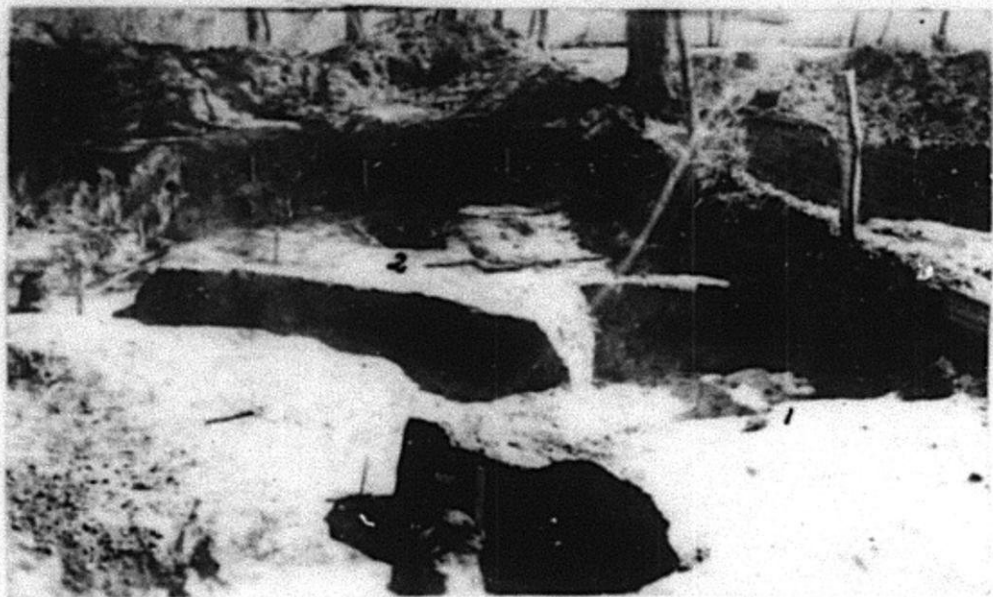
A diorite celt was also taken from this pit.

The walls of the house pit were not indicated by plastering and could not be definitely determined. The entrance was not found.

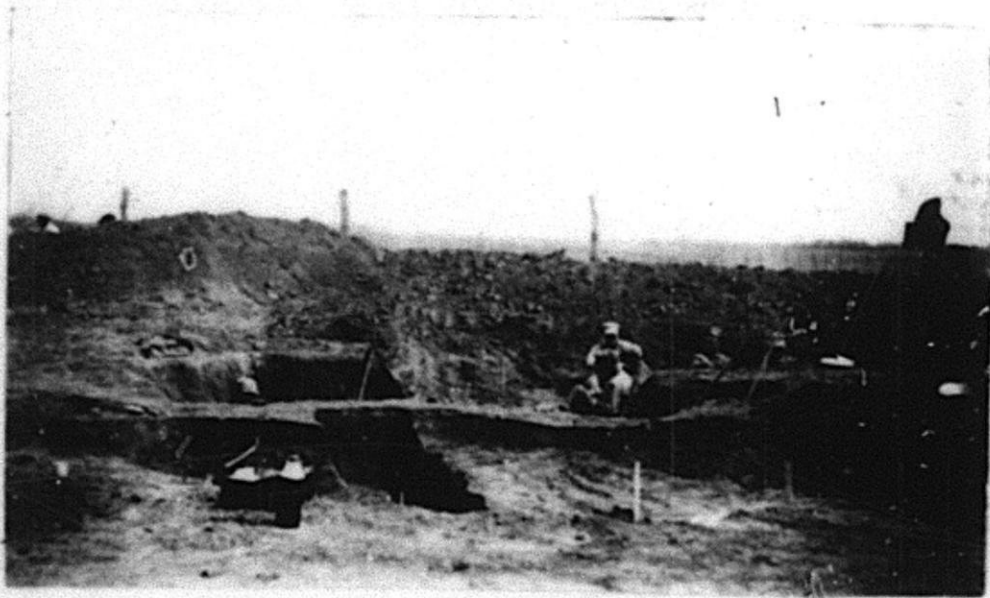
896 pieces of pottery and other artifacts were sent in, of which, as in all other houses, a comparative study will be made.



Top of Human Skull on south-east side of Pit of House Site A About eighteen inches below natural surface. Looking south. Note gopher hole with small pottery sherds in the earth filling it, just below garden trowel.



Excavation in House Site G  
 Ashes of central fireplace at left center - # 1  
 Refuse - storage pit # 1 at back center - # 2



Men at lunch, House Site G.  
 Looking west.



### Earth Lodge, House Site N (H.S.N.)

This House is the center one of a string of three along the crest of a divide between lateral branches of Pony Creek coming in from the west, and on the SE SW Sec. 33, T. 73, R. 43 west of the 5th P.M., a forty acres of timber north-west of Glenwood.

A survey locating these sites is as follows:

From the south-west corner of the SE SW Sec. 33, north along the forty line, 13.60 chains to the north gate post; thence, N 81 $\frac{1}{2}$  E, 5.00 ch.; thence, N 84 E, 3.25 ch.; thence, N 63 E, 2.15 ch. to center of H.S.O. Thence from beginning of last course, N 55 E, 2.35 ch.; thence S 31 E, 2.00 ch.; thence N 62 E, 55 links; to center of H.S.N. Thence from beginning of last course, S 33 E, 2.00 ch.; thence, S 52 E, 2.00 ch.; thence, S 55 E, 1.00 ch.; thence S 68 $\frac{1}{2}$  E, 2.80 ch.; thence S 42 $\frac{1}{4}$  E, 1.50 ch.; thence S 31 $\frac{1}{4}$  E, 2.50 ch.; to a point 10 links south of hickory in the center of H.S.M. Fence on the section line, 71 links south.

The center of H.S.N. has been extensively "dug" by relic hunters, (It is reported that a pot was found by one of them) and because of this digging and the trees growing in and around it, the exact outline of the surface basin was hard to find and the boundary of the excavation necessary to make, was hard to determine.

The central fire had been nearly obliterated, but the traces of it left indicated a diameter of between four and five feet. The locations of the four main posts were found by shaving the floor.

Including the eight in the entrance, we were able to locate enough carbonised stumps of wall posts, by the help of which, much figuring and a great deal of shaving of the house floor, which could easily be made out, around the perimeter of the house pit, we found a total of the holes of 56 wall posts.

The dimensions of the house as indicated by these post holes was 28 feet north and south and 27 feet east and west. The direction of the center line of the entrance was S 57 E. Only 14 feet of this was excavated because of young trees growing in it.

The house was square with round corners and slightly bulging sides, and oriented N 52 W. The walls of the house pit could only be approximately located by the wall posts, and had not been plastered.

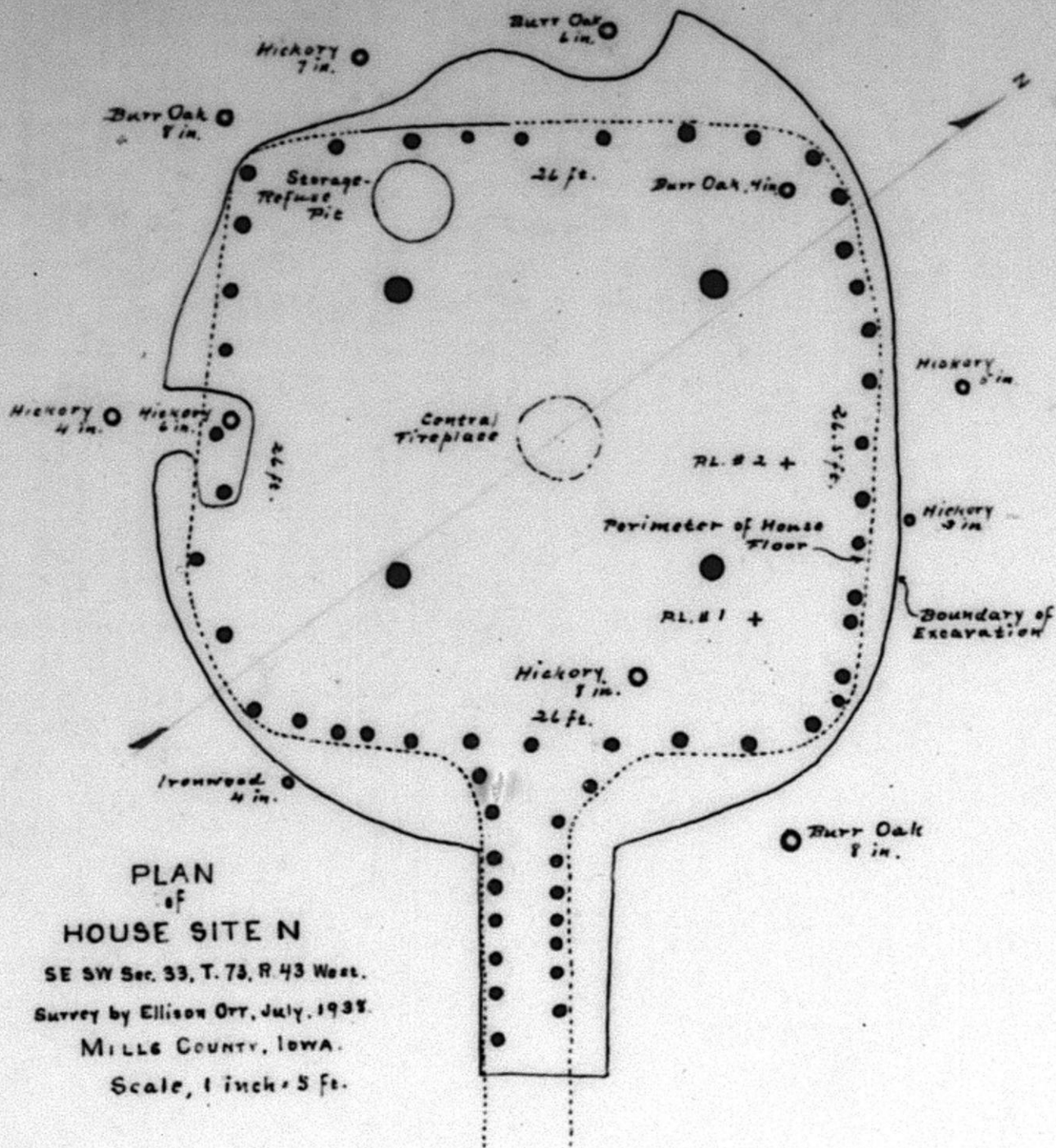
Some clay had been used on one place on the roof, as indicated by a patch of daub with grass stem impressions, on the house floor between the central fire and the entrance.

The one storage-refuse pit near the north-west wall was barren of any inclusions. At Pl I nearly due east of the central fire-place the most of a large pot with indented collar, and a few sherds of another, and a solitary plain collared piece of another, with enough scattered small sherds, 21 flint flakes, and 50 clam shells, were found, to bring the total number of inclusions sent in up to 103. A very poor showing of inclusions.

But then for the first time we were able to locate the entrance, and we believe, all of the wall posts, and we felt that we had accomplished something.

The floor of this house, as well as of H.S.O and H.S.M. was level from side wall to side wall.

Excavation commenced May 27th, completed July 8th.



**PLAN**  
 of  
**HOUSE SITE N**  
 SE SW Sec. 33, T. 73, R. 43 West.  
 Survey by Ellison Ott, July, 1938.  
 MILLS COUNTY, IOWA.  
 Scale, 1 inch = 5 ft.



### Earth Lodge, House Site X-16 (H.S.X-16)

Commenced excavating this small site on the crest of a rather sharp divide between two tributaries running north into Pony Creek, Aug. 29th, and completed the restoration, Sept. 15th.

On the Frank Pitzer farm, on the SW SE Sec. 22, T. 73, R. 43, west of the 5th P.M., at 11.75 chains east and N 27 $\frac{1}{2}$  W, 4.17 chains along the crest of the ridge, from the one-fourth section corner on the south line of Sec. 22.

Like all other house sites this one was indicated by the circular basin, the center of which was 30 inches below the top of the 6 inch high embankment surrounding it.

But the house itself was square, 24 X 24 feet, with rounded corners, as indicated by the posts that supported the side walls, the west, north and east sides slightly bulging outwards, oriented north and south, with the 5 ft. wide entrance extending at right angles out from the center of the south side for a distance of 24 feet.

On pasture land that had never been under cultivation, with a spring twenty rods east in a deep ravine, this is the only location of a house near one.

The central fireplace, 36 in. in diameter, was 25 in. below the surface of the basin at its center, or 49 in. below the natural surface of the crest of the divide.

Four main and fifty-six wall posts, including the eleven in the entrance, were located beyond question as shown on the plan.

The center of the floor was approximately 6 in. lower in the center than at the sides. This was characteristic of all the houses north of Keg Creek excavated by us excepting sites M, N and O.

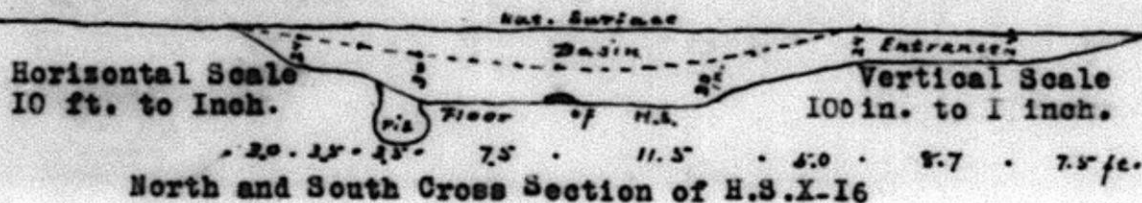
Scattered over the house floor excepting near the fireplace, were abundant pottery sherds but no concentration in fact.

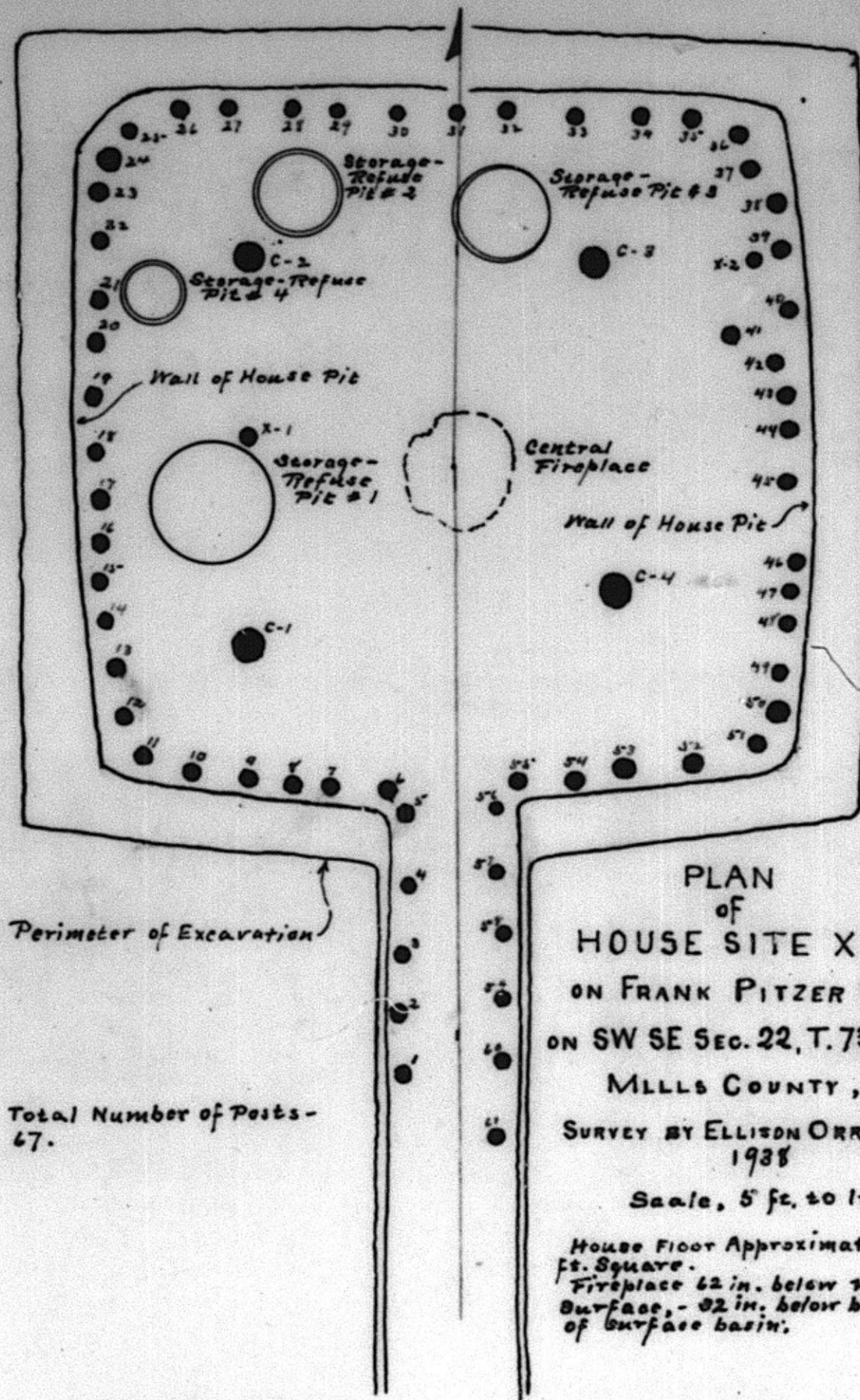
For the first time we found in this site, sherds fused by the great heat of the burning house.

There were four storage-refuse pits, as usual more than 8 ft. out from the central fireplace:

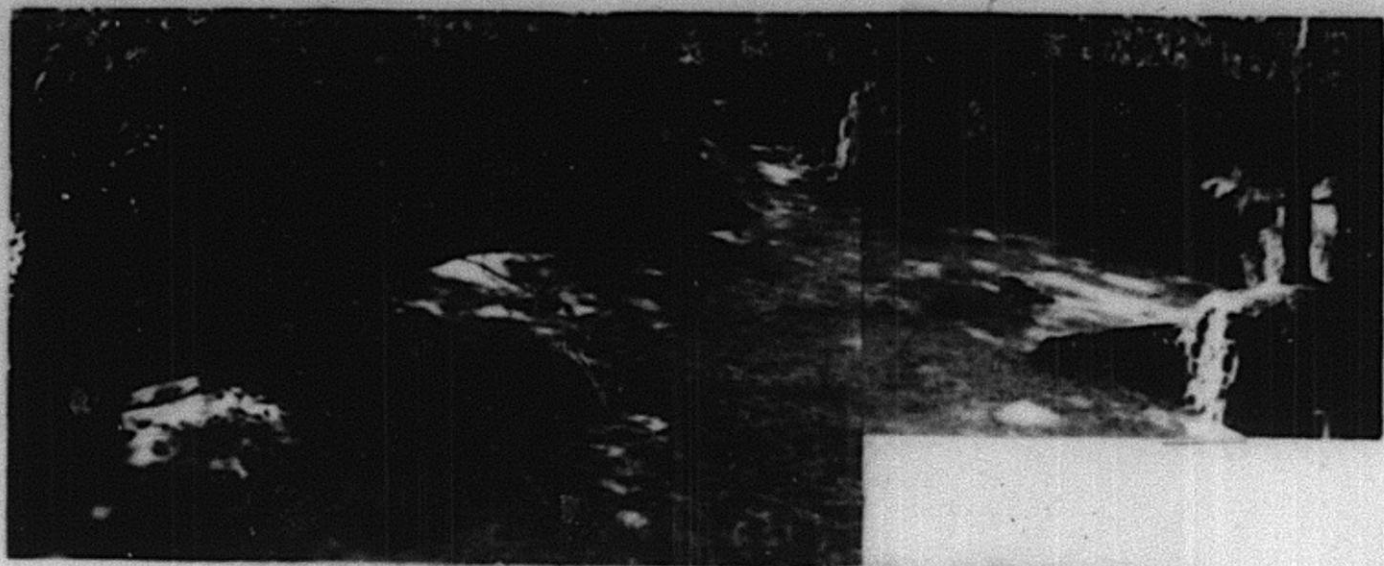
- 1, 54 in. in diameter and 42 in. deep.
- 2, 34 in. in diameter and 54 in. deep.
- 3, 42 in. in diameter and 40 in. deep.
- 4, 25 in. in diameter at floor, 40 in., at 20 in. below, 32 in. deep.

Besides many good pottery sherds, one of which was shell tempered, was the clay effigy, for description and outline of which see page 34; a clay, nearly straight, trumpet pipe, 2.25 in., for sketch of which see page 54; an ornament of white stone with two holes for string, oval, 2.1 in. long by 1.3 in. wide; a shoulder blade digging instrument; a boat shaped abraider like those on the Upper Iowa, 5 in. long, 1 and 1/8 in. wide and 1 and 3/8 in. thick with groove on top 1/8 in. wide for the entire length; and 30 well preserved clam shells.

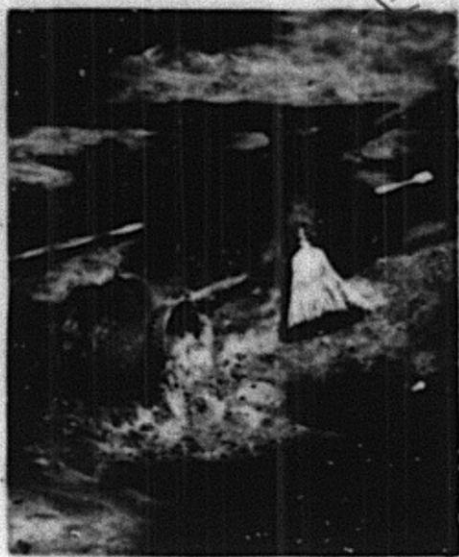
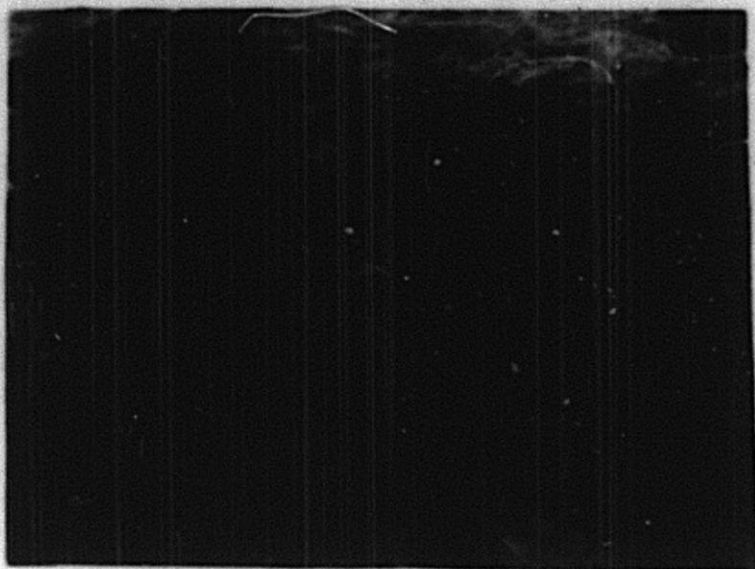








Floor of House Site N, Looking South, 3 57 E, Toward  
Entrance.



Pottery Peci, PL #1 and PL #2, in House Site N.  
Looking East



Starting Work on House Site X-I6. Looking South.  
Note Depth of Basin.



Plan of House Floor of House Site X-I6. Looking South

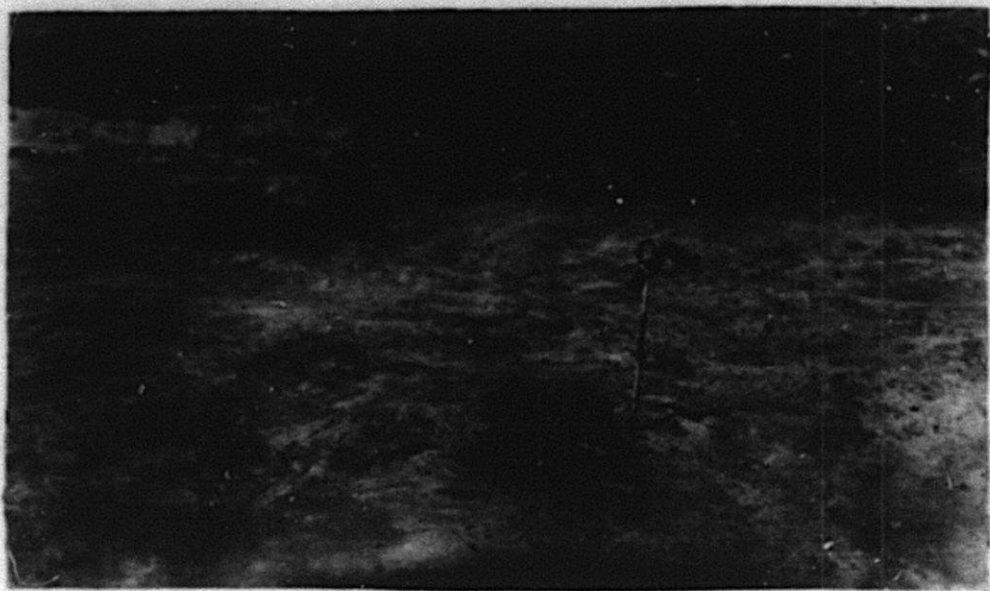




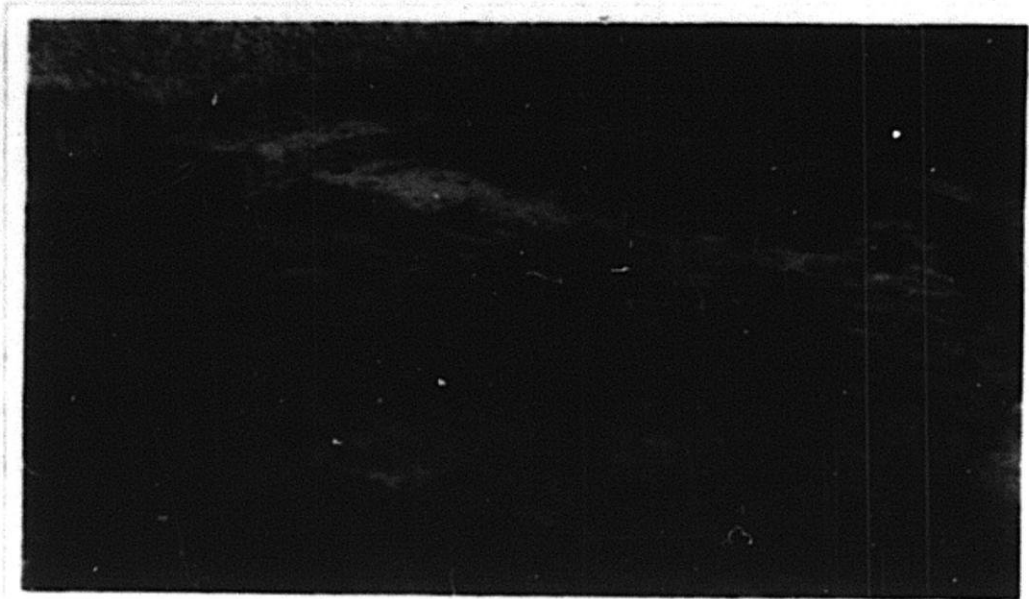
Sherd of one-fourth of Recurved Rim Pot, in situ in  
House Floor of H.S.J



Sivert holding Trumpet Pipe from H.S.J. Pottery sherd at right  
Knee.



Carbonized Stump of north-west Main Post, H.S.J.



Plan of House Floor of H.S.J. Looking north from top  
of Hickory Tree.



Earth Lodge, House Site, F (H.S.F.)

In a corn field on the divide between Horse Creek and that of the mile long valley of a tributary of Keg Creek, the center of which is 212 ft. east and 132.5 ft. south of the I/16 section corner in the center of the SE SW Sec. 24, T.72, R. 43 west of the 5th P.M.

The surface basin was entirely obliterated by cultivation, and the location was determined by the different colored earth thrown out of a pit dug by relic hunters some years ago in the west part of the site, shown us by the owner of the land.

Besides some pottery sherds, the parties digging found a celt which they sold to Paul Rowe of whom we obtained it.

On the location pointed out we excavated a circular pit, with the relic hunter's digging just inside the west margin, 36 ft. in diameter, and 30 in. to the south of the center of which, at 48 in below the natural surface of the field, the central fireplace was found. Two other fireplaces were located, N 72 E of the central one at 8 and 17 ft. respectively.

The floor of this house was unusually concave, the center being approximately 12 in. lower than the periphery.

A total of 9 carbonized post stumps were found, five in the north-west, three in the south-west, and one in the north-east quarter.

It might have been possible to have accepted the eight posts in the north-west and south-west quarters as part of those of a west wall of a house thirty feet square, with fireplace # 2 as that of the central fire, except that the posts do not form a continuous straight line, that posts # 7 and 8 had a diameter of twelve inches, that of main posts, and that pottery and other artifacts were found at the floor level six feet outside such suppositional line.

As the post stumps found afforded no data from which to calculate the position of others, and considerable skimming failed to reveal any others, the plan of the framework and entrance is not known.

No storage-refuse pits were located but the house floor afforded many good pottery sherds, - ten foci being noted. Other good material found being: 2 triangular notched arrow-points; besides the celt obtained of Paul Rowe, one with the poll broken off; a cache of 6 Nehawka curved flint flakes; stem of a broken clay pipe; and bone awls and other flint pieces.

A total of 382 pieces were sent in.

While the number and kind of inclusions was fair, the third failure to settle what the shape of the lodges was like and where the posts were located, was disappointing.

Excavation begun May 10th, completed May 16th.





## Earth Lodge, House Site Q (H.S.Q.)

This, the largest site found, indicated by a surface basin, 62 ft. in diameter, and though for many years under cultivation, still having a depth at the center of .9 ft. below the surrounding surface and encircled by a pronounced embankment, 6 in. high, was located on one of the most slightly points on the crest of the divide between Pony Creek and the Missouri river.

To the north and south they looked across far stretches of forest clad rugged hills, to the east the prairie ran billowing for miles to the sky line, and west, three hundred feet below, the wide valley of a great river which began and ended beyond their ken, the paradise of the waterfowl with its elbow lakes and marshes, ran to the bluff line, the beginning of the vast treeless country, teeming with the buffalo, that extended to the mountains many a days journey away.

In the base to the north was the Council Bluff, and to the south the King's Bluff of the white man loomed against the sky.

On the SW SW Sec. 21, T.73, R. 43 west of the 5th P.M., at 7.50 ch. west and 5.10 ch. north of the south-east corner of the SW SW Sec. 21.

From north to south across the basin a four foot wide trench was dug and at its center the fireplace, three feet in diameter, was encountered at 36 in. below the bottom of the basin, - 3.9 ft. below the natural surface.

A second four foot wide trench was next dug east and west across the center, and like the first, 3.9 ft. down to the house floor, after which the north-west and south-west quarters were excavated, by successive shovel depths, down to the floor.

No entrance was discovered.

Only four carbonized post stumps were found. No. 2, 12 in. in diameter, was but 7 ft. N 53 W of the fireplace. Not enough evidence was furnished by these stumps to enable us to locate any others. Extensive skimming was done but no post holes were found.

Around the outside of the pit excavated there was a pronounced excavation (bench) of the floor ten feet wide, 15 in. higher at the back and 10 in. at the front next the center, where for 18 in. there was a noticeable slope down to the level of the central floor.

Along this drop there were five storage-refuse pits, as follows:

Pit 1 in the SW quarter, 21 in. in diameter, 20 in. deep.

Pit 2 in the NW quarter, 36 in. in diameter, 17 in. deep.

Pit 3 in the SW quarter, 24 in. in diameter, 20 in. deep.

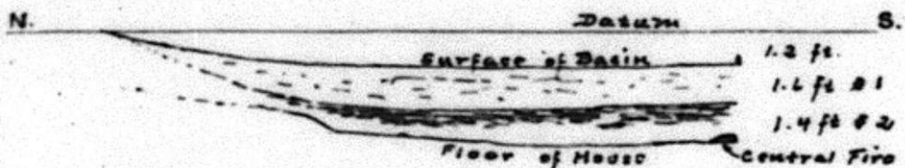
Pit 4 in the SE quarter, 24 in. in diameter, 20 in. deep.

Pit 5, in the SE quarter, 36 in. in diameter, 48 in. deep.

Storage-refuse pit # 4 contained much charcoal mixed with clay and black soil and sherds, including one of 2/3 of a pot, but none of the bottom. In pit # 5 the contents were similar to those in # 4 except that there were no large sherds. Pits 1, 2, and 3 were filled with dark colored clay, bits of charcoal and a few small pottery sherds.

Six pottery foci were found, and at different places, a bead, horizontal lug with vertical hole, a gaming stone, and a chipped quartzite celt.

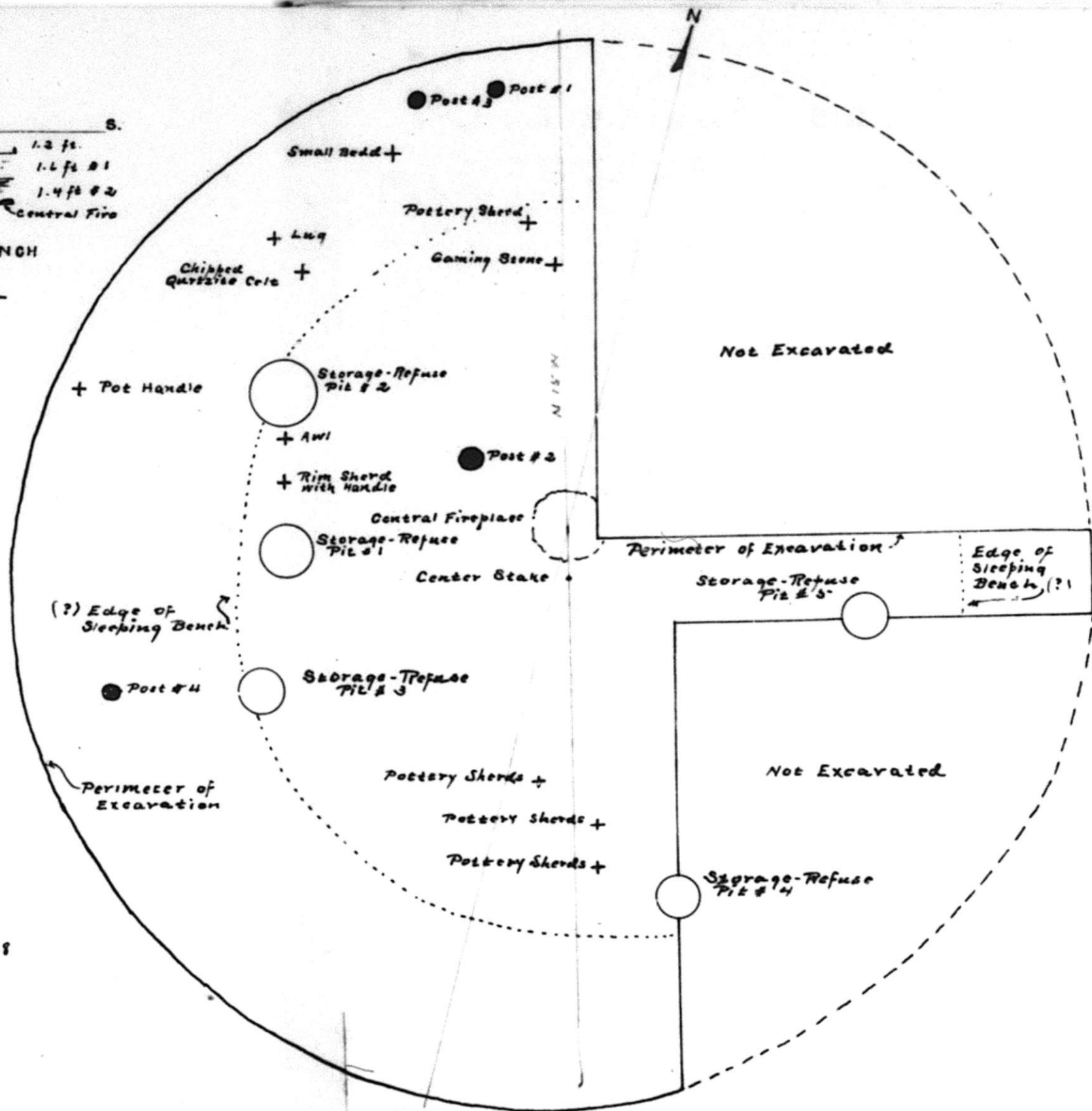
But 154 articles from this site were sent in. We had expected much from this large site but so disappointed were we at our failure to locate the posts and at the few inclusions that we quit work on it when but about half through. Excavation commenced May 26th. Refilling completed June 17th



PROFILE OF EAST SIDE OF N and S TRENCH

#1 Deposited since Cultivation began.  
 #2 Deposited prior to white settlement - includes earth of roof.

PLAN  
 of  
 HOUSE SITE Q  
 SW SW Sec. 21, T. 73, R. 43.  
 MILLS COUNTY  
 IOWA  
 Survey by Ellison Orr, June, 1938  
 Scale, 5 ft. to inch.





### Earth Lodge, House Site J (H.S.J.)

The surface bowl of this small house was 29 ft. north and south, and 28 ft. east and west, and had a depth at the center of 18 in.

A survey locates it on the top of a spur south of the east branch of Pony Creek on the SW NW Sec. 10, T. 72, R. 43 west of the 5th P.M., as follows: From the south-east corner of the SW NW Sec. 10, west 7.70 ch. along the 1/8 Sec. line to the old south-east corner of fenced lot; thence, north along the division fence, 6.90 ch.; thence, west, 90 links to the center of House Site J

From the center of H.S.J., mound #1 of Group #2 bears S 10 W, 1.50 ch. In this mound was a wholly Glenwood culture; A 5 and 1/2 in. pot; A pottery focus; a small trumpet pipe; and a charcoal area. All at slightly below the natural level.

It is possible that all these may have been intrusive and may have some connection with H.S.J.

These sites in brush covered pasture with scattering shell-bark hickory trees scattered about near by.

This H.S. was excavated by removing a spade deep at a time over the entire basin area down to the floor at 33 in. below the natural level. Fire place at center, 30 in. in diameter.

The fine carbonized stump of the NW main post, with the central fireplace gave us sufficient data to locate the remaining three main and twelve of the wall posts. Though we failed to locate others certainly, there were enough to show that the house was square with rounded corners.

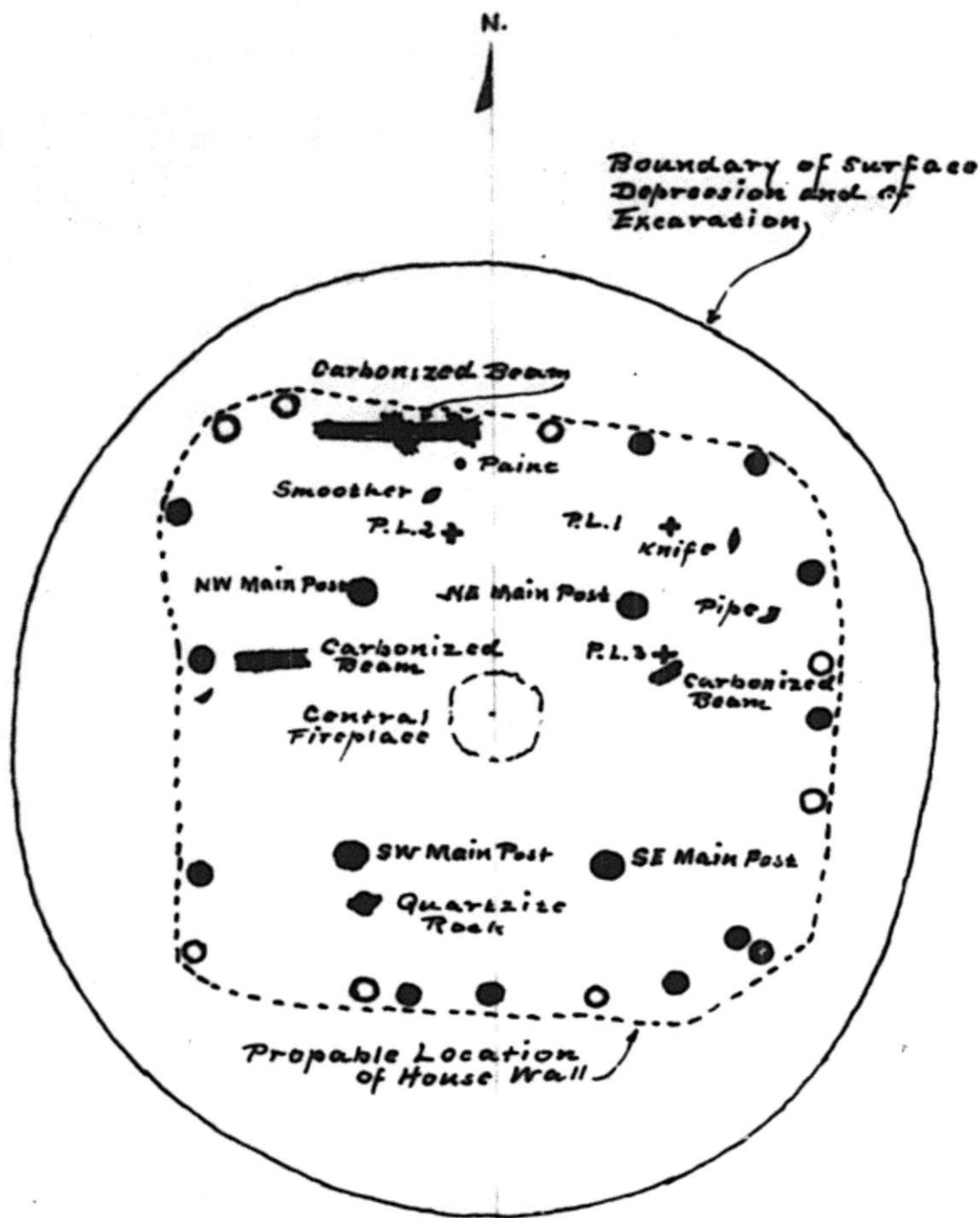
Along the north wall was the charred remains of a beam, 5 ft. long lying just above the floor, west of the fireplace a 2 ft. long piece, and, east, one a foot long. The entrance could not be found.

Almost a complete pot was found at PL.I and near it a 2.4 in. long knife. To the south-east was a perfect elbow clay pipe, and to the south-west of this, one-fourth of the rim and body - extending almost to the center of the bottom, of another pot.

These four artifacts formed, roughly, a semi-circle around the NE main post, with a radius of from 2 to 4 ft.

From the remainder of the floor only small sherds of pottery were recovered. 207 pieces were sent in.

Excavation begun June 30th. Finished July 29th.



- - Main Support Posts.
- - Other Posts - Certain.
- - Other Posts - not Certain.

PLAN  
of  
HOUSE SITE J  
NWNW Sec. 10, T. 72, R. 43.  
MILLS COUNTY,  
IOWA.  
Survey by Ellison Orr, July, 1938.  
Scale, 5 ft. to 1 in.



### Earth Lodge, House Site O (H.S.O.)

House Site O is the most northwesterly of the string of three sites on the SE SW Sec. 33, T. 73, R. 43. Notes of survey exactly locating it will be found on page 77.

The three sites lie on the crest of a divide between two lateral branches of Pony Creek, in a forty acre tract of timber land, and the two burr oaks and the shellbark hickory growing in the site, and the double basswood on the margin, and other trees growing near greatly interfered with its excavation.

Also the central fire had been destroyed and all of the central part much dug over by relic hunters.

However as our experience had taught us that the storage-refuse pits and pottery foci were largely outside the central area around the fire, and as we at that time did not have enough sites in which we had obtained permission to dig, to last us for half the season, we concluded to excavate it and sites H, which also had been riddled by the relic hunters, and M, a small site at the extreme east end.

During the excavation the three trees inside it were blown down in a storm, necessitating payment for them.

A circular pit 30 ft. in diameter was dug down to the floor, 30 to 36 inches below surrounding natural level. By persistent skinning the four main posts were located, and sixteen others-smaller.

The location of these last was such that it was impossible to determine more than a probable approximate location of the side walls, and because of the earth thrown out by the relic hunters, the usual, flat encircling embankment was not in evidence.

No traces of clay plaster or of wattle and daub were encountered. In the south-west part a charcoal log, 3 ft. long and 5 1/4 in diameter, across which lay another, 1 ft. long, lay horizontally at 24 in. below the surface.

On the floor four pottery foci were located. In # 1 was nearly one-half of the high vertical rim and the upper part of the body of a vessel of which both rim and body were profusely decorated with vertical string impressions on which no smoothing had been done, and three other large sherds besides numerous small ones.

In # 2 another rim and attached part of body, which like the one from # 1, afforded a foundation for a restoration. Much broken large pottery sherds were found in # 3 and # 4. At other locations a clay bead and the stem of a broken clay pipe.

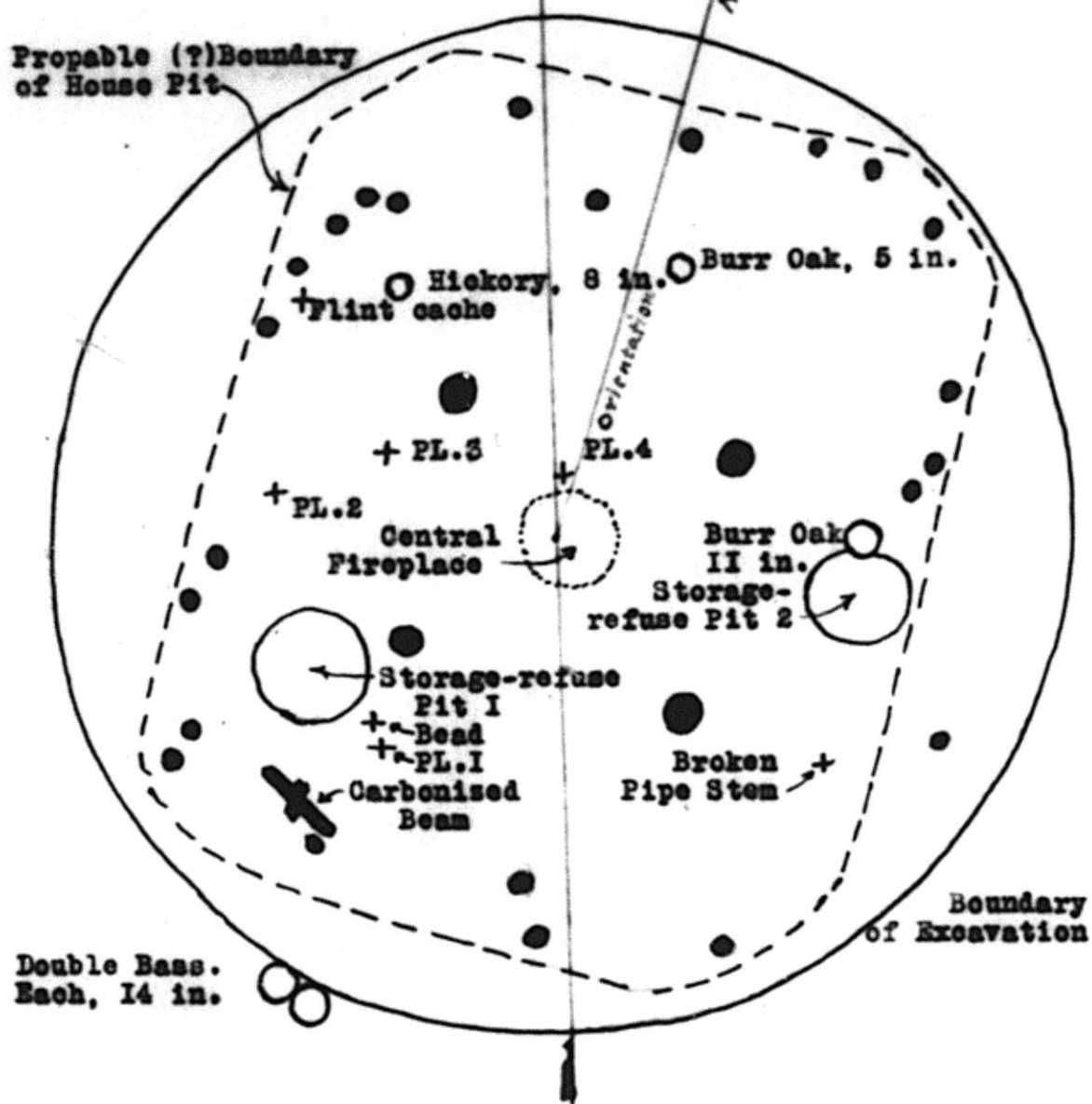
In storage-refuse pit # 1, 40 in. in diameter and 30 in. deep, and in # 2, 46 in. in diameter and 36 in. deep, - most of which was under the spreading roots of a burr oak tree, there were abundant pottery sherds.

A total of 706 pieces, including those affording at least two restorations, were sent in.

The orientation of the site was probably north-east. Entrance was not located.

Excavation commenced June 17th. Refilled July 25th.

Propable (?) Boundary  
of House Pit



Double Bass.  
Each, 14 in.

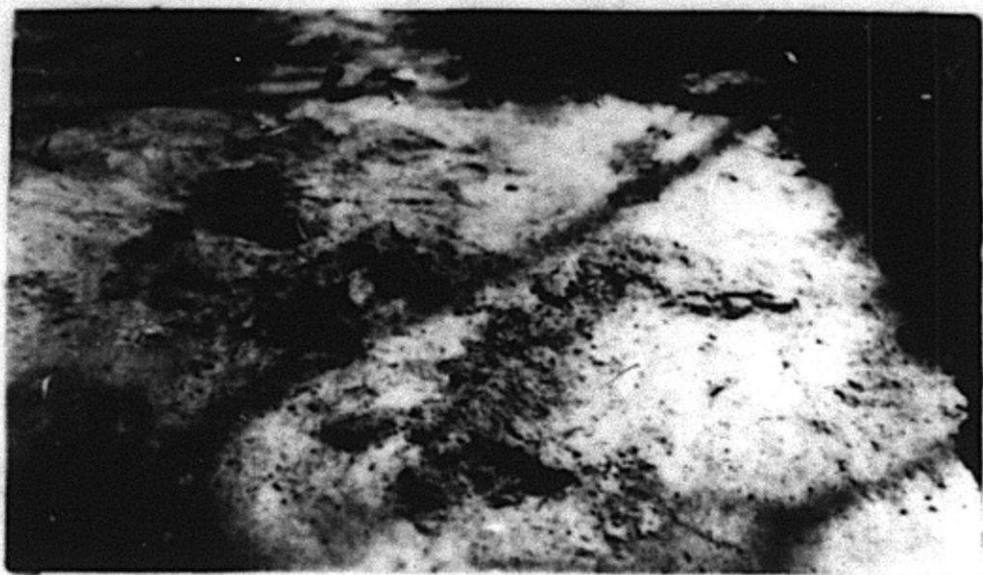
Boundary  
of Excavation

- - Main Support Post
- - Other Posts

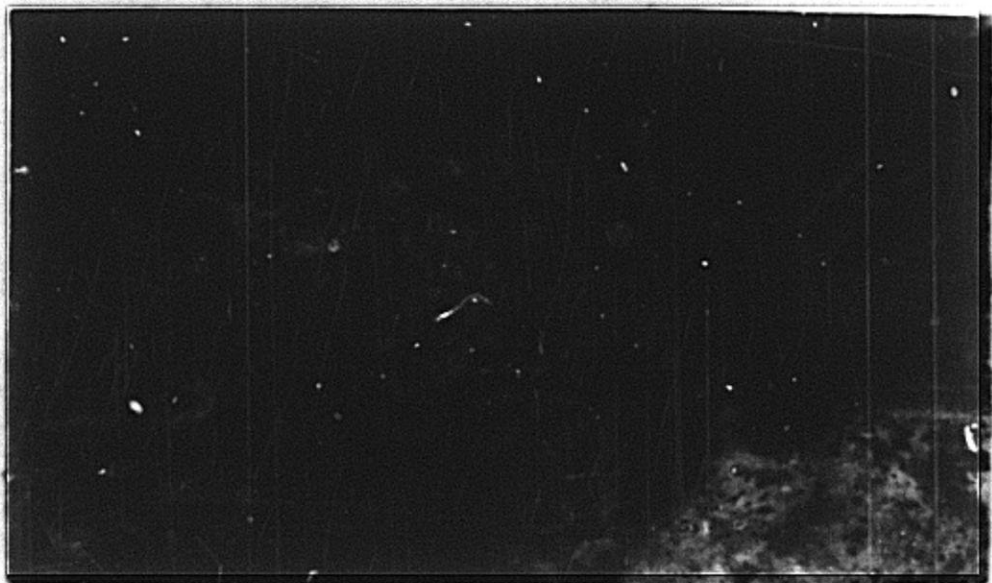
PLAN  
of  
HOUSE SITE Q  
SE SW Sec. 33, T. 73, R. 43 west  
Mills County, Iowa.

Survey by Ellison Orr, July, 1938  
Scale, 5 ft. to Inch.





Wattle on house floor of H.S.M. SE SW Sec. 35, T. 73, R. 43.  
Between fireplace and entrance. Hagenberger (Timmerman) Site



Storage-refuse Pit # 4, H.S.X-16, before excavating. Note ring of burned clay showing the outline of the mouth in the house floor. Pit jug-shaped and lined with burned clay. The best and most symmetrical pit yet opened, but contained only a clam shell and 2 or 3 sherds.

Earth Lodge, House Site X- (H.S.X.)

On a high point on the crest of the divide between Pony and Keg Creeks, on the west side of paved highway # 275, two and one-half miles north of the court-house square in Glenwood, Mills county, Iowa., and in the north-east part of the SW SW Sec. 35, T. 73, R. 43 west of the 5th P.M.

Center of the surface basin is 500 ft. south of the one-eighth section line on the north side of the SW SW Sec. 35, and 75 ft. west of the west line of highway 275.

Surface bowl is 61 ft. north and south and 66 ft. east and west, with a depth below the natural surface of 8 inches.

Usual encircling embankment has been destroyed by cultivation.

First dug trench 6 ft. wide and 65 ft. long north and south through center down to house floor. At central fireplace on house site floor and midway between the ends and in center of trench, was 45 inches below the low point in center of basin or 52 inches below natural surface. See profile, Page 96-A

Location of trench and of entrance coincided, and encountered post holes of wall posts at 18 ft. north and 17 ft. south of center of fireplace which was 6 ft. north and south by 3 ft. east and west.

The orientation of the site was N 9 and 3/4 E, mag. variation, 9 E.

After completing the trench and cleaning up the bottom, excavated pit. 19 ft. east and west and 40 ft. north and south on each side, removing one spade in depth at a time and cleaning up after each spading.

At a level which we afterwards found to be about 25 inches above the house floor, we found the almost continuous edge of a vertical stratum of burned clay.

Trenching around the site, along and just inside of this stratum, we found at a depth of 25 inches below the top, the well defined house floor, in which we found seven carbonized stumps of posts, locating the corners definitely, which gave us sufficient data to enable us after a due amount of calculating, and much skimming, to locate all the wall posts, a total of 72.

Inside on the burned loess clay, 25 inches high, wall were discontinuous patches of clay plaster, that when the house was burned, did not turn red like the loess of the wall. Following is a copy of the field notes on the occurrence of this plaster: "Patchily, along the entire side of the house pit the inner side of the wall was coated for 10 to 25 inches above the house floor, - the height of the earth side wall, - by a coat of daub one-half inch thick.

None was found on the east or south side.

This plaster was gray in color and was of the same material as the pieces which were scattered quite plentifully over the house floor and which were full of impressions of the turkey-foot prairie grass, but the wall plaster contained no impressions of grass.

It evidently had been smeared or daubed on the wall of the original house pit from the floor up to the natural surface.

Above that old original surface, since the building of the lodge, on this McManigal site, on the west side, 17 inches, and on the north side, 28 inches had accumulated.



As the carbonized stumps of the north-west and south-east main posts projected above the house floor, it was comparatively easy to locate the remaining two of the four. One other post, a small one, # 13, was located in the south-east corner. This one was probably set after the house was built to brace up some part that was giving way.

It will be noted from the plan that the main posts were 20 ft. apart. To support the heavy earth covered part of the roof that these posts carried would require large timbers 20 ft. long. Believing that other posts midway between, set in line or nearer the fire to help carry this burden, might be found, we spent most of two men's time for a couple of days skimming and boring for them but could find no trace.

The entrance which we fortunately found so easily in digging the reconnaissance trench, sloped upward from the house floor, at 22 ft. 9 in. out, as far as we excavated, still showed at 30 in. below the natural surface, (probably about from 6 to 10 inches when the house was built) the mottled black earth, just above the yellow clay, with pettery sherds, indicating the floor.

On its east side were 11 wall posts, on the west, 9.

The floor of the house was slightly basin-shaped, the center being .5 ft. lower than the 6 to 8 ft. wide bench next to the wall running entirely around the house.

The inner side of this bench was quite clearly indicated by a steeper upward slope for about 18 inches.

Skimming was done not only for the purpose of finding the post holes but to locate the mouths of the storage-refuse pits.

Of these we located six, five of which were in the elevated part next to the wall.

Pit # 1, S 30 W, 15 ft., 9 in., was 40 in. in diam. at the house floor; 50 in. at 2 ft. below the top; 30 in. at the bottom and 52 in. deep.

At 30 in. deep was a stratum of charcoal, below that, 3 mandibles cut off before the pre-molars and end rounded, one with cut back of and outside the last molar; 3 shoulderblade digging implements; 1 cut-off long bone with longitudinal crease; 1 foot bone; 1 toe bone; 23 body sherds; 3 vertical rims; 1 scraper; 2 worked flints; 2 clam shells.

Pit # 2 42 in. in diam. at house floor; 82 in. deep. Contained a bone awl and 1 clam shell.

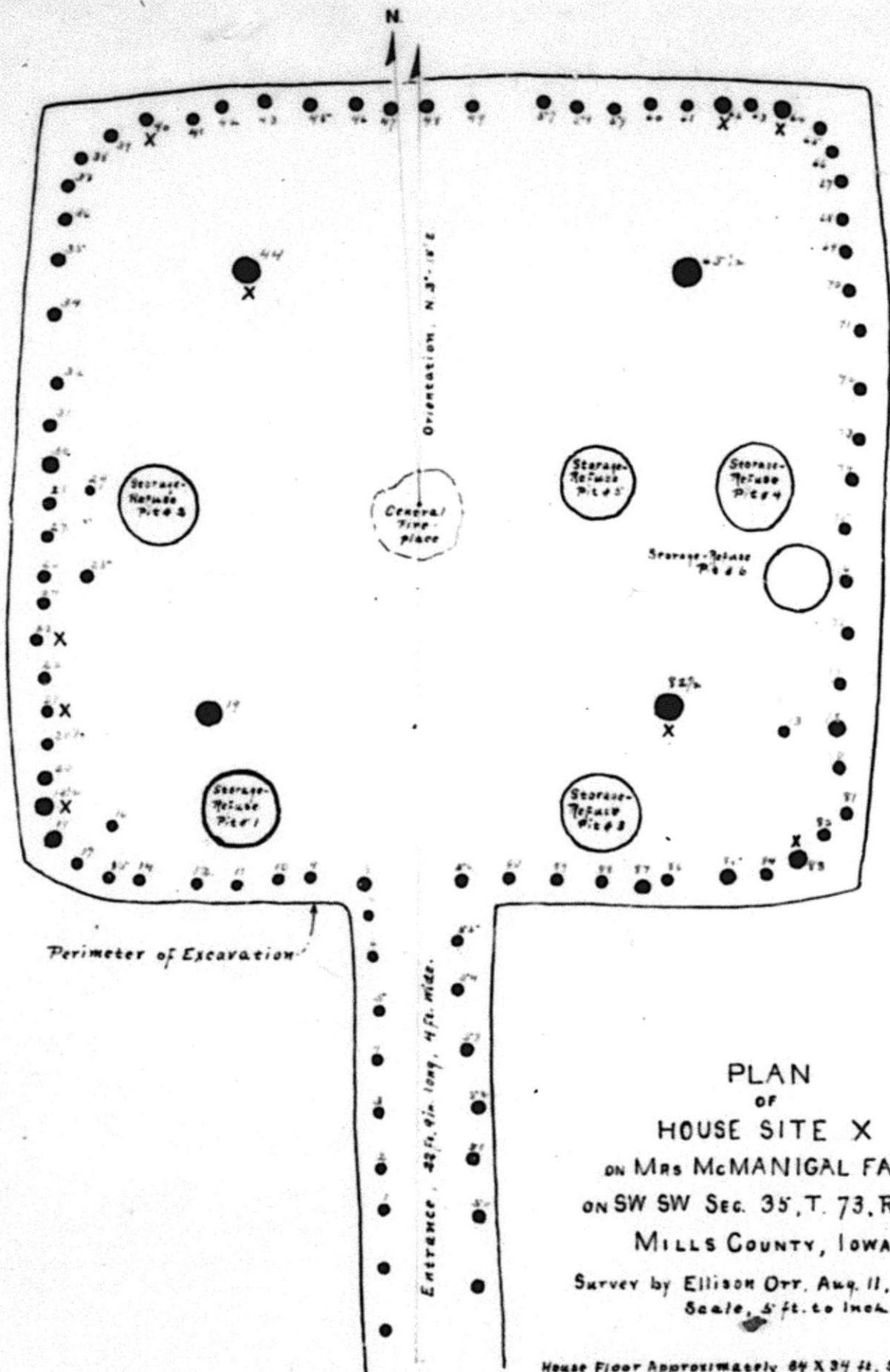
Pit # 4 N 86 E, 15 ft. 3-4 ft. in diam at house floor.

Pit # 5 7 ft. west of Pit 4. 3 ft. in diam. 3 ft. deep.

Pit # 6 4 ft. 6 in. SE of Pit # 4. 3 ft. in diam., 1 ft. deep. Contained 12 body sherds; 1 detached handle; 1 vertical rim; 1 long Nehawka flint flake; 5 other flint flakes; 4 clam shells; 20 hand size stones.

Scattered over the floor outside the central area, 12 ft. in diameter; 89 rim sherds; 510 body sherds; 2 restorable pots; 1 sherd stained red; 4 detached handles; 1 clay pipe stem; 2 triangular notched arrow points; 9 snub nose scrapers; 7 other scrapers; 119 flint flakes; 1 flint core; 3 bone awls; 5 "door knobs"; 2 celts; 2 smoothing stones; 3 abraiders, and other artifacts. Totaling 897. This was the most symmetrical large house excavated.

Excavation commenced Aug. 1st. Restoring finished, Sept. 14th

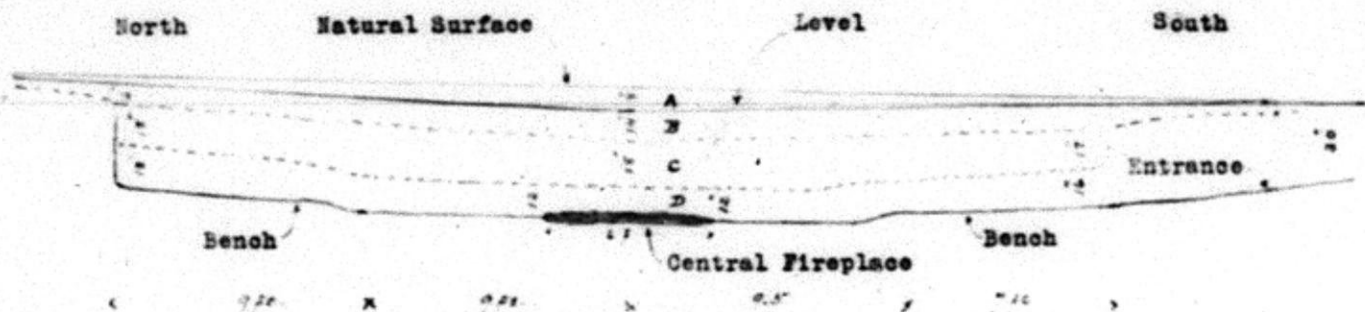


PLAN  
OF  
HOUSE SITE X  
ON MRS McMANIGAL FARM  
ON SW SW SEC. 35, T. 73, R. 43 WEST.  
MILLS COUNTY, IOWA.

Survey by ELLISON OTT, Aug. 11, 1938.  
Scale, 5 ft. to inch.

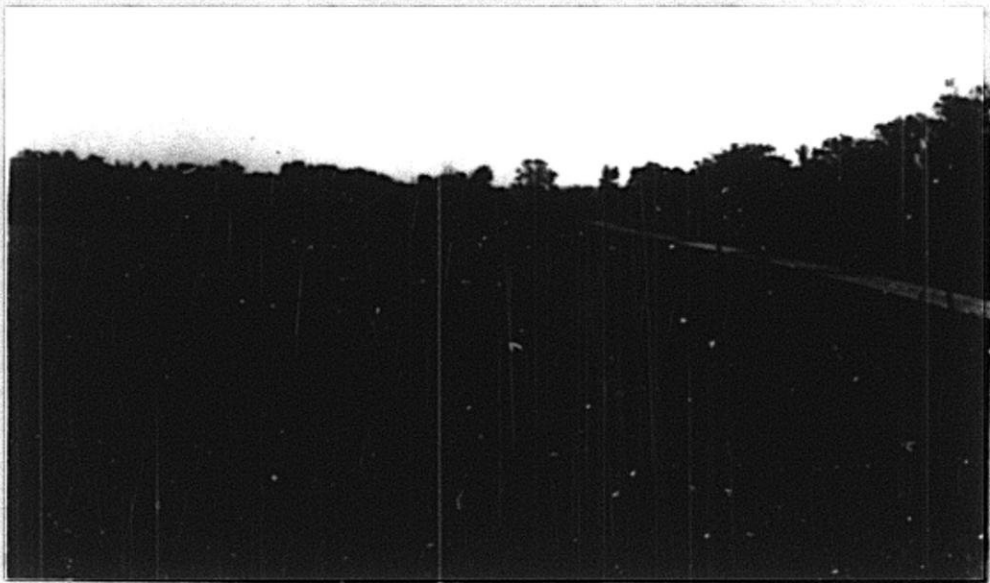
House Floor Approximately 84 X 34 ft. Square.  
Fireplace 34 inches below surface of basin.  
Entrance, 42 ft., 9 in. long, 4 ft. not excavated.  
X - Carbonized Stump Marks Position of Post.



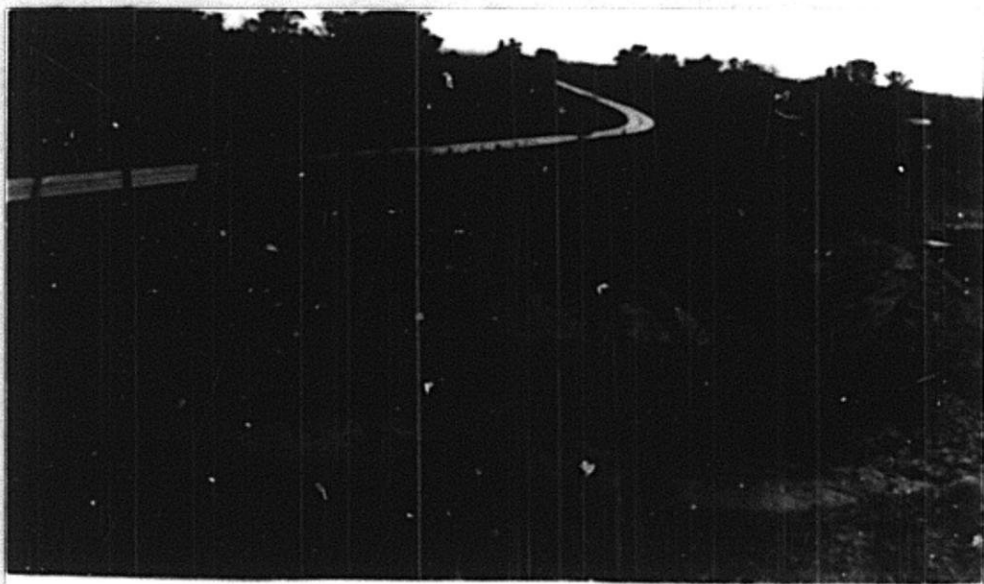


Profile of Earth Lodge I  
North to South through center.

- A - Basin, - 8 inches below Natural Surface at Center of Lodge Site.
  - B - Soil washed and plowed in since Cultivation began. *Destroyed*
  - C - Accumulated Dust and Humus from time Lodge was ~~occupied~~ to Time of White settlement.
  - D - Fallen-in Earth Covering of Roof.
- Scale, 5 feet to Inch.

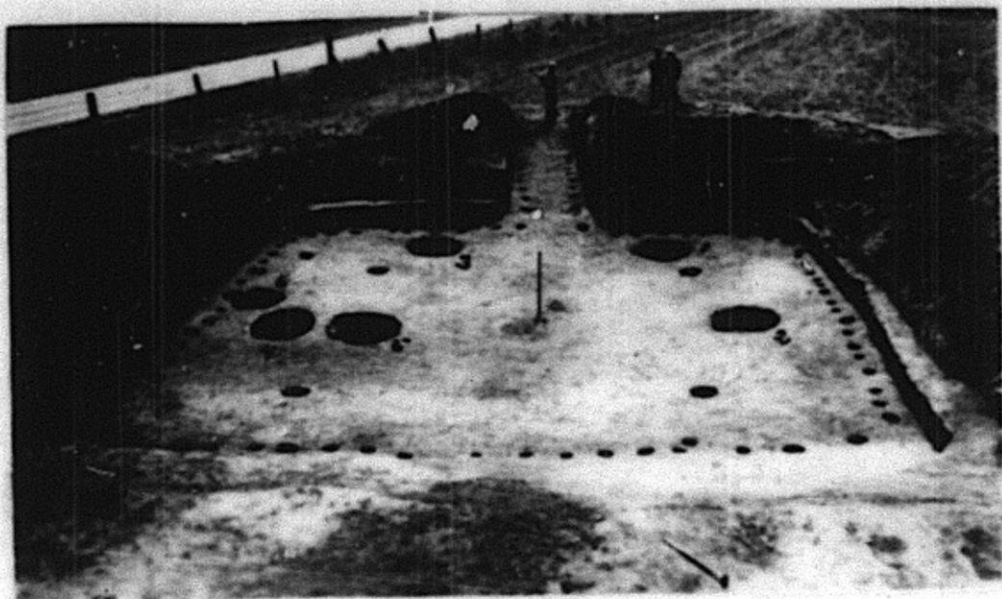


Men Cleaning up Bowl of Earth Lodge X, the McManigal Site before Excavation.

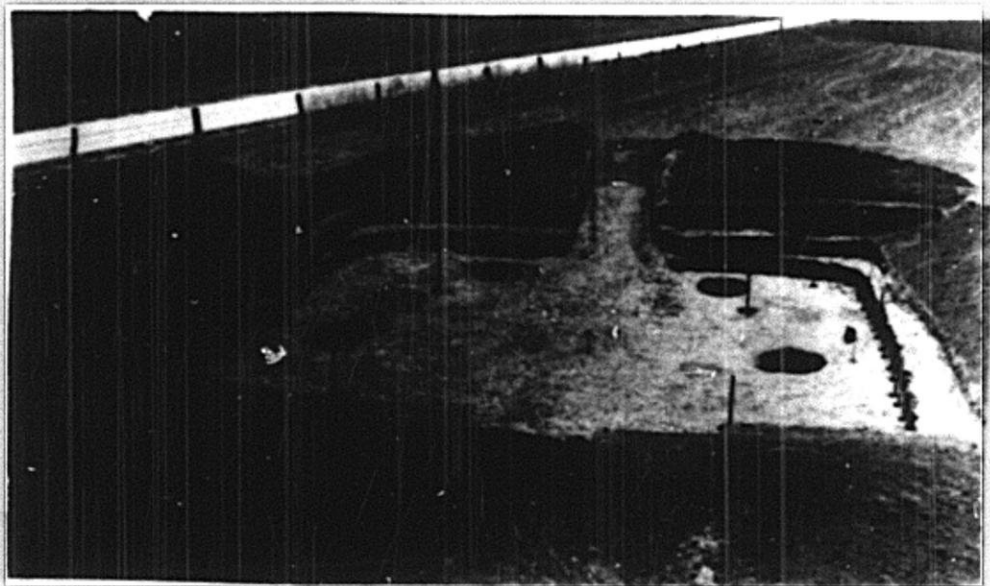


View of House Pit, McManigal Site from the North. Men at Work sloping north bank in order to be able to get more complete photograph.

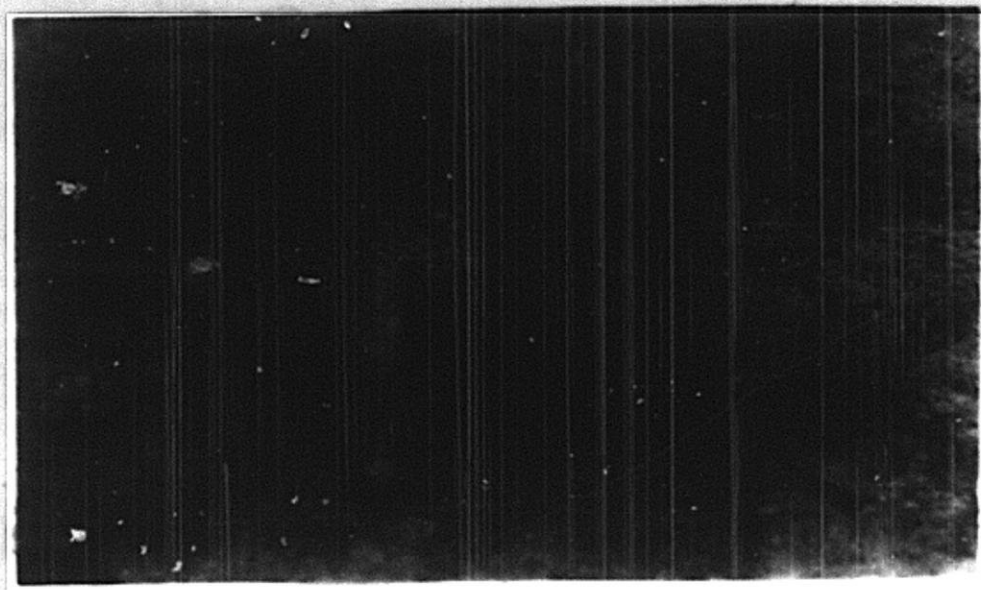




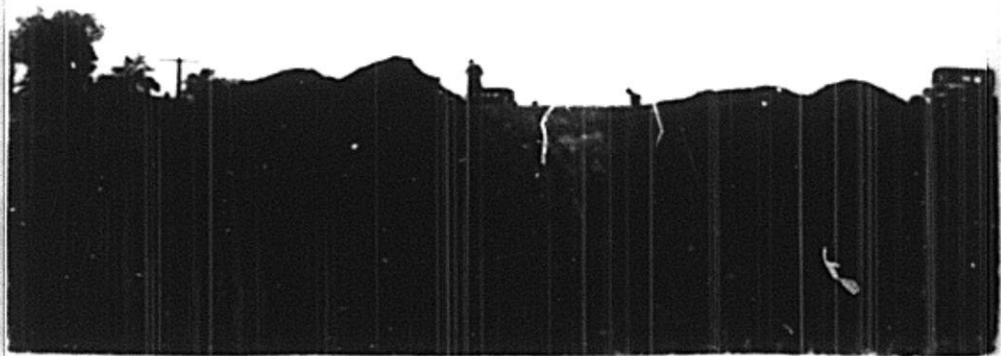
Floor Plan of Earth Lodge X, the McManigal Site, two and one-half Miles north of Glenwood, Mills County, Iowa, on Highway # 275. On SW SW Sec. 35, T. 73, R. 43 west of 5th P.M. This photograph taken from the top of a 20 ft. ladder stood on end. Looking south. Side of excavation on the north side sloped off in order to show wall post holes on that side. Stake in center of fireplace. Numbers in red ink indicate Storage-refuse pits.



Same view as above but north end not sloped.



Carbonized NW Main Post of McManigal Lodge Site. Looking NW



Earth excavated from the McManigal Earth Lodge Site. Looking Sw.



### Earth Lodge, House Site X - IO, (H.S.X-IO)

A survey locates this site as follows: From the 1/4 Sec. corner in the center of Sec. 34, T. 73, R. 43 west of the 5th P.M., north along one-fourth section line, 3.45 ch.; thence, east, 5.59 ch. to center of House Site X-IO. On a high point of the divide between valleys tributary to the East Branch of Pony Creek, and 3/4 mile west of Highway # 275.

Surface basin almost filled by cultivation, - center but 8 in. below the natural surface. No encircling embankment.

Excavated a four feet wide trench north and south through the center down to the house floor, encountering the central fireplace, 4 ft. in diameter, at 54 inches below the bottom of the basin at its center, - 62 inches below the natural surface. This trench also coincided with the 4 ft. wide entrance, which we excavated for 24 ft. to the south or to the end of the wall posts on either side. At the end, 4 ft. farther, test holes showed the floor to be 1 ft. below the present surface or about at the natural surface when the house was built.

At 16 ft. north of the fireplace found two post holes of posts of the north wall.

From this trench excavated east and west 13 ft. to the house walls, these excavations being 30 ft. north and south, and covering the entire house pit, 30 X 30 ft. square.

The house walls were indicated at intervals by vertical patches of burned earth, and by not so many disconnected areas of clay plaster.

Carbonized stumps of wall posts at or near the corners, with an occasional one between, made the location of the outward bulging line of posts comparatively easy. At all four corners these posts were unusually large. The north-west corner was square, the others, rounded. The four 12 inch main posts were found by skimming. An additional post, 12 inches in diameter, was located 4.5 ft. S 14 W of the center of the fireplace, the only post so located found in any site excavated.

There was a total of 57 house wall posts, with 10 additional on the east and 11 on the west side of the entrance. In this site the main posts were well out from the center, and 14 ft. apart north and south, and 16 ft. east and west, - 4 to 6 ft. less than in the McManigal site. Eight inch horizontal beams would probably the required weight of roof in this house without additional central support.

The house floor consisted, as in other sites, of a central flat area around the fire, outside of which, next to the wall, was the encircling bench, 12 inches higher, next to the wall.

In cleaning up, six storage-refuse pits were located at the inner edge of or on the bench.

Storage-refuse Pit # 1 was 60 in. in diameter and 30 in. deep.

Storage-refuse Pit # 2 was 38 in. in diameter and 35 in. deep.

Storage-refuse Pit # 3 was 42 in. in diameter and 30 in. deep.

Storage-refuse Pit # 4 was 40 in. in diameter and 37 in. deep.

Refuse Pit # 5 was 48 in. in diameter and 52 in. deep.

From this pit, at a depth of 24 inches, was taken, except for one lug broken off, a complete globular plain pot, with a neck but .2 inch high.

|                         |            |
|-------------------------|------------|
| Shoulder diameter       | 3 inches.  |
| Depth                   | 1.6 inches |
| Diameter of round mouth | 1.9 inches |

Two horizontal half moon lugs, .5 in. wide, with vertical holes.

This pot had been "killed" by punching from the inside, a .2 in. hole through the bottom.

Storage-refuse Pit # 6 was 48 in. in diameter and 25 in. deep.

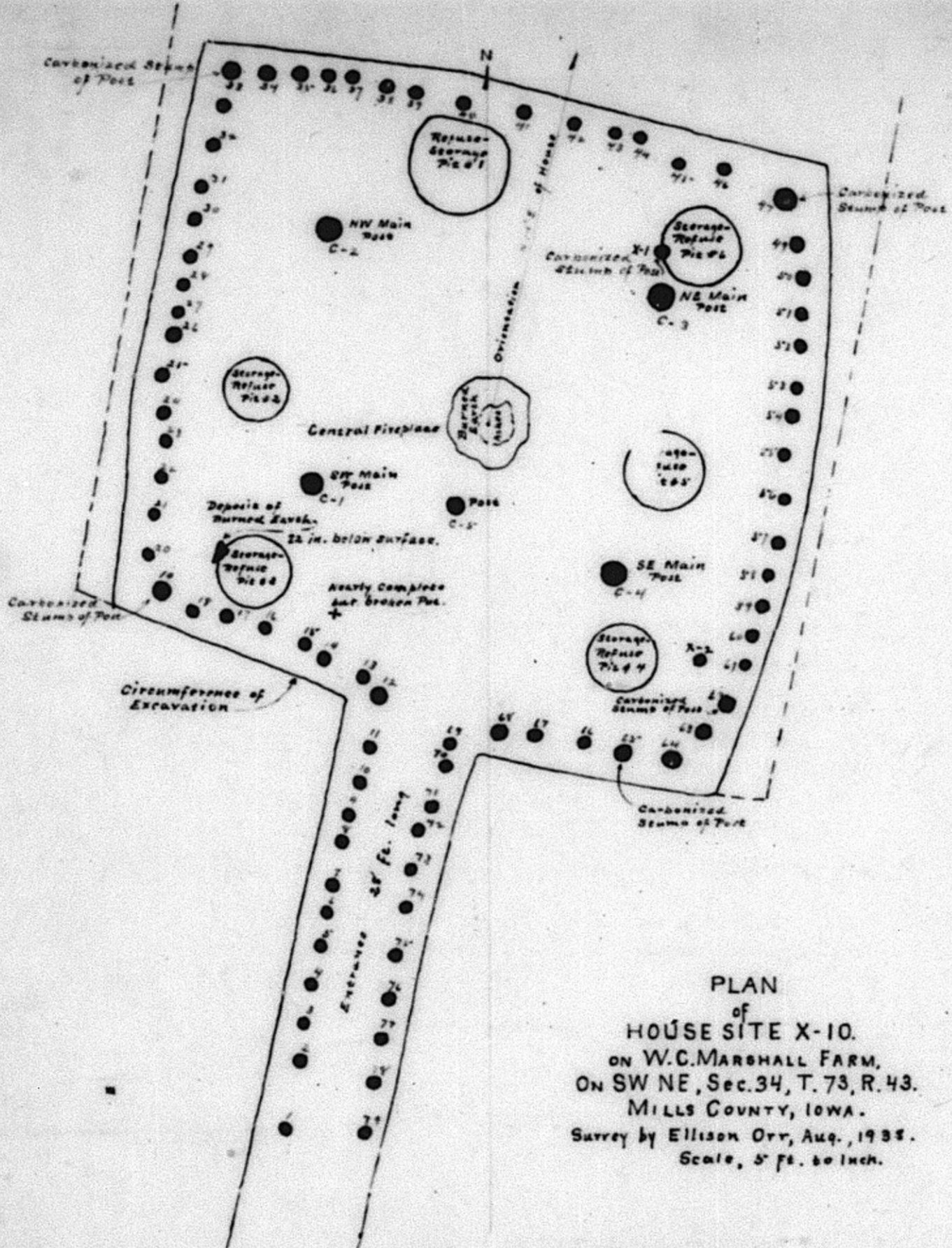
At S 60 W, 14 ft. from the center of the fireplace, and at 22 in. below the surface, there was found a heart shaped deposit of earth burned very red, 10 in. wide and 14 in. long, containing a very small amount of very fine sand. This had the appearance of having been in a pasty condition when placed there.

At S 20 W, 13 ft. from the center of the fireplace, and on the house floor, up side down, were the disarranged large pieces of a large pot. See photograph on page 107.

Besides the above, from the house floor and the storage-refuse pits, there was recovered 193 rim sherds; 1154 body sherds; 3 restorable pots; 14 fused body sherds; 10 detached pottery handles; 8 pottery sherds stained red; 1 vertical rim with incised lines on the side; 1 "fish tail" lug; 5 large rough triangular arrow points; 12 snub-nose scrapers; 211 flint flakes; 1 flint core; 7 shoulder blade digging implements; 48 clam shells; 1 worked bone; 5 paint stones; 1 diorite celt; 1/4 of crudely made pot, - resembles those found by Swearingen and McDowell on the State Farm; Six ten-row and two eight-row corn cobs; 1 fossil, brachiopod, a productus, and other inclusions, a total of 1790 pieces.

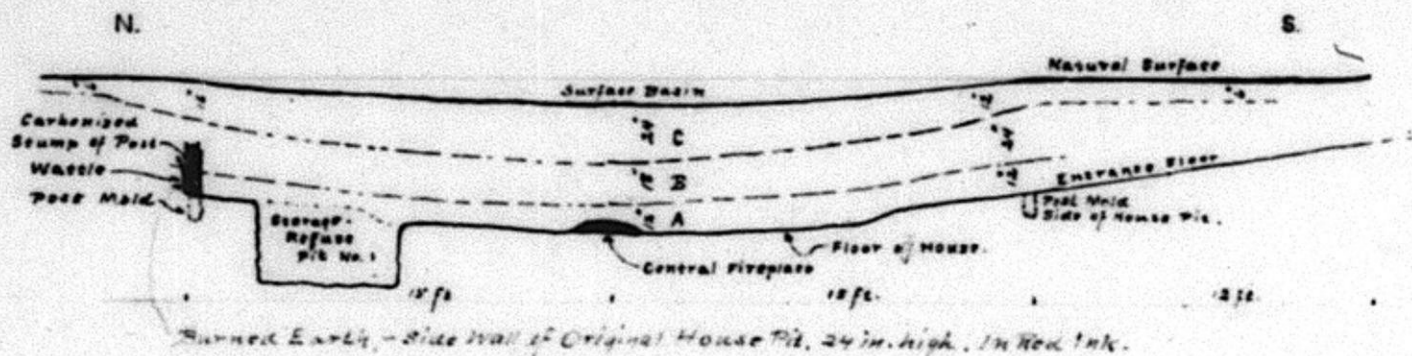
Orientation of site was N. 14 E.





PLAN  
 OF  
 HOUSE SITE X-10.  
 ON W.C. MARSHALL FARM,  
 ON SW NE, Sec. 34, T. 73, R. 43.  
 MILLS COUNTY, IOWA.  
 Survey by Ellison Orr, Aug., 1938.  
 Scale, 5' ft. to 1 inch.

House Floor, approximately 26 X 30 ft. square.  
 Fire-Place 32 inches below surface.  
 Entrance 28 ft. long.  
 Total No. Posts, - 56

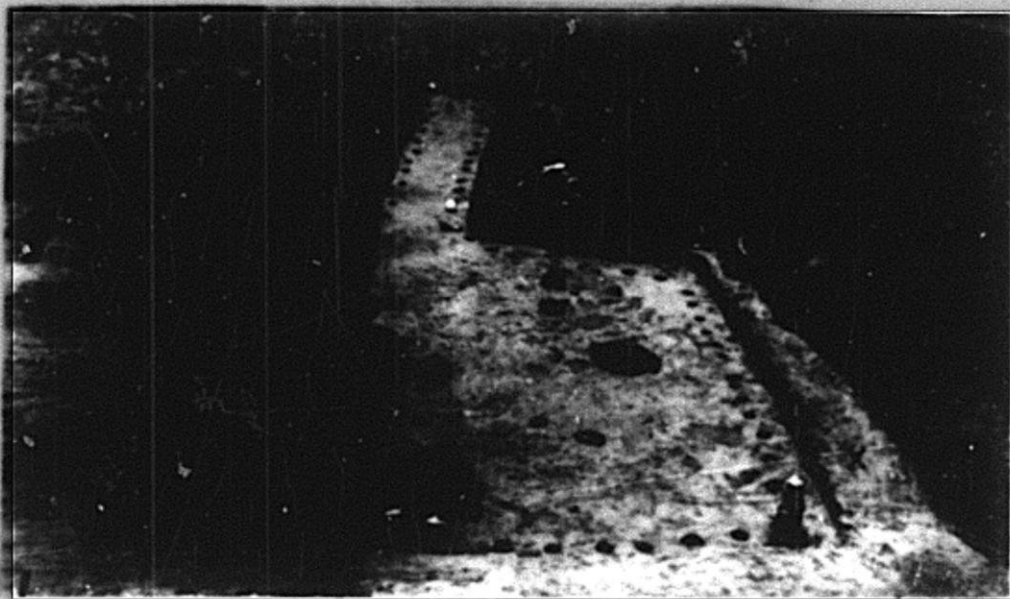


Profile of East Side of North and South Trench through the Center of  
House Site X-10.

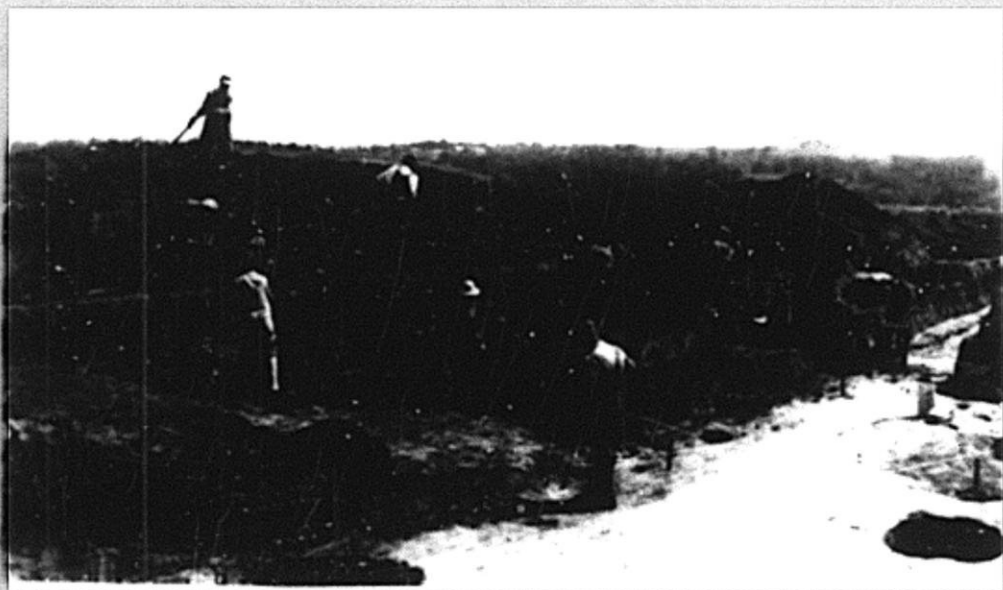
- A- Fallen-in Earth that formed Roof of House.
- B- Accumulation of dust-blown Earth and Humus from time of burning of House to beginning of cultivation by white man.
- C- Soil accumulated and worked into Basin since beginning of cultivation.

Scale, 5 ft. to Inch.

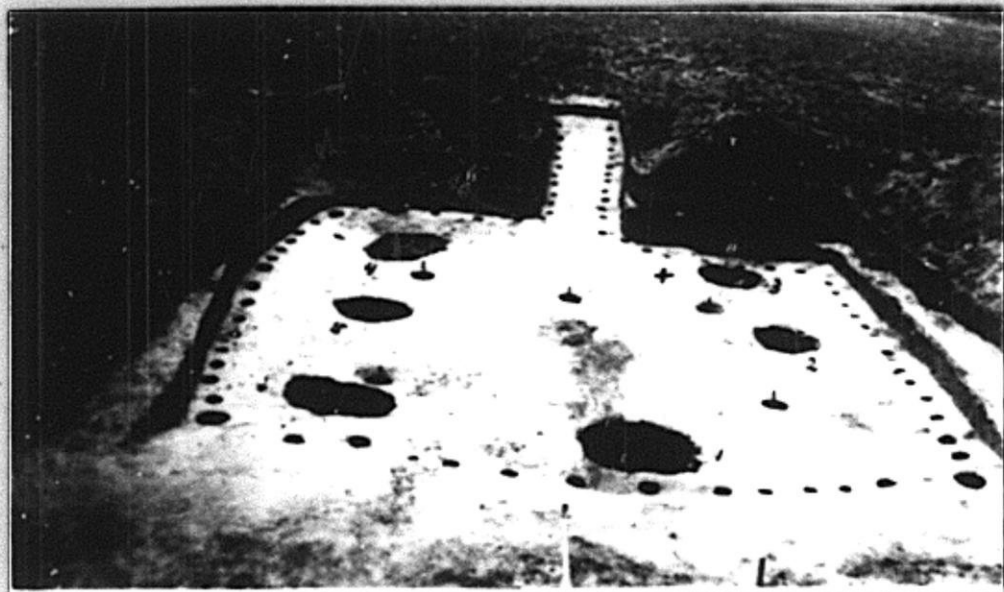




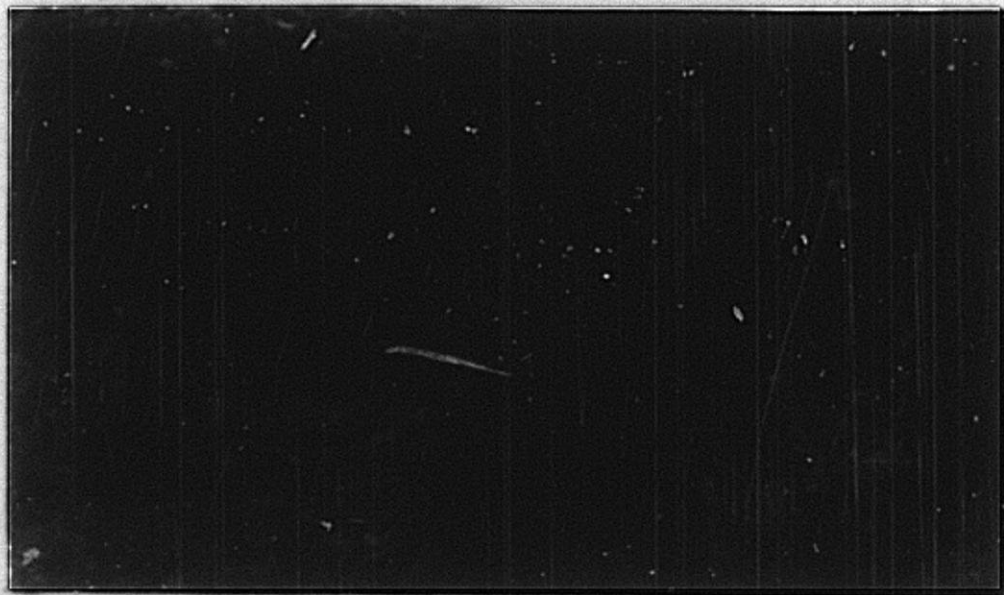
Plan of Entrance and one-half of Floor Plan of Earth Lodge X-10. Marshall Site south of Road, on SW NE Sec. 34, T. 73, R. 43 west of 5th P.M. Looking south. Note charcoal post Stump at the north-west corner. Bench marked by X in red ink was original surface when house was built.



Men at Work Excavating the east half of Earth Lodge X-10. Central fireplace marked by stake at right of man in center. Paper sacks near entrance. Looking South-east.

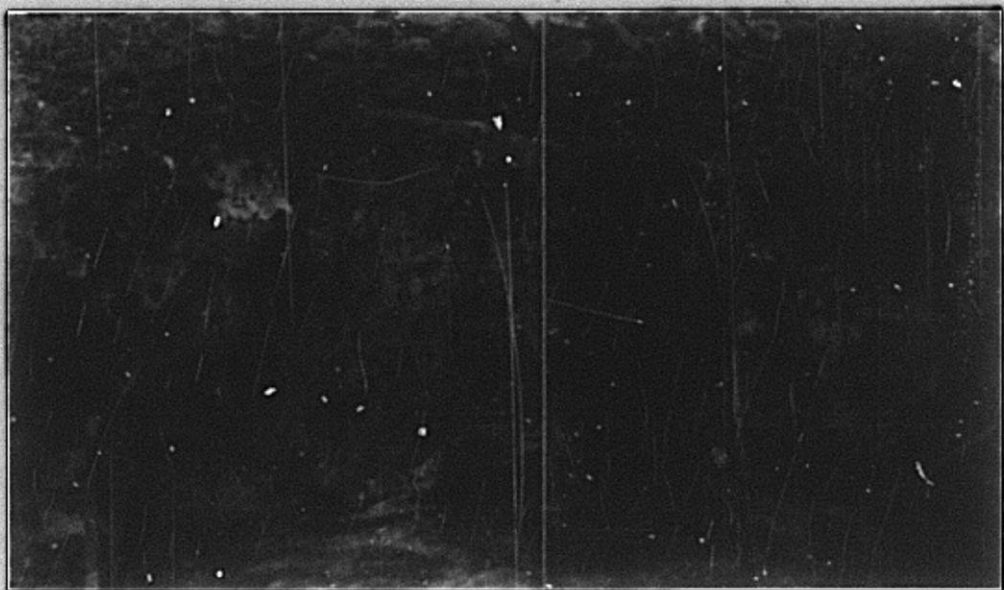


Floor Plan and Entrance of Earth Lodge X-10, taken from Top of Twenty Foot Ladder. North side of Pit sloped to enable the taking of a photograph showing all wall post holes. Looking south. Numbers of Storage-refuse pits in red ink. in red ink shows location where crushed whole pot lay on House Floor.

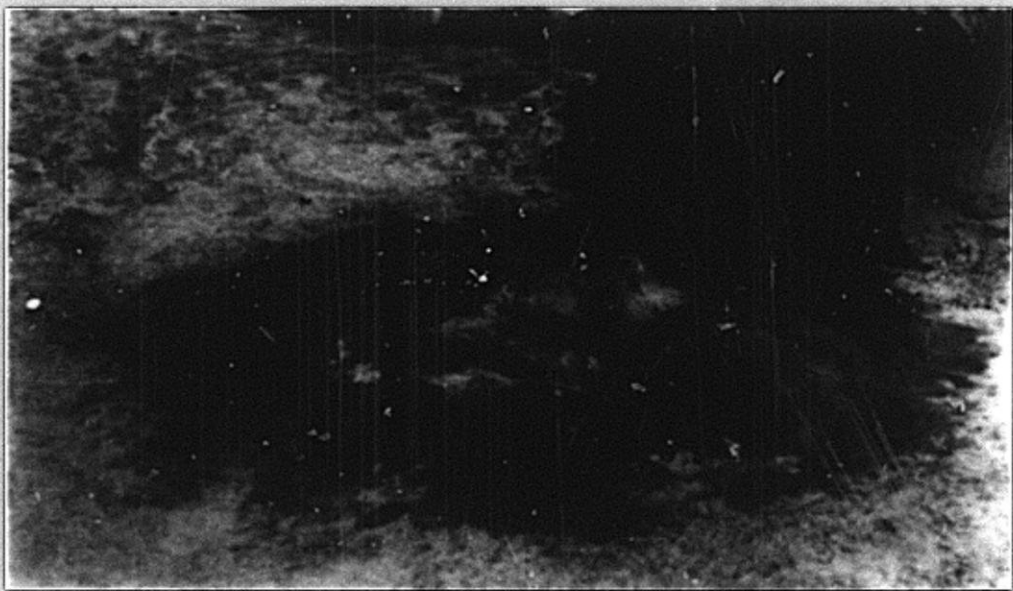


Carbonized North-west Corner Wall Post, H.S.X-10.  
Looking North-west.

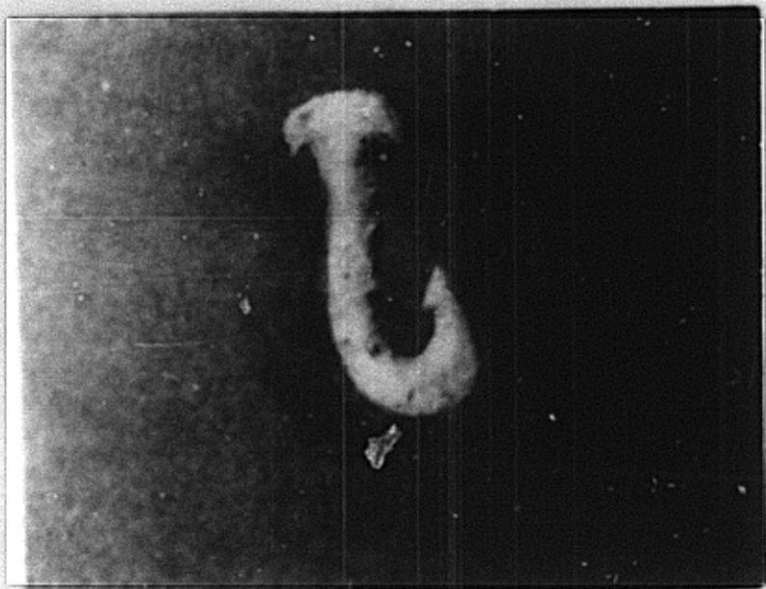




Clay plastered Wall with Mould of Post above house floor  
of H.S.X-10, filled with loose dark earth, at right of center.  
Looking West

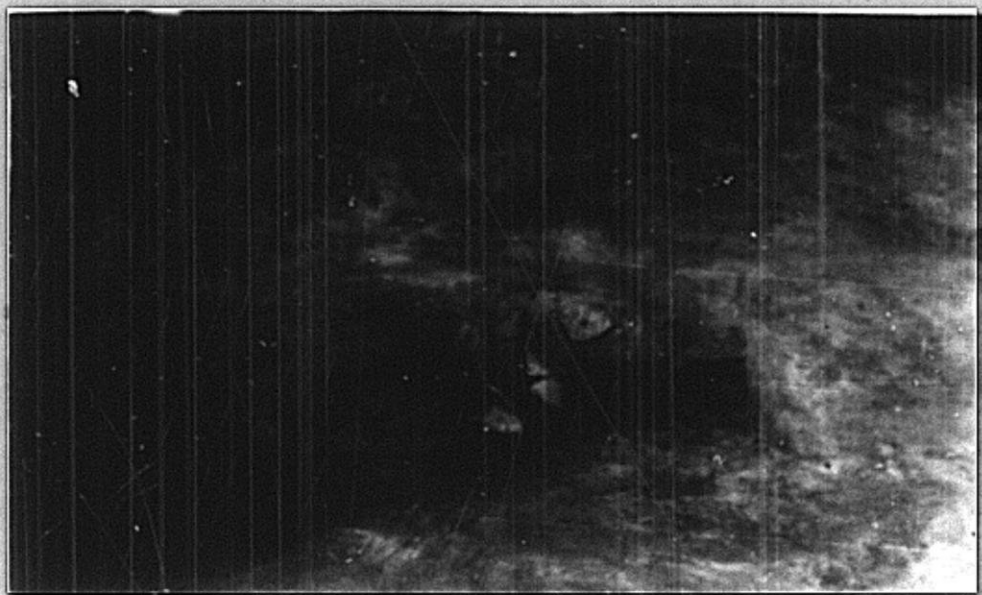


Ashes of Central Fireplace, H.S.X-10. Looking east.



Flint Fish-hook  
Collection of Mr. Cheyney  
Glenwood, Iowa.





Fragments of large Pot with Vertical Rim, - up-side down  
on house floor of H.S.X-10. North-west of Entrance.  
Looking South-west.



Heaps of Earth thrown out in Excavating H.S.X-10. From south.

### Earth Lodge, House Site X-II (H.S.X-II)

The surface indications of this site had been entirely destroyed by cultivation. We were told by the owner of the farm that the ridge on which it was located was, when he was a boy and lived on the farm, covered with heavy timber. He said that once he and his uncle were cutting wood near the "buffalo wallow", as they called it, in mid winter, and that on looking away from his chopping, he saw perhaps eight or ten rods away in the woods, seven wolves standing looking at them. He called to his uncle to "see the dogs" who told him that they were wolves and to keep on chopping and act as if he had not seen them, while he himself worked over to where his rifle stood and picking it up quickly shot and wounded one of them. They followed the wounded animal by the blood drops on the snow for a long ways but did not come up to it. Suddenly there came up a blinding blizzard and they came near to not finding their way back home. He had to hang on to his uncle's ax handle to keep from being separated and lost. He said that at that time the "wallow" was 3 ft. deep, and that it was as large or larger than H.S.X-10.

A neighboring farmer, many years a resident, finally located it for us according to his best recollection. A days testing with augur failed to find any indications of it. We then trenched north and south across the propable location and by good luck found the house floor and intersected the north and south house sides.

The north side at 32 inches below the surface showed a very distinct vertical stratum of burned earth, indicating the wall.

Areas east and west of the trench were then excavated by removing successive spadings and cleaning up the earth, to the east and west walls and down to the house floor. The central fireplace was located at 49 inches below the surface. At the north wall, 30 in., at the west wall, 38 inches below the surface.

Immediately above the yellow loess forming the floor was a stratum of dark, - not black, - 12 to 17 in. thick at the center, containing just above the floor, quantities of charcoal and some pottery sherds. This is believed to have been the earth that covered the roof. Above this was a stratum, 8 to 12 inches thick at the walls and 9 to 14 inches at the center, - the dust and humus that had accumulated between the burning of the house and the beginning of cultivation. This like the 8 to 12 inches above it, afterwards worked in by cultivation, was black and in the middle, mucky.

The center of this site is located as follows: From the 1/4 Sec. corner in the center of Sec. 34, T. 73, R. 43 west of the 5th P.M., north, 30.00 ch. to the center of the road; thence, east along the road center, 2.22 ch.; thence, north, 2.42 ch. to center of the H.S.

The house walls were well defined by patchy vertical burned strata. The house pit was approximately 31 X 31 ft. square with slightly bulging sides and rounded corners. The entrance, 4.5 wide was excavated, s 12 W, 28 ft., - with wall posts on either side, - extending out 18 ft. The ascending floor was indicated by mottled black earth containing pottery sherds. This stratum of mottled black earth was found patchily in all house sites.



Four main central posts were located and in addition, midway between them, and the corner wall posts, was a second set of seven, - two in each corner except the south-west where there was but one, midway between which and the pair in the north-west, there was another.

Forty-nine wall posts around the house pit, and six on either side of the entrance. Orientation of the house, N 4 E.

The fireplace consisted of 4 inches of ash, 20 in. in diameter, overlying the same thickness of clay burned very red, 36 in. in diameter.

In the south-west corner was, at 8 in. below the surface, an irregular deposit of ashes approximately 30 in. in diameter.

H.S.X-II was rich in inclusions, 2026 pieces having been sent in, among which were 2 restorable pots; 1 small whole pot; 215 rim sherds; 1 clay trumpet pipe; 1 fragment of a clay pipe stem; 3 sherds showing arm and hand in relief running from handle out over shoulder ( see page 23 ); 3 triangular, notched arrow points; 11 other arrow points; 14 snub nose scrapers; 16 other scrapers; 162 flint flakes; 3 bone awls; 11 shoulder-blade digging implements; 210 rough hand stones; (not sent in); 8 abraders; 2 hammer stones, and single specimens of unusual pottery types. There were many rejected small sherds, - 270 from pits 8 and 9 alone.

Nine storage-refuse pits were located as follows:

- Pit # 1, 3.5 ft. in diameter and 3.2 ft. deep. Straight well defined vertical wall. Walkins
- Pit # 2, 3.4 ft. in diameter and 3.9 ft. deep, with rough vertical sides. Hall
- Pit # 3, 3.2 ft. in diameter and 3.5 ft. deep with rough vertical sides. Kelso
- Pit # 4, 3.4 ft. in diameter and 2.3 ft. deep with rough vertical sides. Walkins
- Pit # 5, 3.4 ft. in diameter and 4.6 ft. deep with rough vertical but well defined sides. contained two restorable pots besides other sherds. A very rich pit. Hall.
- Pit # 6, 4.4 ft. in diameter and 4.0 ft. deep with rough vertical sides. Two very perfect shoulder-blade digging implements at bottom of pit. See page III for photograph. Rhodes
- Pit # 7, 4.0 ft. in diameter and 4.2 ft. deep with rough vertical sides. Contained broken, angle, pipe stem. Rhodes
- Pit # 8, 3.0 ft. in diameter at top, and 3.8 ft. at bottom. Jug shaped, the upper 18 inches, - the neck, - lined with burned clay. Among other things a fine clay trumpet pipe was found in this pit.
- Pit # 9, Dimensions not taken. Very rich in material, mostly pottery sherds.
- Excavation begun Sept. 26th, completed Oct. 5th.

Pottery Sherd from Storage-refuse Pit # 9, H.S.X-II.

A collared rim sherd with attached piece of plain body, 6.5 X 6 inches. Heavy grit tempered ware .3 inches thick. Horizontal trailed tooling on outside.

Shoulder uniformly curved, and coated from 2 inches below the neck, down, with soot.

Five horizontal, parallel, twisted string impressed lines on face of collar, apparently extending entirely around neck. Shoulder of collar indented with diagonal lines .3 inch apart.

Diameter at lip, 5.6 inches. Probable diameter at shoulder, about 12 inches. Probable depth, 5 or 6 inches.

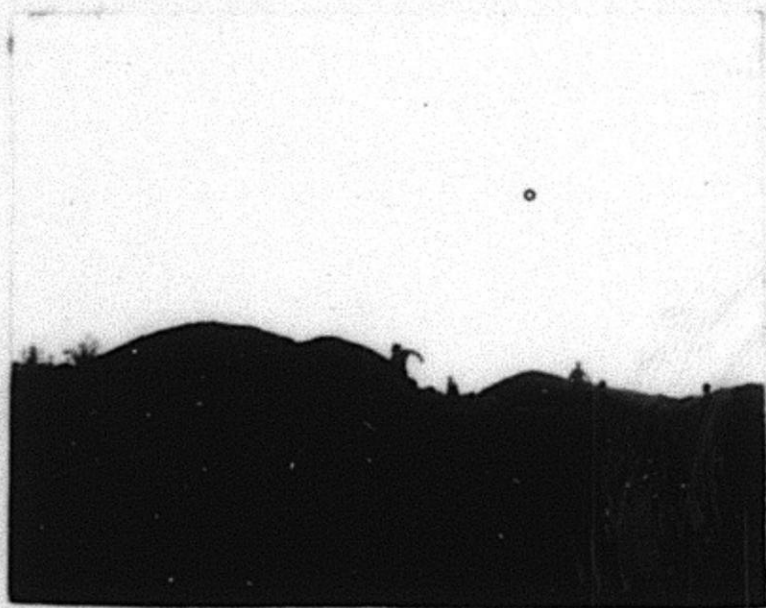
Pottery sherds from Storage-refuse pit # 2, H.S.X-II.

Three sherds of vertical rim of glenwood culture pot. One with a handle flaring out and upward in a semicircle from the shoulder to level with top of rim, having on its outside, a spreading .6 in. wide and .1 in. deep groove for its entire length.

A second sherd, broken in two, which, from the bottom of the handle, on each side, a slim arm, .25 inches in diameter, runs outward and slightly downward. On the right side, attached in relief to the shoulder, approximately 1.3 inches to the elbow from which it runs horizontally, 1.2 inches to a hand with five digits spread out fanwise in relief on the shoulder of a body decorated with twisted cord impressions nearly obliterated by smoothing. On the left side the arm is broken off midway between the shoulder and elbow.

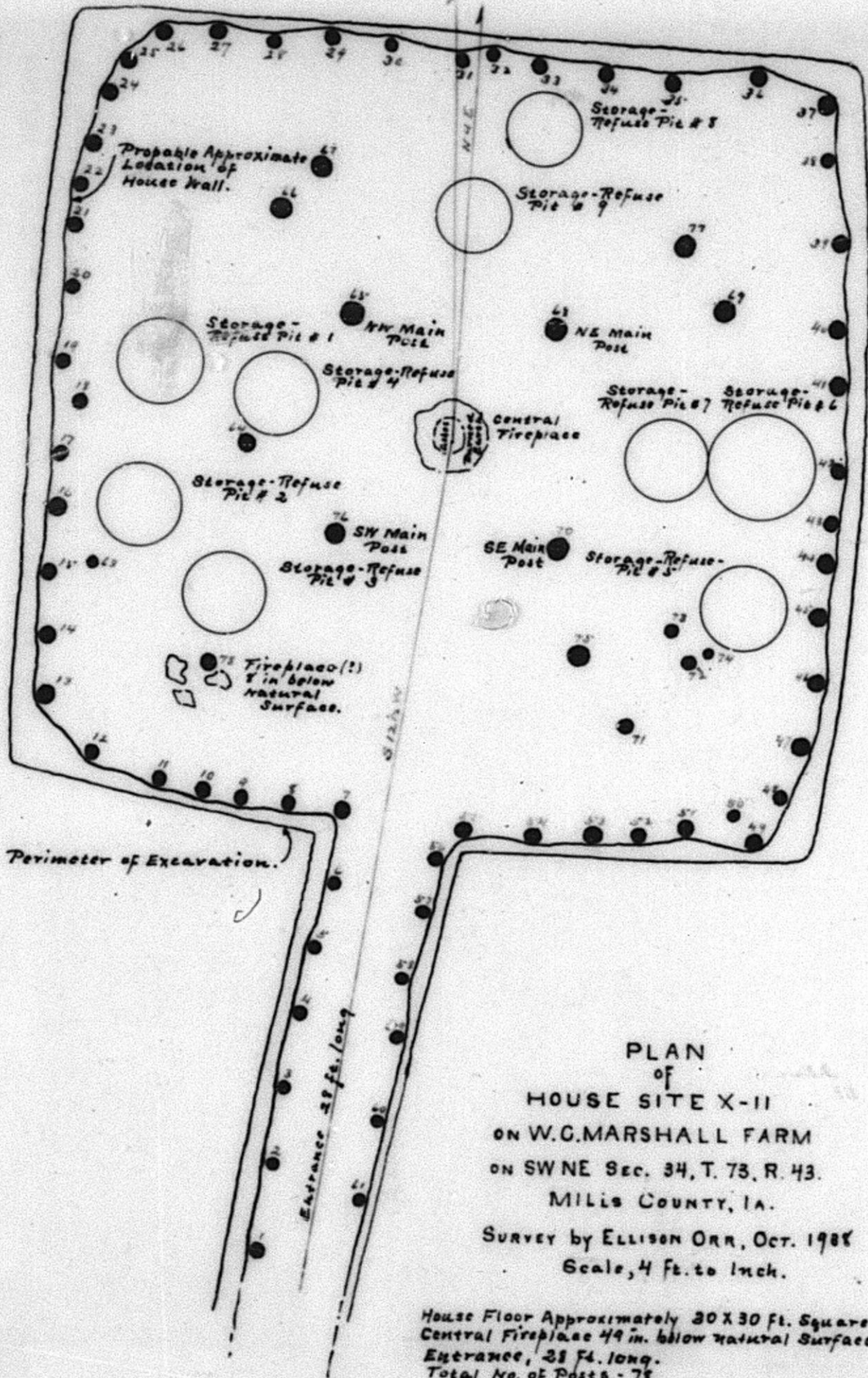
A third shows an entire left arm and hand from another vessel, with smooth body, except for a piece missing where it is broken in two.

See page 23 for sketch of second and photograph of third.



Starting to Refill House Site X-II





PLAN  
OF  
HOUSE SITE X-II  
ON W.C. MARSHALL FARM  
ON SW NE SEC. 34, T. 73, R. 43.  
MILLS COUNTY, IA.  
SURVEY by ELLISON ORR, Oct. 1985  
Scale, 4 ft. to Inch.

House Floor Approximately 30 X 30 Ft. Square.  
Central Fireplace 49 in. below natural surface.  
Entrance, 38 Ft. long.  
Total No. of Posts, - 78.



Men Cleaning up Floor of House Site X-II. Looking South.



Two Shoulder-blade Digging Implements from Storage-refuse Pit # 6, H.S.X-II. Looking east.  
In situ on the Bottom of the Pit, no other inclusions.

Excavated by Rhoads.

It was with similar tools made from the scapulae of buffalo or elk, or with implements made of wood, that the house pits were dug, and it was with such that the squaws cultivated their corn and beans.



Earth Lodge, House Site X-15 (H.S.X-15)  
The Henry Lehse Site.

This Site on a high point or knob of a divide between two valleys tributary to Pony Creek, and about 2000 ft. east of that creek, is located on the east and west center line of the SW SW Sec. 27, T. 73, R. 45 west of the 5th P.M. at 5.16 ch. east and 9.75 ch. north of the corner to sections 27, 28, 33 and 34, T. 73, R. 45.

From the perimeter of the surface basin, 60 ft. in diameter and 18 inches deep at its center, the natural surface slopes steeply in every direction except the south, where for 200 ft. the crest is level, after which a very steep slope extends south to the road, 645 ft. (See photograph, page II9-A)

Because of this location on the peak of the ridge, there has been practically no deposition of silt by run-off of storm water, - the only precipitation received being that which fell directly into the basin. Curiously because of the mucky nature of the upper strata within this catch basin, caused by the retention of the rain fall, there was produced an oasis of good corn this summer, in a field the remainder of which was not worth harvesting.

Through the center of the basin, north and south, a trench, 6 ft. wide and 54 ft. long was first excavated down to the house floor.

As the center of the 4 ft. wide entrance was 1 ft. east of the center of the south house wall and ran from thence, S 12 E, only a wedge shaped north part of it was cut into by the excavation of the trench.

At 12 ft. north from the south end of the trench, the south house wall, well indicated by a vertical stratum of burned earth, plastered inside with clay "daub". The house floor at this point was 42 in. below the surface of the basin. At 30 ft., the fireplace, consisting of a stratum of white ashes, 36 in. north and south by 25 in. east and west, and 2 to 3 in. in thickness, under which was an area of burned earth, 42 in. north and south by 36 in. east and west, at a point 1 ft. west of the exact house center as fixed by surface measurements.

At 48 ft., the north wall of burned earth, faced by the "daub" plaster on the inside was encountered. The house floor here was 42 in. below the surface of the basin.

The top of the fireplace was 50 in. below the surface of the center of the basin. The central level of the floor was 3 in. lower or 53 in. below the central surface of the basin, or 71 in. below the natural surface of the crest of the knob.

The earth excavated from the trench was thrown out on the east side. The half of the house pit on the left of the trench was next excavated out to the north, west and south walls and down to the house floor.

After this was completed, the earth thrown out of the trench on the east side was removed farther east, and that side excavated out to the north, east and south walls and down to the house floor.

The floor consisted of the inside flat area around the central fire, outside of which, next to the wall, was the 8ft. wide encircling bench, approximating 12 in. higher.

At approximately 18 to 24 inches below the surface of the basin, the uniformly level edge of a 1 to 2 in. thick vertical stratum of burned earth, extending entirely around the house pit, except for the entrance, indicating the house wall, was encountered. On the inside of this vertical stratum of loess clay, colored and hardened by the fire that consumed the house, was plastered, patchily, entirely around the perimeter, a coat of clay that did not color in the burning but remained a gray slate color.

This apparently had been smeared on the sides of the pit when the house was built and roughly rubbed down but not with the naked hand as there were no finger impressions. It is the same material as the "daub" of the "wattle and Daub", but unlike the latter contains no impressions of the prairie grass.

It is our belief that top of the burned earth (loess) and plaster, also plainly shown in some of the other ledges, is at what was the original surface level when the house was built, and that the varying accumulation of earth above this level has been deposited since that time.

The house pit of this lodge was, like that of the others, quite uniformly 24 in. deep around the sides, with a level central depressed area up to 12 in. lower.

Four main posts, 12 to 14 inches in diameter, were located, NE, SE, SW and NW from the central fire. Within 3 to 4 ft. of and outside of these, was located another post of less diameter, - about 8 inches, - and, except the one on the east, approximately midway between, were four others. Of these, the one on the south, 12 in. in diameter, was almost exactly between the SW and SE main posts and directly in line with the entrance and fireplace.

A total of 62 wall posts were located, of 23 of which there were charcoal stumps. These are indicated on the plan by an X in black ink. At the almost square corners were located the heavier posts, from 8 to 12 inches in diameter.

Twelve feet of the entrance was excavated, uncovering 5 posts on the east side and 6 on the west, for a distance of 12 ft. out from the house. Borings showed that it extended at least 20 ft. farther.

The orientation of the House was north and south, but the entrance had a direction of S 12 E.

Unlike most of the other houses excavated, the walls of H.S.X-15 did not curve or bulge outward.

Immediately above the house floor was a thin discontinuous stratum containing much charcoal over which were occasional foci of burned earth.

On the central flat area, as in other houses, there was just over the yellow loess, the thin stratum of mottled dark earth extending out over the entrance floor where it was thicker, usually about 4 inches. This appears to have been the real tramped, mixed earth floor.

Of the II storage-refuse pits scattered irregularly over the house floor, 3 were within 2 ft. of the wall, the remaining 8 along the inner edge of the bench.

Pit # I, Plastered on the sides, - had a top diameter of 28 in. was jug-shaped with a bottom diameter of 40 in. at a depth of 40 in.



- Pit # 2, a small pit, 16 in. in diameter and 15 in. deep.  
 Pit # 3, a small pit, 18 in. in diameter and 16 in. deep.  
 Pit # 4, A 9 in. deep double pit, the north one, 2 ft. in diameter, the south one, 3 ft.  
 Pit # 5, a shallow, 6 in. deep oval pit, 3 ft. north and south and 2 ft. east and west.  
 Pit # 6, 10 in. deep, 18 in. in diameter.  
 Pit # 7, an oval pit 25 in. north and south by 36 in. east and west and 40 in. deep.  
 Pit # 8, 36 in. in diameter and 20 in. deep.  
 Pit # 9, 42 in. in diameter and 36 in. deep.  
 Pit # 10, 35 in. in diameter and 40 in. deep.  
 Pit # 11, 32 in. in diameter and 14 in. deep.

Pits # 1, 7, 8, 9, and 10 were good examples of the average good storage-refuse pits. All were perpendicular walled except # 1 which was jug-shaped and walls plastered as noted above. All contained much broken pottery and other material.

These five are shown on the house plan by a double circle. Pit # 1 was an especially fine example of the jug-shaped plastered wall type.

Pits 2, 3, 4, 5, 6 and 11 were shallow with but few inclusions. (See photograph at bottom of page 115)

On the house floor there were two notable pottery foci. One at the foot of the north-west corner post, consisted of one-half of a large collared rim with most of that half of the body attached. The collar was ornamented with indentations on its shoulder, and on the face by three parallel incised horizontal lines, crossed up and down by three incised diagonals, forming a zig-zag pattern. Near it was a bone awl.

Two feet south of pit # 7 were two caches of cupped clam shells. (See page 119 at bottom)

On the house floor, in a triangular area formed by the central fireplace, pit # 10, and post X-6, there was much broken pottery, including enough of one vessel for a restoration.

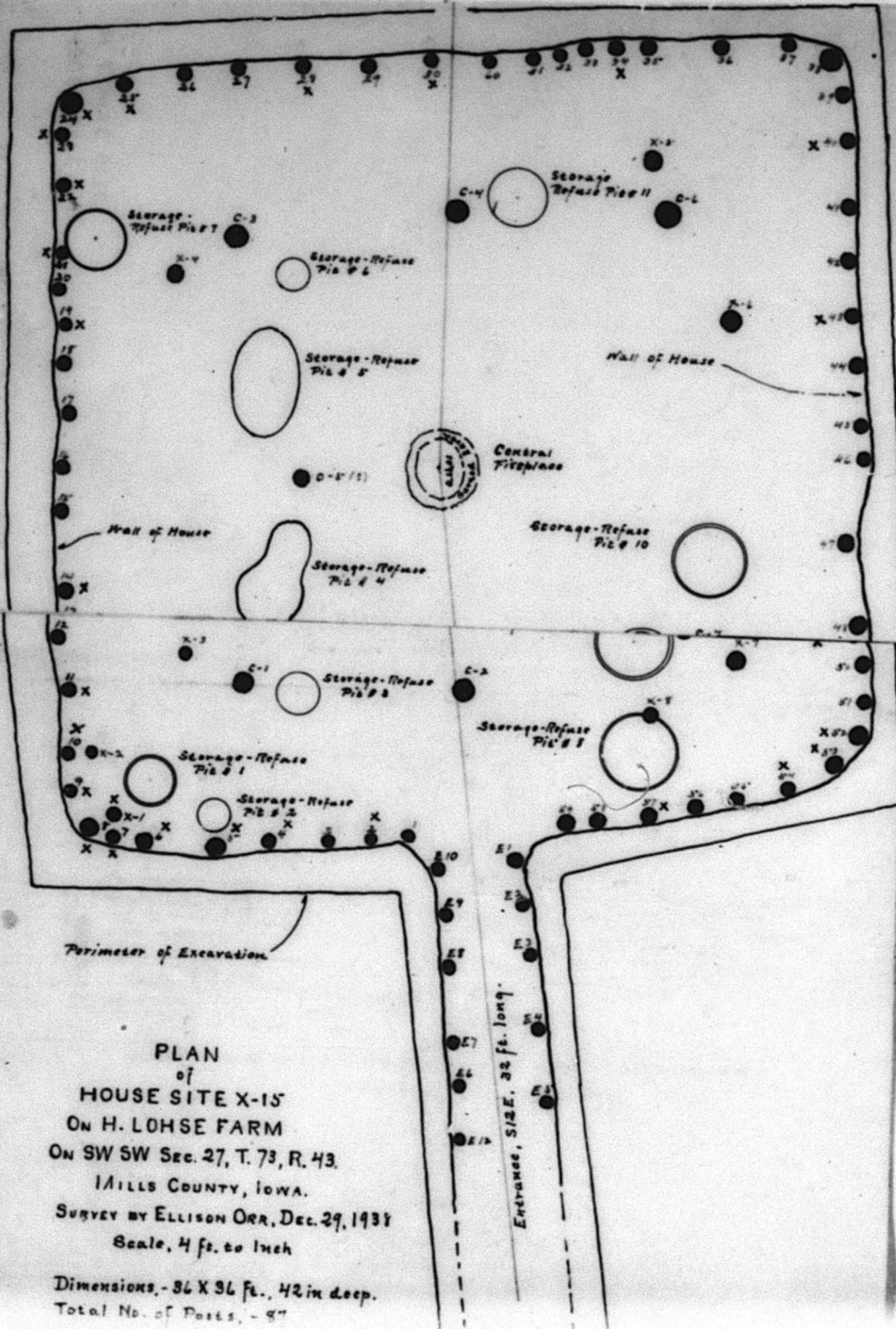
But on the whole H.S.X-15 can hardly be said to be rich in inclusions, but 805 pieces having been sent in.

These included 61 rims; 653 body sherds; at least two and possibly more, restorable pots; 18 fused body sherds; 5 detached handles; 5 detached lugs; 1 elbow clay pipe; 2 animal head effigies; 2 triangular arrow-points; 10 scrapers; 3 flint hand axes; 2 bone beads; 3 bone fish hooks, two of which there was but one-half; 5 bone awls; 14 abraders; and disk part of a spool-shaped ear ornament.

The site included, however, all the characteristic features of the underground structure of what we regard as the typical earth ledge of the Glenwood focus, or possibly, aspect of the Nebraska culture, except possibly of lodges that lay south of Keg creek.

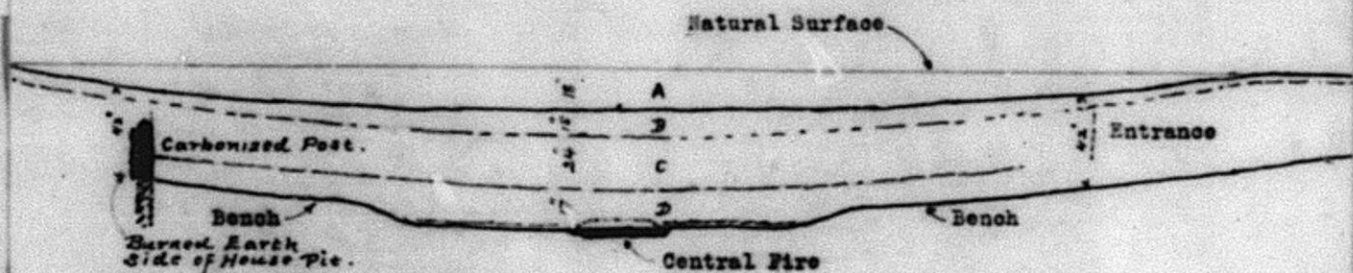
Nothing was missing.

Even the central roof supporting posts in addition to the main, which should have been present in other large houses, but which we were unable to locate, were found in this.



PLAN  
 of  
 HOUSE SITE X-15  
 ON H. LOHSE FARM  
 ON SW SW Sec. 27, T. 73, R. 43.  
 MILLS COUNTY, IOWA.  
 SURVEY BY ELLISON ORR, Dec. 29, 1931  
 Scale, 4 ft. to 1 in.  
 Dimensions, - 36 X 36 ft., 42 in. deep.  
 Total No. of Posts, - 37

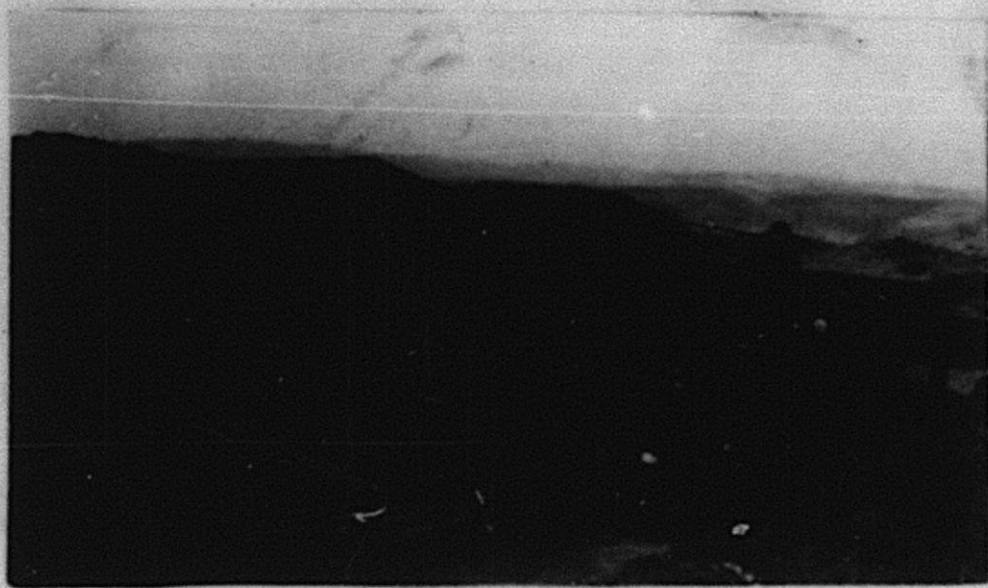




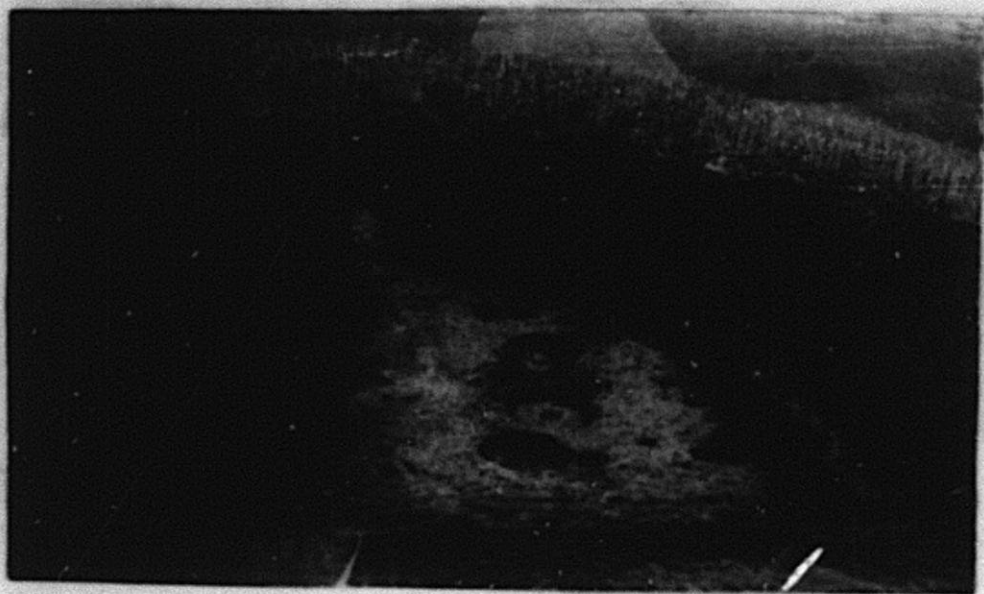
Profile of North and South Trench through the Center of House Site X-15

- A - Surface Basin, 18 inches deep in Center.
- B - Soil Carried into Basin by Cultivation.
- C - Wind Deposited Dust with much Humus.
- D - Fallen-in Earth that Covered the Roof.

Scale, 5 feet to Inch.

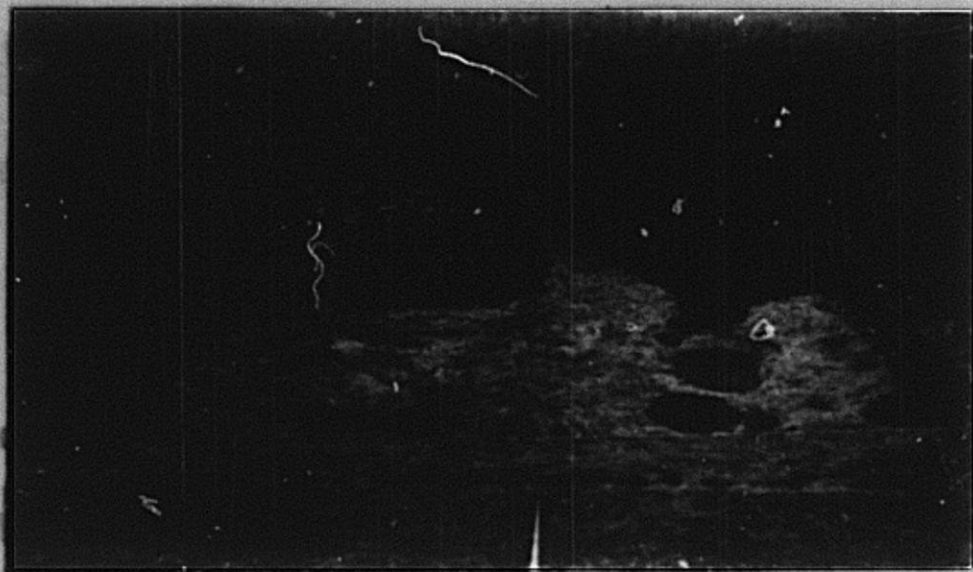


Men Excavating the West Half of House Site X-15.  
Looking North

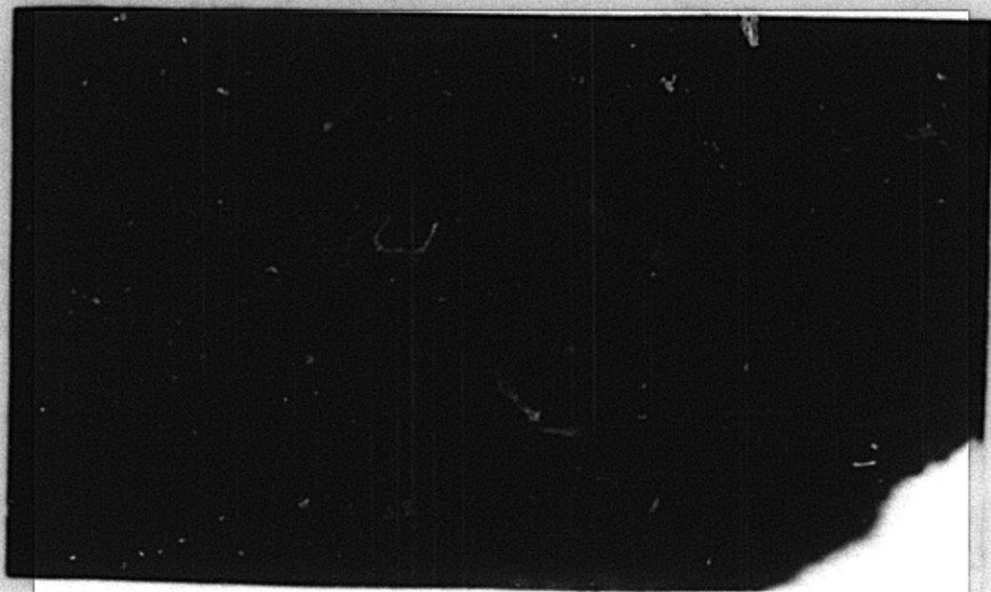


West Half of House Pit, H.S.X-15, and Entrance. Men moving  
the Earth thrown out of Trench from over East Half before  
Excavating it. Note Three Shallow Storage-refuse Pits, 4,  
5 and 6. Looking South.

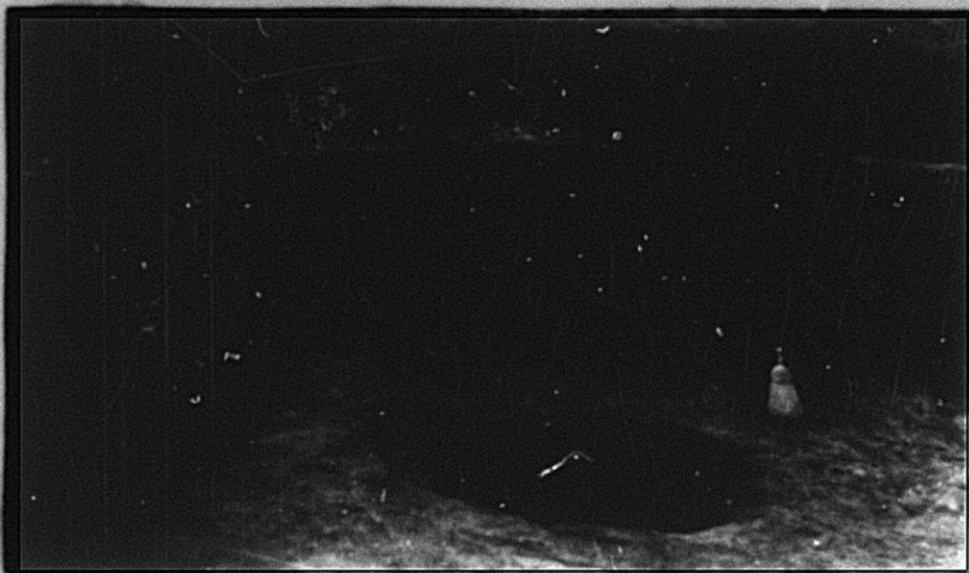




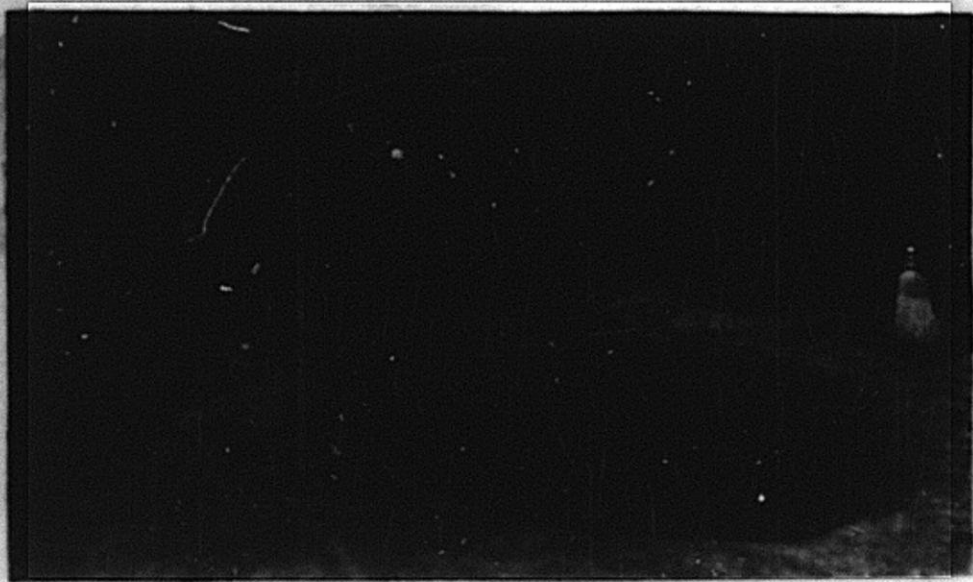
Floor Plan of House Site X-15. Looking South. Photographed Nov. 30th. The Sun, far South, threw Shadows of South Bank on the Floor. Waited till last possible day for better Conditions. Commenced to refill next morning.



The Central Fireplace of House Site X-15. Looking North.  
(up-side down)

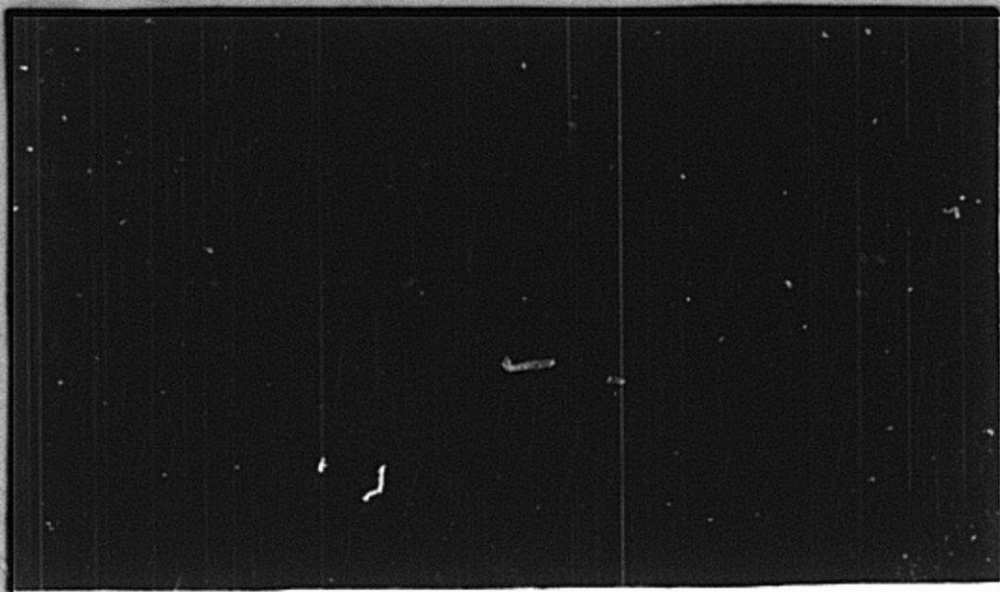


South-west Corner, looking South-west. Note Storage-refuse Pit # I in center Foreground. Carbonized Stumps of Wall Posts 6, 7, 8, 9, 10 and X-I along wall of house pit. 24 in. High with much Clay Plastering.



Same as Above, but Close-up. Note the Replacement of Post X-I by loose dark Earth beneath the Carbonized Part. Looking South-west.

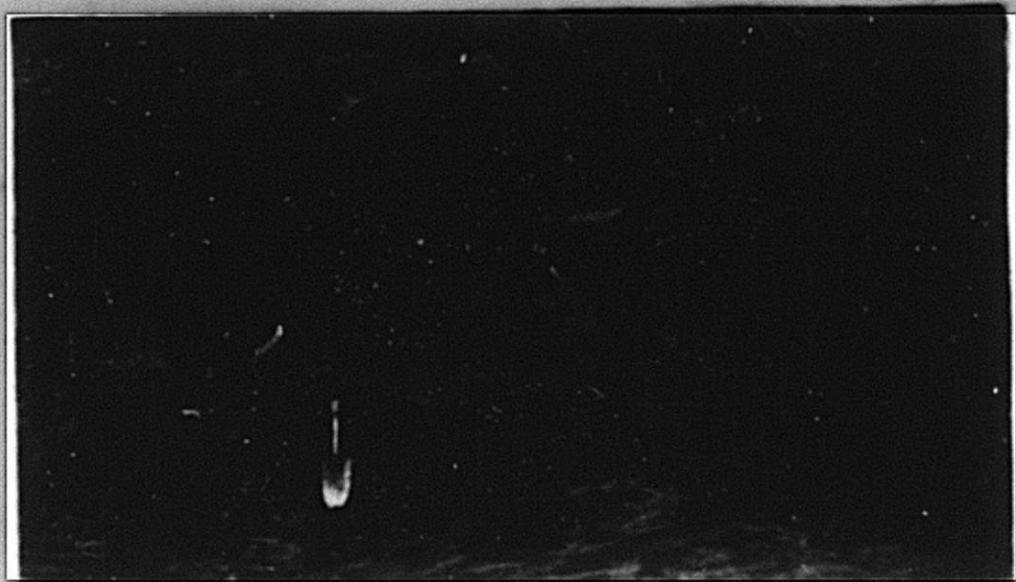




Carbonized Wall Post in the North Wall of House Site X-15.  
Note good picture of Clay Plaster to right. Looking North.



Carbonized Post # 30 at the North End of Reconnaissance  
Trench of H.S.X-15. Looking North. Note Wall of House Pit  
Pit, 24 inches high, - clay plaster to north.  
Looking North.

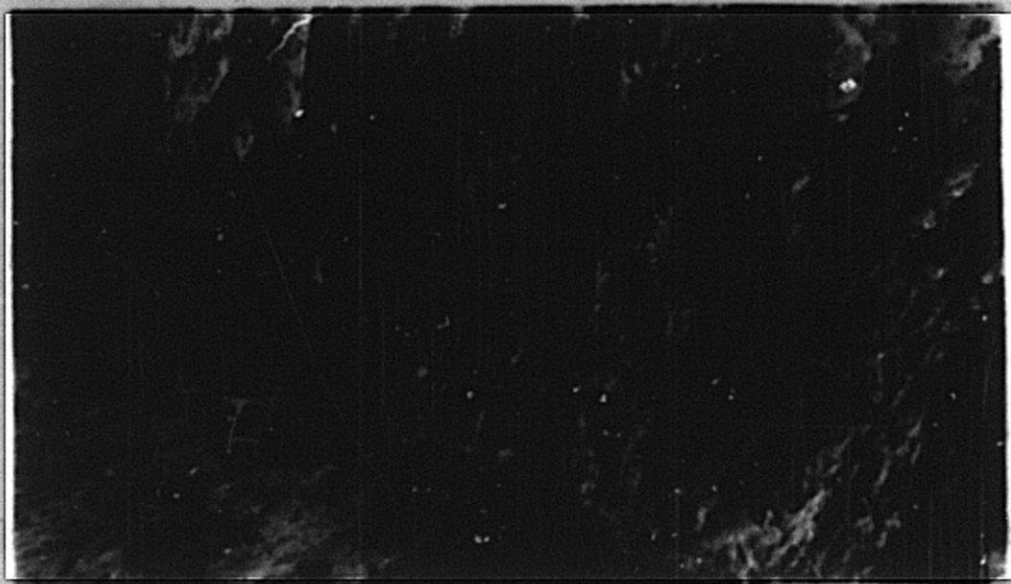


A Good Picture of West Clay Plastered Wall of H.S.X-15.  
 Looking West. X in red ink marks top of Wall  
 Looking



Carbonized Post at North-west Corner of House Site X-15  
 Much loose dark earth mixed with the carbonized parts.  
 Looking North-west.





West Wall of House Site X-15 showing clay plaster and  
Impression in same of three Posts. Looking North.



Two Clam Shells in situ on house floor of House Site of  
House Site X-15, with post hole of Wall Post at upper  
Left. Looking West.



*Boyer Rainey Kilmon  
Bowley Keise  
Culley Wright  
Hall Rhodes*

**Men at Lunch around Stove in Trench of House Site X-15. Nov. 16th, 1938. Looking North**



**Heaped up Earth around House Pit of House Site X-15. before beginning to refill, Dec. 1st, 1938. Looking west. Note rounded top of high point and 3 men.**



## THE WOODLAND CULTURE.

By the researches of Dr. Charles R. Keyes and the work of his associates it has been quite well settled that evidences of occupation by people of the Woodland culture are found in all parts of Iowa.

Burial and effigy mounds along the Upper Iowa and generally along the Mississippi river in the north-east part of the state, where quite extensive excavations have been carried on, appear to be predominantly of that culture, which there antedates the Oneota.

In 1938 Miss Mildred Mott, excavating mounds and a village site near Webster City, found in the mounds "evidence of Woodland authorship", and in the village site and in the village site "a valuable collection of potsherds and other artifacts, all apparently Woodland."

The people of this culture appear not only to have occupied all of Iowa but also to have penetrated well into Nebraska.

During 1938 Hill and Cooper found, in their work along the Missouri river bluffs on the Nebraska side, "sherds of Woodland type occurring in both mounds and pits" and considered these as affording "additional information regarding what now appears to be a statewide ( Nebraska ) distribution of evidence of Woodland occupation."

We personally saw in an excavation north of Omaha, on which their men were working, a small cache of small but quite certainly Woodland sherds.

In our own work in Mills county we found in the two largest mounds excavated, No. 6 of Group No. 4 on the crest of a high bluff overlooking the flood plain of the Missouri river, and No. 7 of the same group, 387 ft. to the east, evidence of erection by Woodland people, in the shape of, not many, small sherds of that culture in the mound earth below the natural surface to a depth of 24 inches, and in the jumbled bundles burials. Excepting flakes and spalls of Nehawka flint no other manifestations were found.

In Mound No. 10, the Boyce Group, no skeletal material was found but four small Woodland sherds were scattered through the earth at a depth of about 24 inches below the natural surface. At this level a coarsely worked diorite heavy celt or ungrooved axe was also found. Except 5 scattered clam shells at 5 ft. below the natural surface there were no other inclusions.

In the total absence of manifestations of what could certainly be considered any other culture, the preponderance of evidence is that all three are burial mounds of people of a Woodland culture.

In our excavations of house sites we found on the house floor of House Site X, one, on the floor of House Site J, two, and on that of House Site X - II, two, typical small Woodland sherds.

These all had the smooth appearance that comes from much handling and had quite likely been picked up, probably along some water course, and brought to his lodge by the finder.

In a trip down the canyon of Bomar Creek, four miles south of Glenwood, we picked up 4 good sherds, and on the vertical south wall located an ancient fireplace consisting of a lens-shaped ash deposit, 2 ft. in diameter and 4 inches thick, in yellow clay showing no trace of humus, 25 ft. below the present alluvial surface of the valley, - 20 ft. below the surface at the time of settlement by the whites.

Mixed with the ashes at the center of the deposit were five hand sized drift boulders. No other inclusions were associated with this fireplace. The bottom of the canyon is now six to eight feet lower.

Though there was nothing about it that would indicate the culture of the people that sat around it, the accumulation of twenty feet of alluvial soil when the surrounding country was in a state of nature, and the run-off consequently not burdened with silt, must indicate that it was that of many centuries ago.

On the SE SE Of Sec. 5, T. 72, R. 43 where a small valley opens into that of the Missouri river, up which the road to the head of Indian Hollow runs, ~~and~~ on the north side ~~is a~~ is a ditch twenty feet deep cut by the run-off of storm water from the valley above. *See Page 123-4*

In this ditch at 15 ft. below the surface of the valley, is a stratum of ash with some charcoal, 15 ft. long and 4 inches thick, in which Mr. Lester Hunt found two Woodland sherds.

Mr. Paul Rowe has in his collection sixty-three pieces of Woodland pottery, some quite large. Fifty-eight were picked up in the deep erosion ditches or earth-walled canyons of the creeks and their tributaries draining an area of ten miles north and south by three miles east and west, along the Missouri river bluffs in north-west Mills county, Iowa.

Mr. Rowe also has in his collection a restored, grit-tempered Woodland pot found by him in a short erosion ditch on the north side of and opening into the earth-walled canyon of the East Branch of Pony Creek, and on the SW SE Sec. 34, T. 73, R. 43 west of the 5th P.M., one-fourth mile south of House Site X-10. ①

This vessel lay on its side at six feet below the present surface of the valley, in the edge of an old filled-in ditch cut into by the present one, crushed and broken by the super-incumbent earth.

It has a total height of 9.5 inches and a diameter at the shoulder of 7.75 inches. The neck is 2.75 inches high, the opening at the top having a diameter of 5.5 inches.

The body is globular with a very blunt pointed bottom.

Neck is vertical, flaring out at the top. Slope of shoulder to neck, 28 degrees from the perpendicular. The body is completely covered with somewhat obscured or washed out impressions made by a paddle wrapped with twisted sinew or cord, forming no pattern.

The neck is without decoration, the outside corner of the lip decorated with small oblique indentations. Walls are 1/8 to 3/16 inches thick.

① *An amphora without handles.*



A large portion of a very similar Woodland vessel, in two pieces, but larger, was found by Mr. Rowe in the same ditch at 25 ft. from the above described vessel.

A third, same type, broken in three pieces, was found in a short lateral ditch opening into Pony Creek canyon from the west, on the SW SE Sec. 33, T. 73, R. 43.

Mr. Rowe says that all his Woodland sherds not found in some ditch, were found within throwing distance of one."

Resembling the Paul Rowe pot is one secured from Mr. Emmet Delevan, except that the Delevan pot is wider in proportion to its height, the ~~Paul Rowe~~ pot being as wide as it is high, while the ~~Rowe~~ is only four-fifths as wide as it is high.

The Delevan Pot is a Woodland pot from the south-west corner of the SE SW Sec. 23, T. 71, R. 43, Lyons township, Mills county, Iowa.

Height, 4.50 inches

Diam. of Bowl, 4.55 inches

Diam. of Neck, 3.1 inches

Diam. of Lip, 3.4 inches

Height of Lip above Shoulder, 3.4 inches

Ornamentation, three horizontal lines of incised vertical indentations, .1 inch long, .15 inch apart, around the neck just above the shoulder.

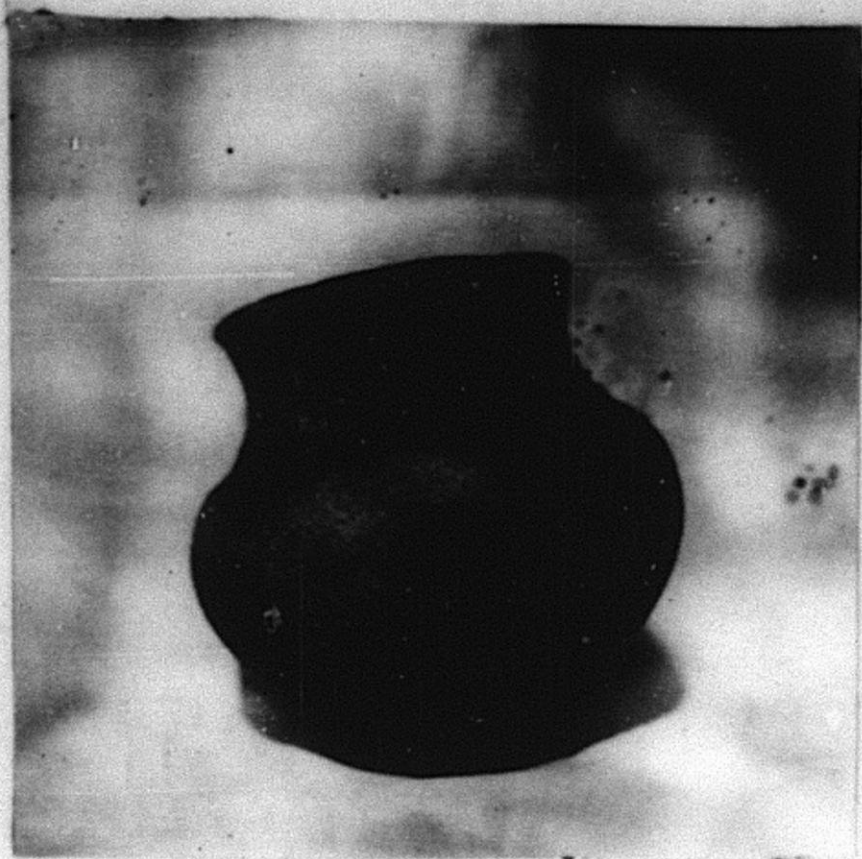
Body covered from shoulder to bluntly conical base with short indentations, tending to form lines, .1 to .2 inches long, radiating diagonally to the right downwards from the neck for approximately one inch, and from there vertically and to the left to the bottom.

This vessel was found by a boy protruding from the freshly exposed side, - exposed by a slide, - of the canyon of Chabonapu Creek at about one-half mile north-west of its junction with Waubonsie Creek at the site of Waubonsie's Pottawattamie village located on the flat between the two at their junction.

It was buried about twelve feet below the present surface of the valley.

The finder sold it to Mr. Emmett Delevan who was working on the bridge across Chabonapu Creek a few rods below, of whom we obtained it.

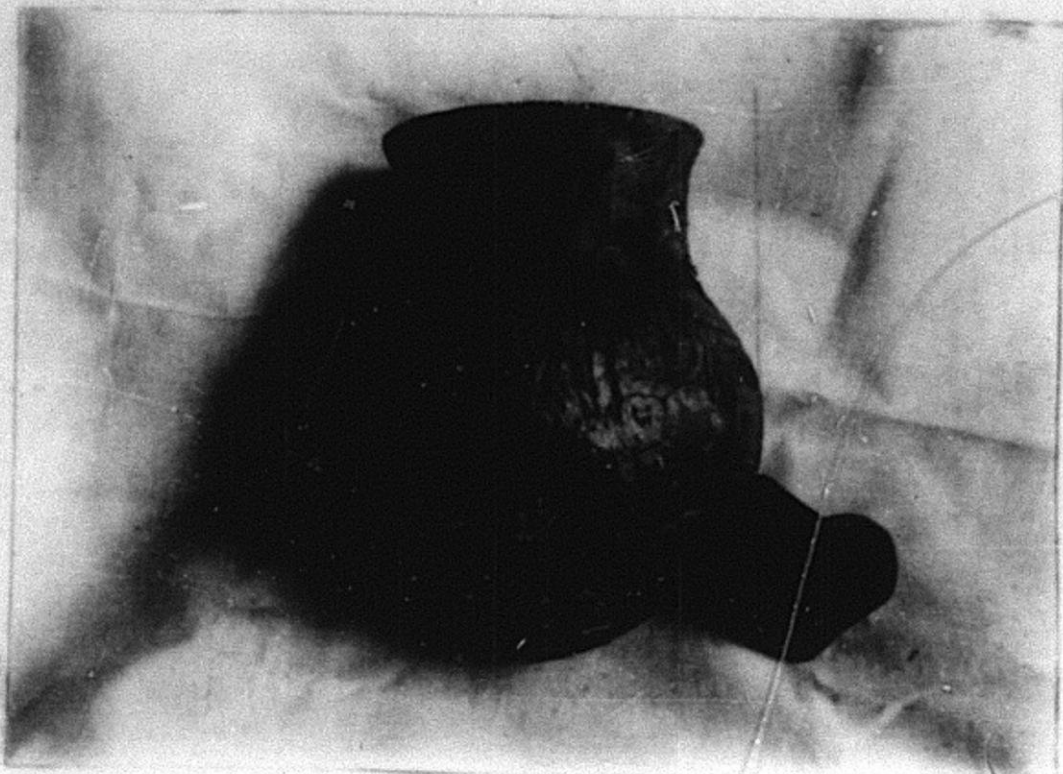
The finding of this Woodland pottery in the filled-in valley of Pony Creek and its tributaries, and the finding of the Delevan pot in the filled-in valley of Chabonapu Creek, and that of the sixty-three sherds now in Rowe's collection, fifty-eight of which were found in the eroded ditches in the valleys, would appear to indicate that the camp or village sites of the Woodland people are to be looked for in the valleys.



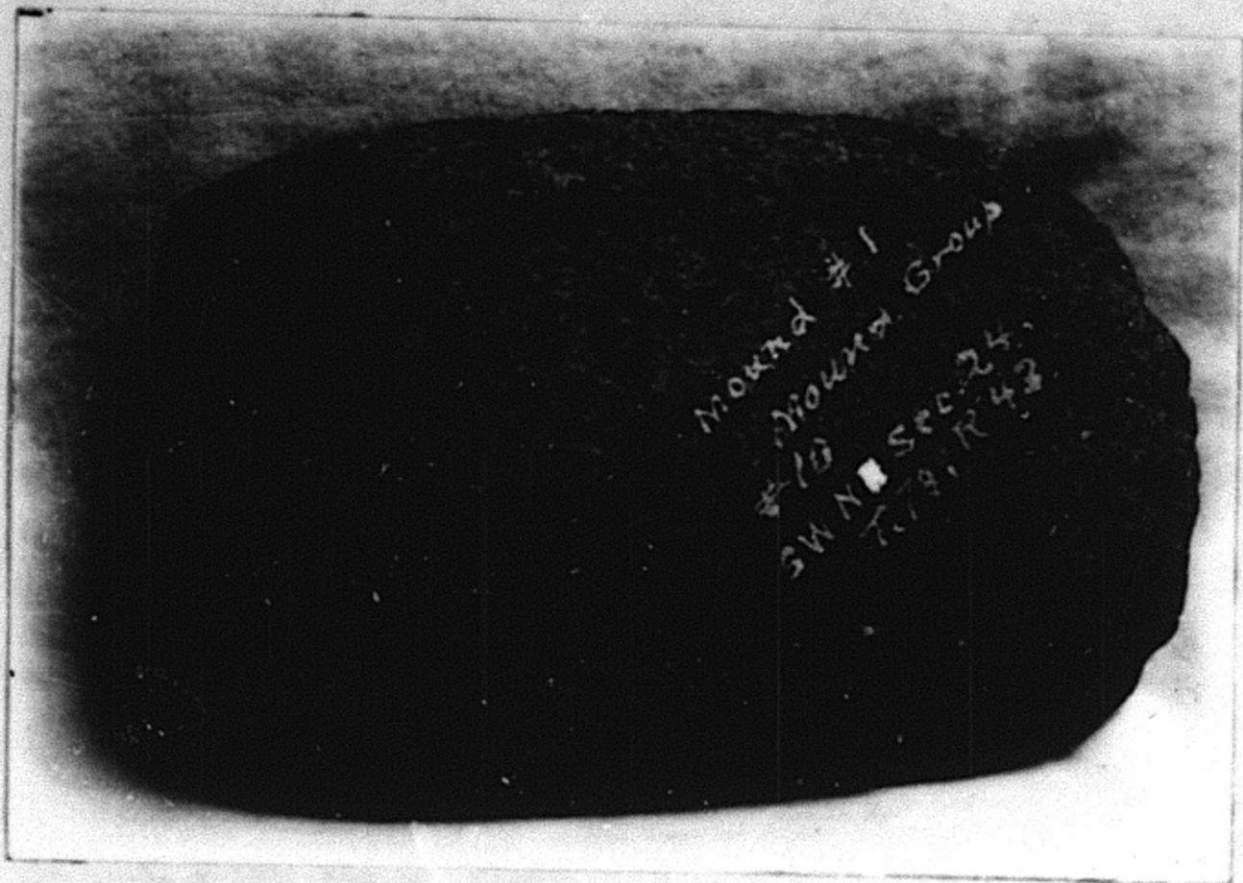
The Emmett Delevan Woodland (Algonquin) Pot.  
Exposed in side of canyon or erosion ditch of Chabonapu  
Creek, on SE SW Sec. 23, T. 71, R. 45 west of the 5th  
P.M., by caving in of side, at twelve feet below the  
present surface.

Lyons Township, Mills County, Iowa.  
Three-fifths Actual Size. See Page 122.





Woodland (Grit-tempered) Pot.  
In Collection of Paul Rowe, Glenwood, Iowa.  
One-third Actual Size.  
Height, 9.5 inches.  
Shoulder Diameter, 7.75 inches.  
Height of Neck, 2.75 inches.  
Diameter of Opening at Top of Neck, 5.5 inches,  
about two-thirds of Diameter at Shoulder.  
See Page 121.



Rough, Granite, Woodland (?) Celt. Four-fifths actual size. From Mound Floor (?) thirty inches below the South-east Edge of Mound # 1, Group # 10. The Boyce Mound Group. On SW NW Sec. 24, T. 73, R. 43 west of the 5th P.M., Mills county, Iowa.



Earth Lodge, House Site K (H.S.K.)

In pasture with scattering timber, on the S1/2 SE SW Sec. 35, T. 73, R. 43 west of the 5th P.M. Located by survey as follows: At 420 ft. south and 287 ft. east of intersection of fence on the north side of the S1/2 of the SE SW Sec. 35 with east side of Highway # 275.

The surface basin is 32 ft. in diameter and 18 inches deep at center.

In excavating we first removed the entire interior of the basin, one spading deep at a time with a clean-up after each spading, down to the house floor.

The central fireplace on the house floor, 30 inches in diameter, was located 18 inches NW of the basin center at 42 inches below the natural surface, and was from 4 to 6 inches thick.

Entrance 3 42 E from the center and 30 inches wide as shown by the extension of the black soil of the central floor area across the bench to the edge of the pit.

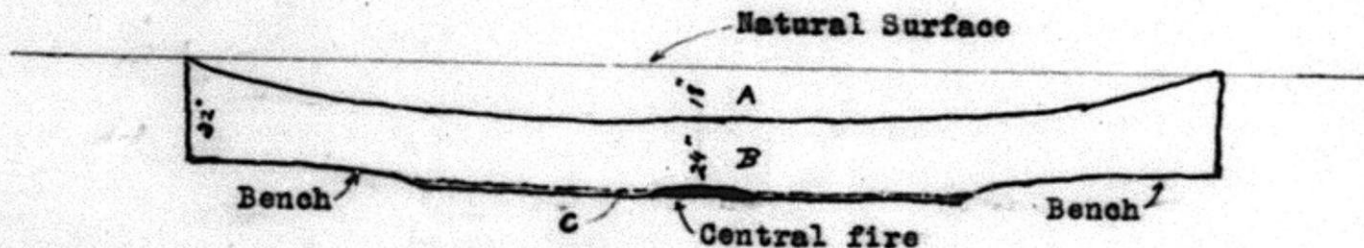
A 6 ft. wide bench extended around the perimeter of the house pit, 6 inches above the house floor on which was a stratum of sticky black soil containing many small fragments of charcoal and burned earth.

At 6 in. above and 1 ft. south of the central fire was a large vertical rim sherd with part of body attached; on floor of bench at north-east perimeter, a stemmed flint with beveled edges, 3.2 inches long, at N 10 E, 11 ft., on house floor, a Nehawka celt, 2.2 in. long (see outline on page 40); and on house floor, from center of fireplace extending N 75 W for 26 inches, was a carbonized log, 4.5 in. in diameter.

The stumps of only two carbonized posts were found, one at S 67 E, 7 ft., and the other, N 75 W, 9 ft.

These were quite certainly main posts.

Had we then known as much about locating posts as we afterwards did, we could have quite certainly located the remaining two main posts and probably those of the wall.



Profile of House Site K

- A - Surface Basin, 18 inches deep.
- B - Fallen-in Roof and Accumulated Earth since Burning of House.
- C - Stratum of Black Earth with Charcoal.

Scale, 5 ft. to Inch.



Looking <sup>west</sup> ~~east~~ from Henry Lehse House Site.  
Dec. 1st, 1938.

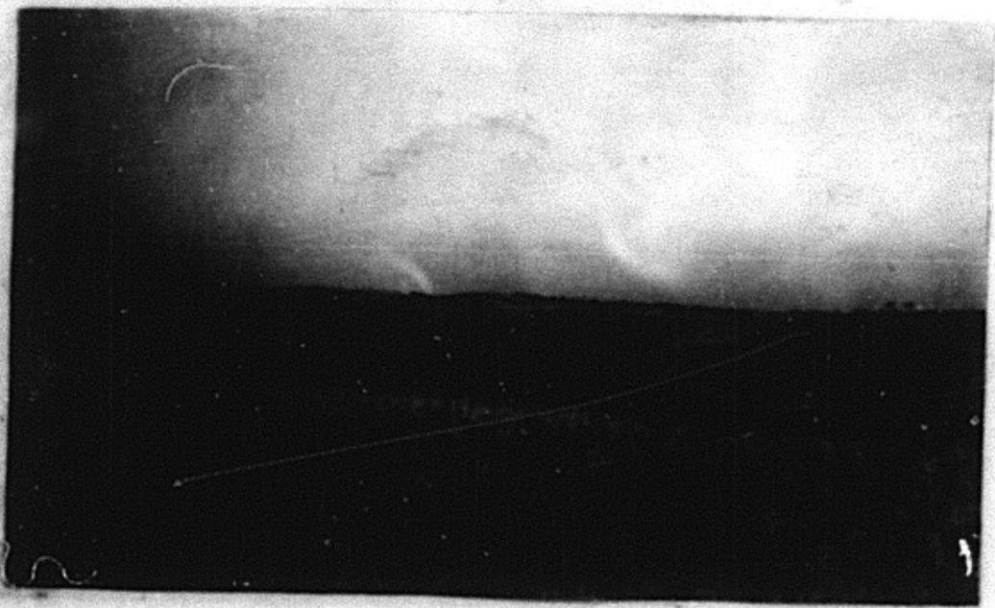


Looking North-~~west~~ from Henry Lehse House Site.  
Dec. 1st, 1938.

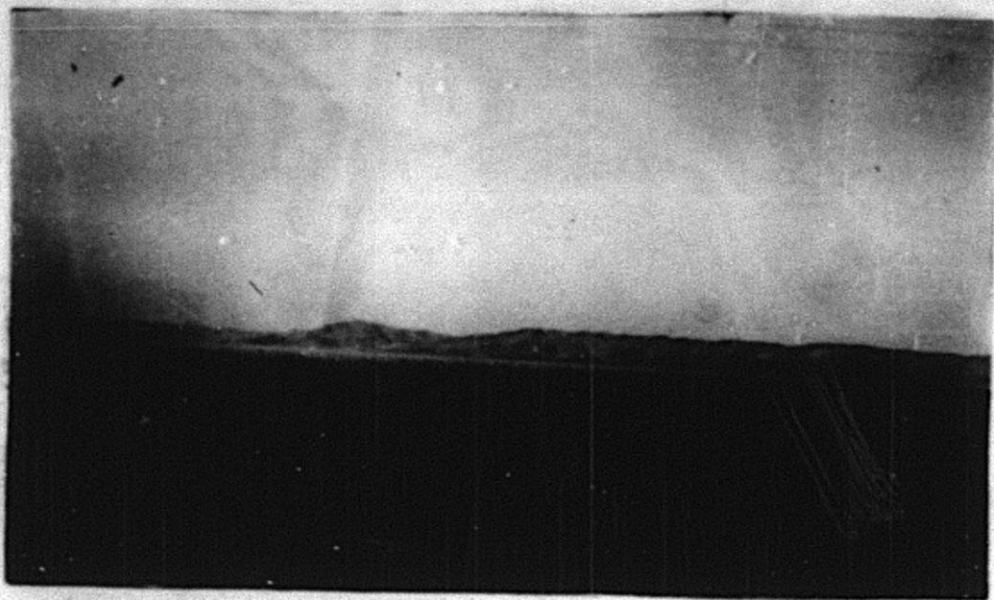




*South*  
Looking <sup>^</sup>West across Pony Creek from Henry Lohse House Site.  
Dec. 1st, 1938.



*North*  
Looking ~~South~~ from the Henry Lohse House Site.  
Dec. 1st, 1938.



Missouri Bluff Line. Two Miles Away.



Missouri River Bluffs, at One-half mile.  
North of mouth of Wall Hollow.





Woodland Mound. Mound No. 6 of Group No. 4. From  
the West. Men Cleaning Off Grass.



View in Bomar Creek Canyon. Note the Height of the  
Vertical Walls.



**EXCAVATIONS ON THE FARM CONNECTED WITH THE  
STATE INSTITUTION SOUTH OF GLENWOOD, MILLS  
COUNTY, IOWA.**

---

For more than twenty years two "boys", Lee Swearingen and Francis McDowell, now men around fifty years old, inmates of the State Institution at Glenwood, have been interested in the collection of "Indian Relics" which they found at different places on the one-thousand-acre farm on the hills south of the buildings of the Institution.

At first their finds were all from the surface. Later they did in a desultory way considerable excavation. Along a branch of Horse Creek, one-half mile south of the buildings they actually dug up at different times, a half acre to a depth of two or more feet. This they believed to be a village site and one whole pot of their collection was found there.

Their method was to dig in places where they found a concentration of flints and broken pottery on the surface. Some older and wiser collectors, though they never dig, will tell you that such places in the fields, whether there is a surface basin or not, indicate earth lodges or house sites. The boys seem to have proved the theory.

At one place, which we have designated House Site D, 360 ft. north and 100 ft. west of the I/16th corner in the center of the NW of Sec. 24, T. 72, R. 43 west of the 5th P.M., they recovered in their digging ~~they recovered~~ from a depth of, they thought, five and one-half feet, three whole pots, - that is from about as deep as they were tall.

The work was not at all systematically done. They "just dug" anywhere over an area of twenty-five feet in diameter. They remembered encountering no charcoal stumps of posts and of course did not recognize the floor, sides of the house or walls of any pits. They found "lots of ashes" and there were concentrations of broken pottery and flints which evidently were storage-refuse pits.

This House Site D is located at the point of contact of the gentle slope of the hill on the north side of the creek with the bottom land of Horse Creek. At 80 rods north-west, on a similar location, they have dug a pit from which they have taken, as from H.S.D., many hand size drift boulders and limestone rocks, also a few pottery sherds. This we have tentatively designated as House Site E.

The boys are only permitted to dig when there is no crop growing on ~~on~~ the sites. At such times they may dig a week or more very industriously, during the time they may have from their routine work, then get tired and lay off. Sometimes they will work two or three summers on the same site.

Late in the summer of the present year, 1938, they opened up two undoubted house sites, H.S.X-38 and H.S.X-39, on the crest of the spur of the upland running north-west from the garden green-house towards the rail-road. Neither was half excavated.

In the one farthest north-west, the one first opened, McDowell found a skeleton at a depth of around 4 ft. which he turned over to Dr. Dye, the Superintendent of the Institution, and which we did not see. A large quantity of broken pottery, some flint and worked bone as well as many hand boulders, were found in both houses.

We visited them three times while they were at work but were unable at either visit, because of their habit of throwing the dirt behind them, just where in the house they were working.

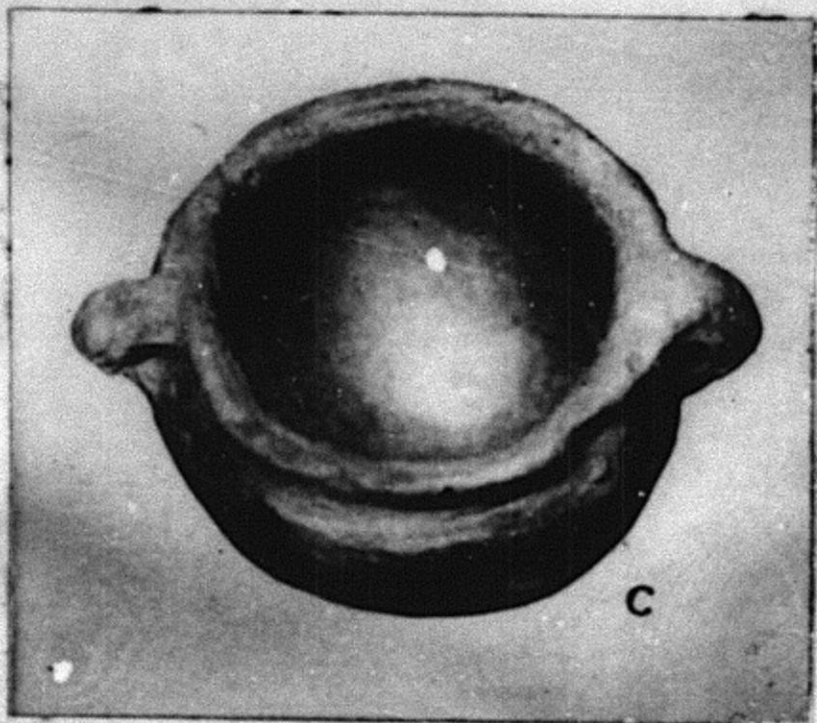


The above photograph is of grit-tempered globular pot with almost no neck having a narrow plain collar. The usual nearly smoothed out cord impressions are absent from the body. The vessel is without handles or lugs.

Found by Lee Swearingen and Francis McDowell, apparently in a storage-refuse pit in House Site D, at five and one-half feet below the surface. Neither this site or H.S.E show any signs of surface depression.

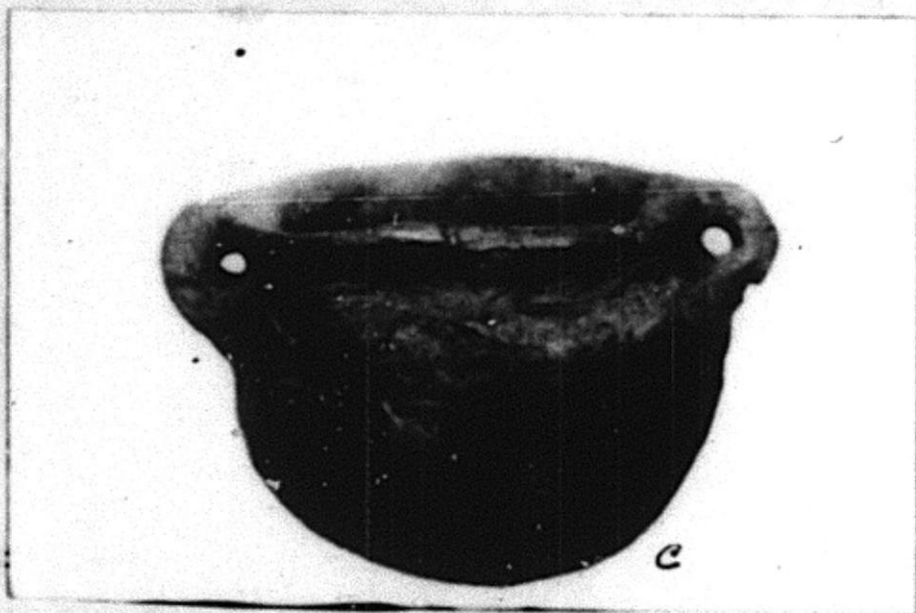
Photograph is actual size of pot, which we have designated as Pot B.

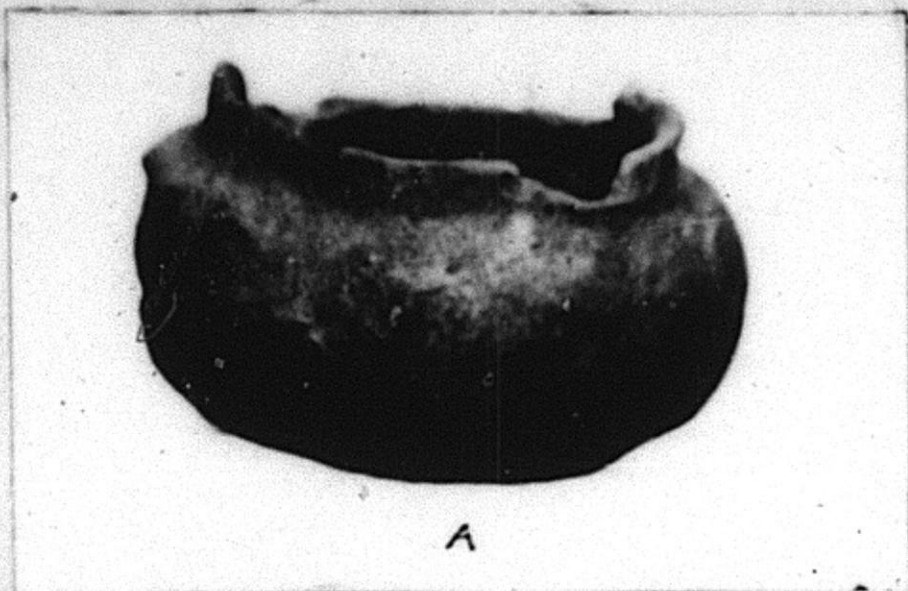




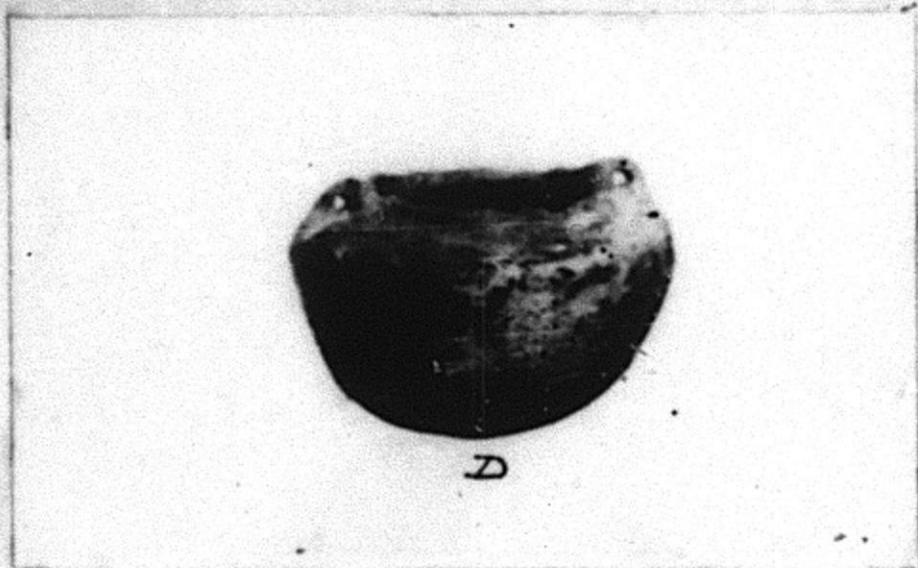
Photograph from above of globular, grit-tempered pot with low recurved, thick rim attached directly to the shoulder. Two handles extend from below shoulder to level with top of rim. Horizontal holes drilled through the handles.

Recovered from H.S.D by Lee Swearingen and Francis McDowell  
About two-thirds actual size. Designated Pot C





Photograph of Pot A, two-thirds actual size. Found by Lee Swearingen and Francis McDowell in excavations in Camp Site on north side of branch of Horse Creek. From NW NE Sec. 24, T. 72, R. 43. In north-east corner at about 200 ft. north of brook. 50 ft. NW of cellar of old white man's house. Low rim, no neck, no handles and no decoration.



Photograph of Pot D, two-thirds actual size. Small grit-tempered pot with almost right angle at nearly flat shoulder. Low rim connected directly to body. Handles extending from angle of shoulder to top of much broken rim. Horizontal hole drilled through the handle. No decorations. From H.S.D, found by Swearingen and McDowell.





Right. - Lee Swearingen *(taller)*  
 Left, - Francis McDowell

At Swearingen's right  
 Note edge of heap of earth thrown out of pit in  
 H.S.X-39 in "cabbage patch" north-west of the gar-  
 den greenhouse on State Institution Farm, On SE  
 NE Sec. 13, T. 72, R. 43 west of the 5th P.M.  
 1938

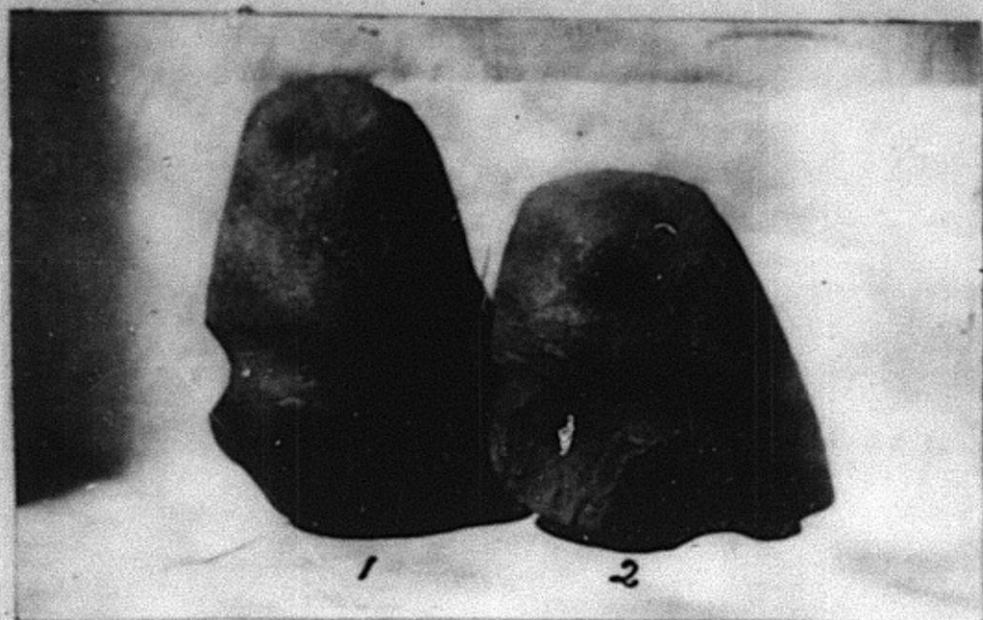
#### GROOVED AXES OF MILLS COUNTY, IOWA.

In the Collection of Mr. Paul Rowe, one of the two outstanding collections of local pre-historic Indian artifacts found in Mills county, there are three seemingly distinct types of grooved axes, none of which were found in the earth lodges or house sites excavated by us in 1938, nor in the excavations made by Proudfit and Dean in the eighties, so far as their published report shows.

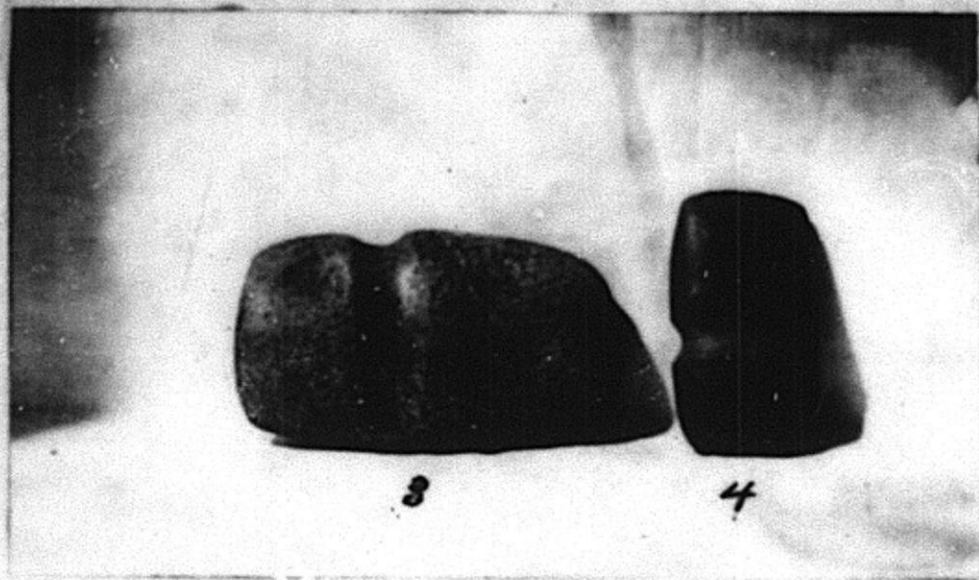
Although celts of different types are not rare, grooved axes, field and ditch finds, are by no means common in the county.

Without attempting to discuss the differences, we have selected what seem to be typical examples of the three types for photographing. The results are to be found on the following pages.

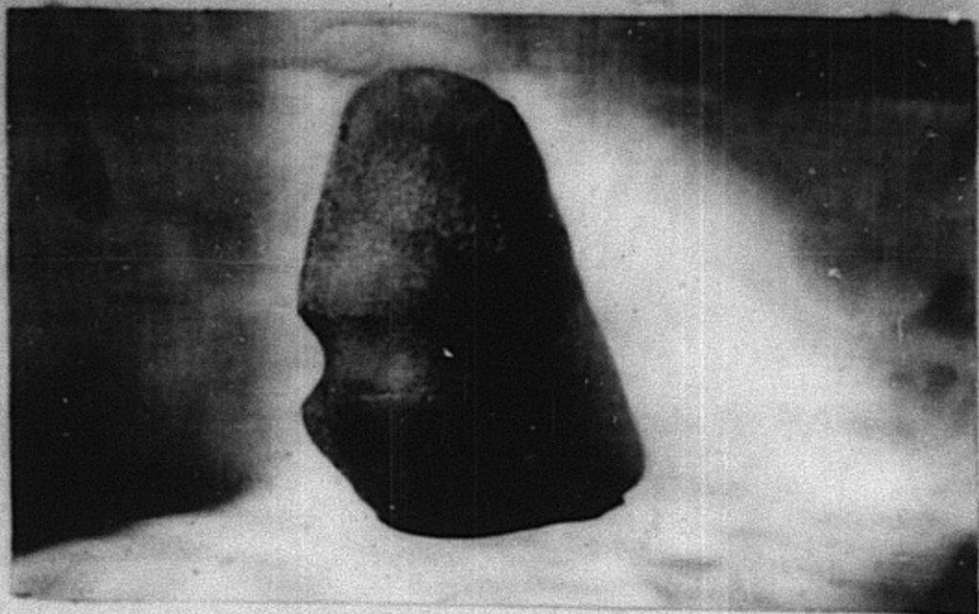




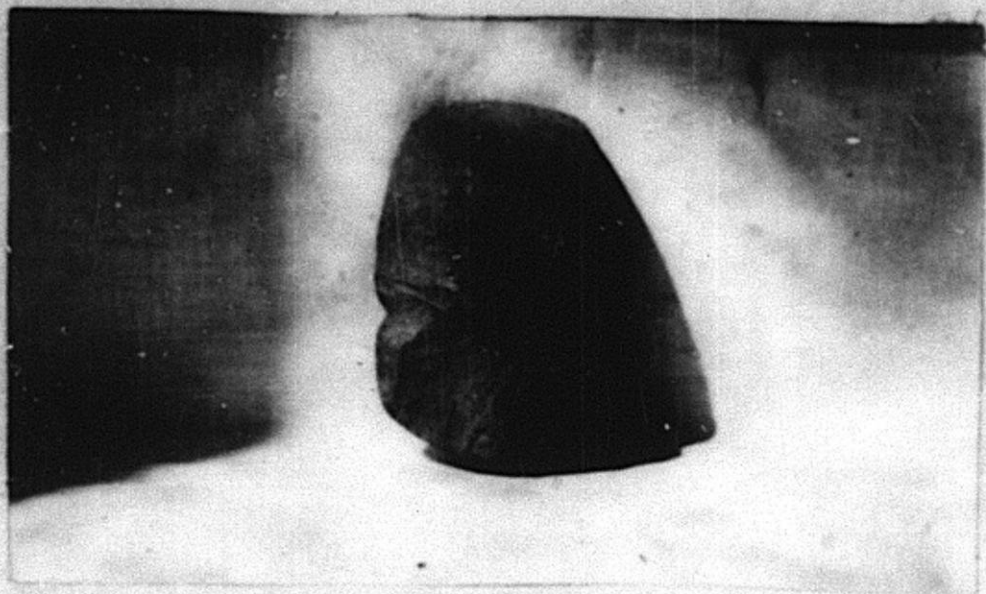
Photograph of crudely made, all-round grooved axes from the Paul Rowe collection. Rounded poll and narrow bitt. About  $5/12$  actual size. Axes 1 and 2



Photograph of well made, polished axes with three-fourths round groove. Poll approaching square. Side opposite the one grooved, flat. About  $2/3$  actual size. Axes 3 and 4

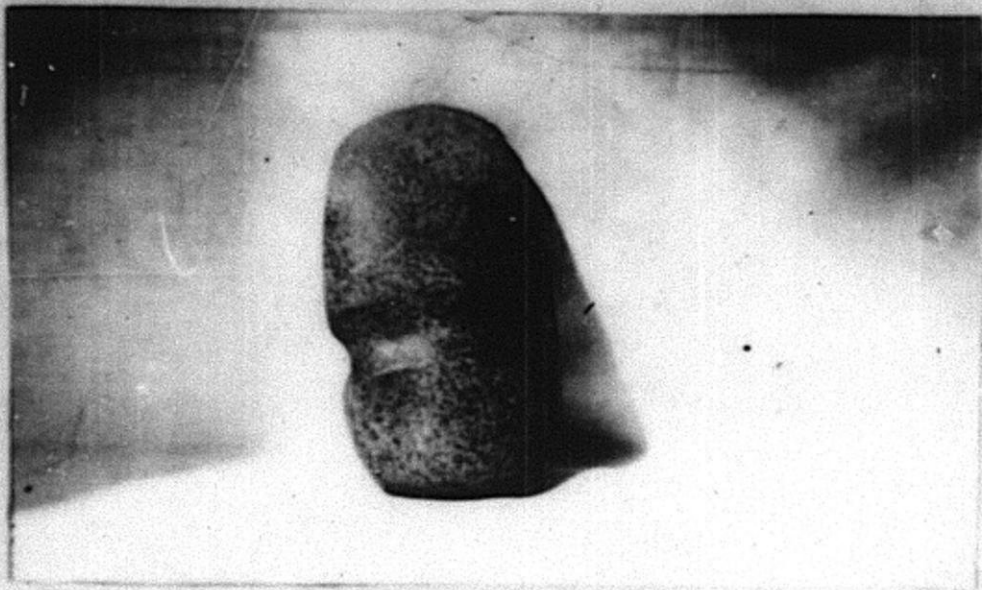


Photograph of axe of diorite from Paul Rowe collection.  
 Axe No. 1  
 Found on SE NW Sec. 31, T. 73, R. 42, Mills county. In  
 valley of Keg Creek. All-round groove. 5.8 X 3.3 X 1.3  
 inches. Note narrow bitt and rounded poll.

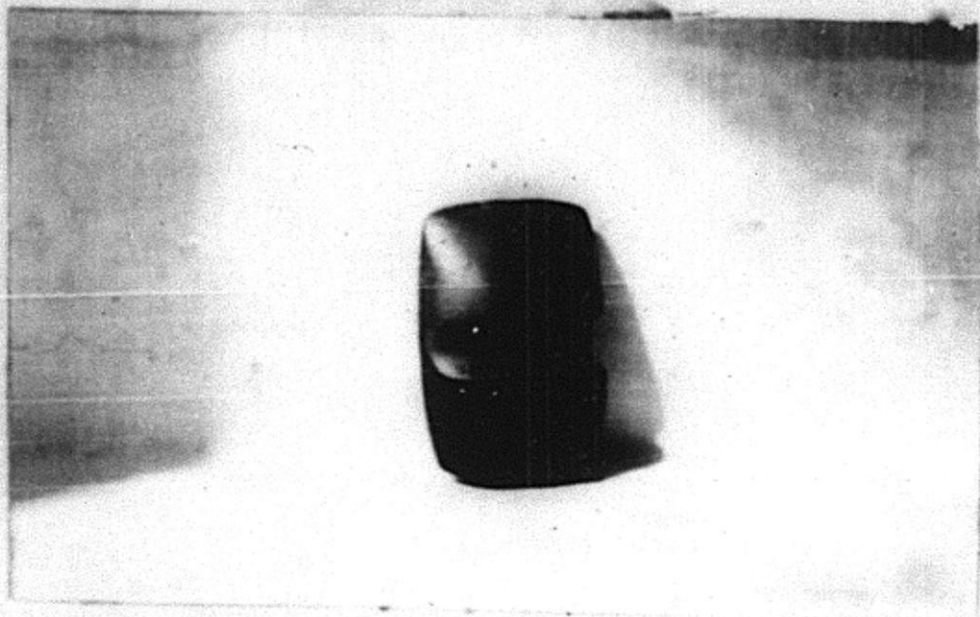


Photograph of axe of diorite from Paul Rowe collection.  
 Axe No. 2.  
 Found on SE NW Sec. 31, T. 73, R. 42, Mills county. Valley  
 of Keg Creek. All-round groove. Note narrow bitt and  
 rounded poll. 4.6 X 3.2 X 1.2 inches.

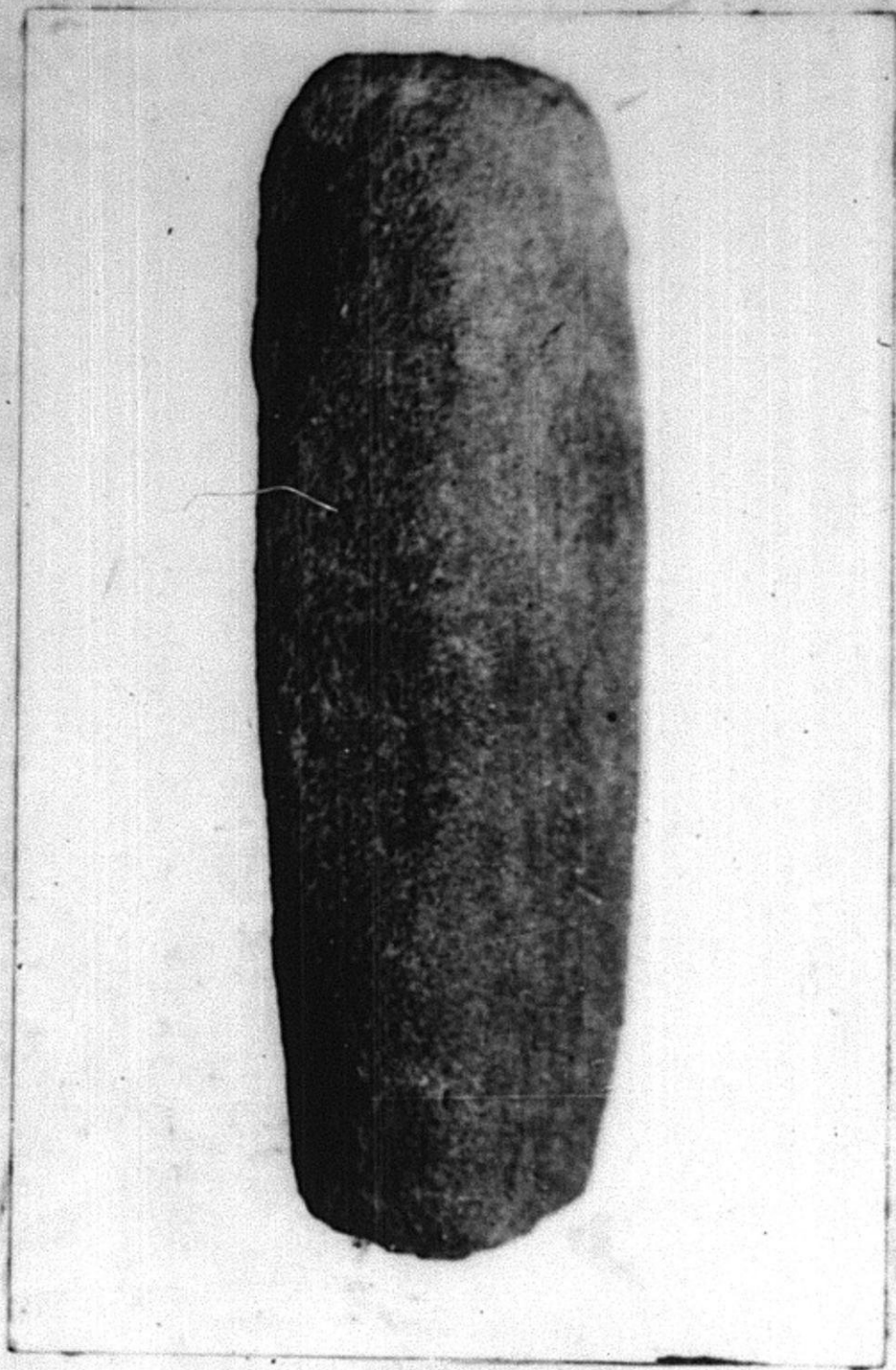




Photograph of polished diorite axe from the Paul Rowe collection. Axe No. 3. Found on Pony Creek near its mouth.  $\frac{3}{4}$  groove. 3.3 X 1.9 X .9 inches.

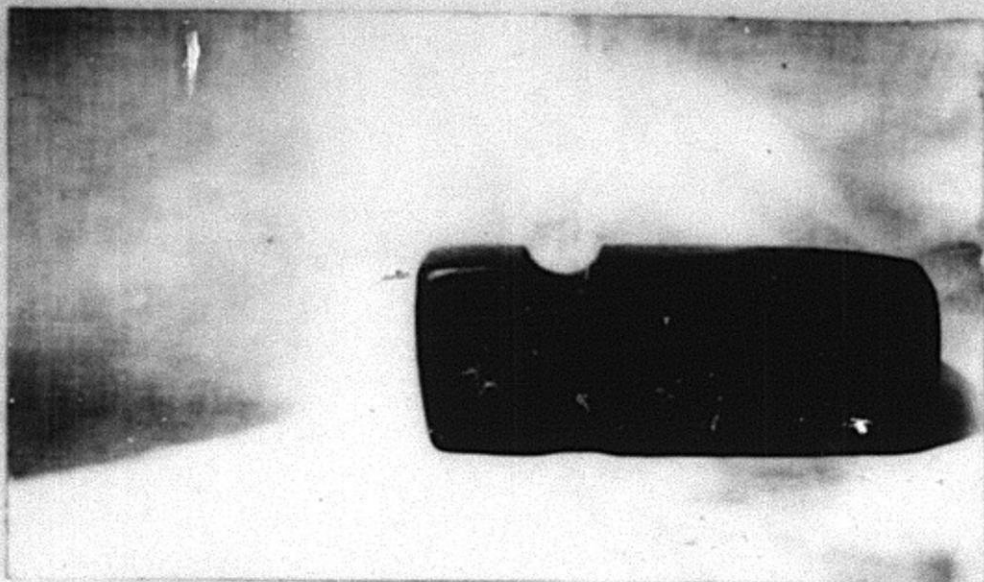


Photograph of small axe of very dark material flecked with small silvery spots, from the Paul Rowe collection. Axe No. 4.  $\frac{3}{4}$  groove.  $\frac{2}{3}$  actual size.



Photograph, actual size, of celt found on State Farm, one mile south of Glenwood, Iowa, by Lee Swearingen and Francis McDowell.



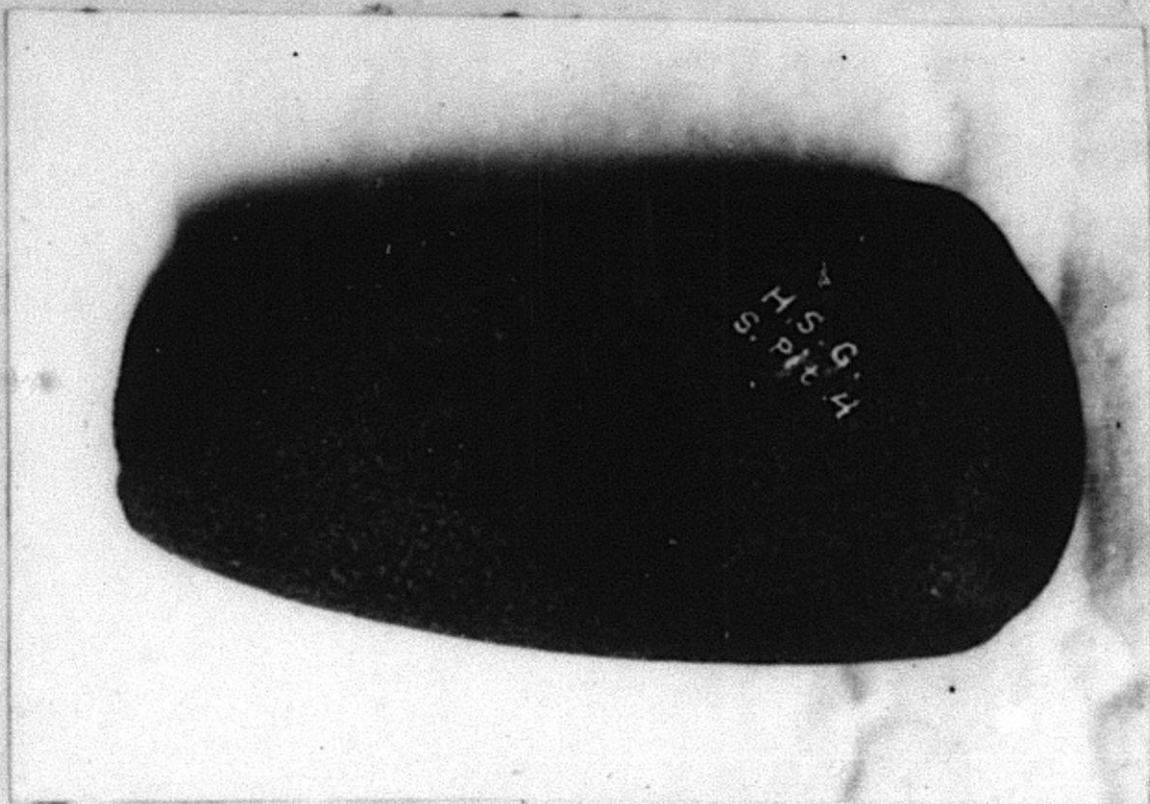


Photograph of a highly polished axe from the Paul Rowe collection. This type of square axe, long in proportion to its width, is fairly common farther to the east and south.

This particular axe was found in Fremont county. The photograph is 1/2 actual size. The poll is square and flat as is also the side on which it is resting. Mr. Rowe just recently sold it to a stranger for \$25.00

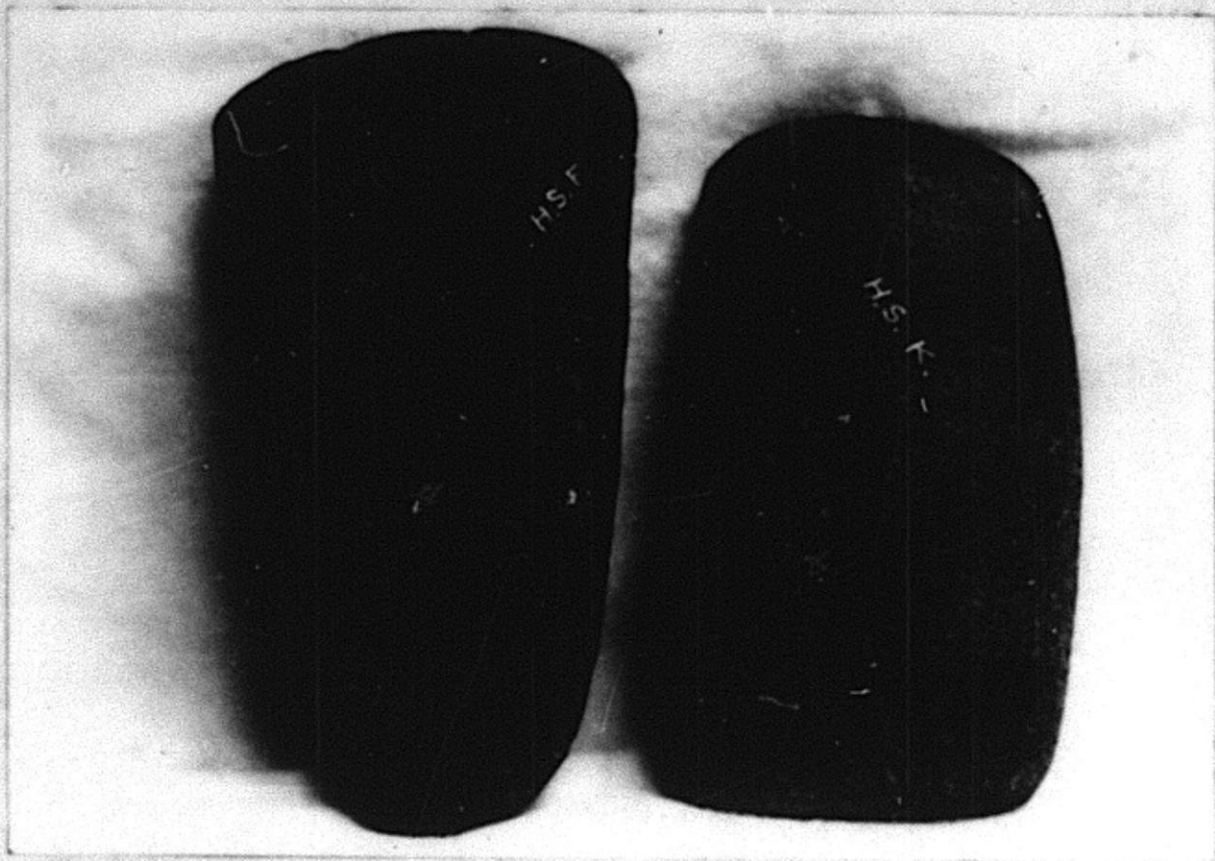


Photograph, actual size, of  
 Fine, symmetrical polished muller, found by Lee Swearingen and  
 Francis McDowell on camp or village site on the north side of  
 a branch of Horse Creek in NE corner of NW NE Sec. 24, T. 72,  
 R. 43

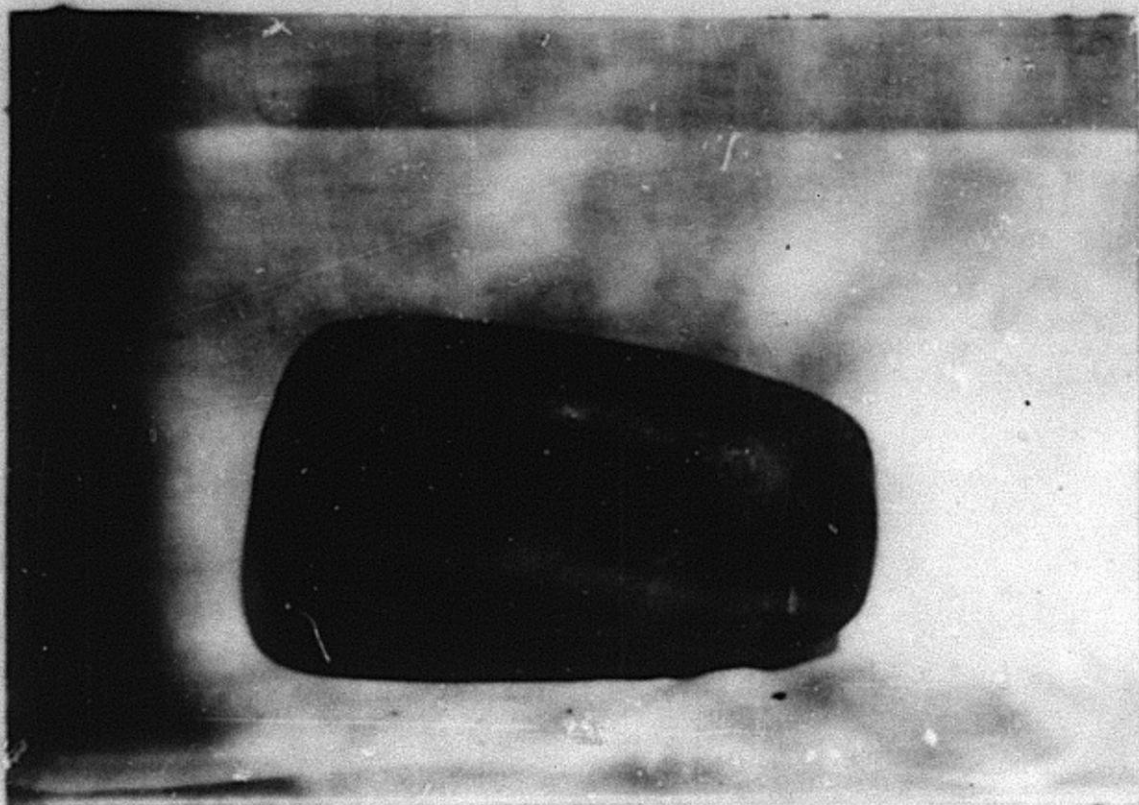


Photograph of diorite celt, actual size, found in excavating  
storage-refuse pit No. 4 in House Site G





Photograph of two diorite celts found on the house floors of House Sites F and K, actual size.



Photograph of celt of some dark material from "Happy Valley"  
From SE SE Sec. 27, T. 71, R. 43, Mills county.  
1/2 actual size. Found by Jack Rainey in cow path along the  
north side of creek. 6.8 X 3.3 X 1.4 inches.



REPORT  
of  
THE SURVEY AND EXCAVATION  
OF PRE-HISTORIC MOUNDS  
IN MILLS COUNTY, IOWA.  
1938

MOUND GROUP No. 4

( TERRY GROUP )

On NW NE Sec. 32, T. 73, R. 43.

Six Miles by Road to Foot of Bluff, on Top  
of Which Group Lies, North West of Glenwood,

MILLS COUNTY, IOWA.



### General Description.

Mound Group # 4, the Terry Group, is a procession of burial tumuli lying along the sharp crest of the bluff bordering the Missouri river on the east, on the NW NE Sec. 32, T. 73, R. 43, west of the 5th P.M., Mills county, Iowa.

To the north and south deep ravines with a dendritic system of short tributary branches, break through the bluff line into the wide river valley. Deep V-shaped lateral branches of these ravines lie back of the bluff's edge and parallel to it, between which and the river is the sharp narrow ridge on which the mounds lie.

Such narrow ridges parallelling the river and formed in the same way were much favored by the pre-historic Indian as final resting places for the remains of his dead, and mounds, ossuaries, and single burials are common on such slightly places along the Missouri river for the entire length of the western boundary of Iowa.

On the river side the loess bluffs break very steep and rough, with many short, salient spurs, down to the wide level bottom lands. Miles across these bottoms are the misty hills of Nebraska, presenting a wonderful panoramic outlook. It speaks for an innate love of the beautiful in nature in the Indian that here he made the last resting place of his dead.

Beginning at the south end of the crest of the bluff on which they are located, and running a little east of north, this group consists first of five round mounds having diameters of from twelve to eighteen feet and heights of less than eighteen inches.

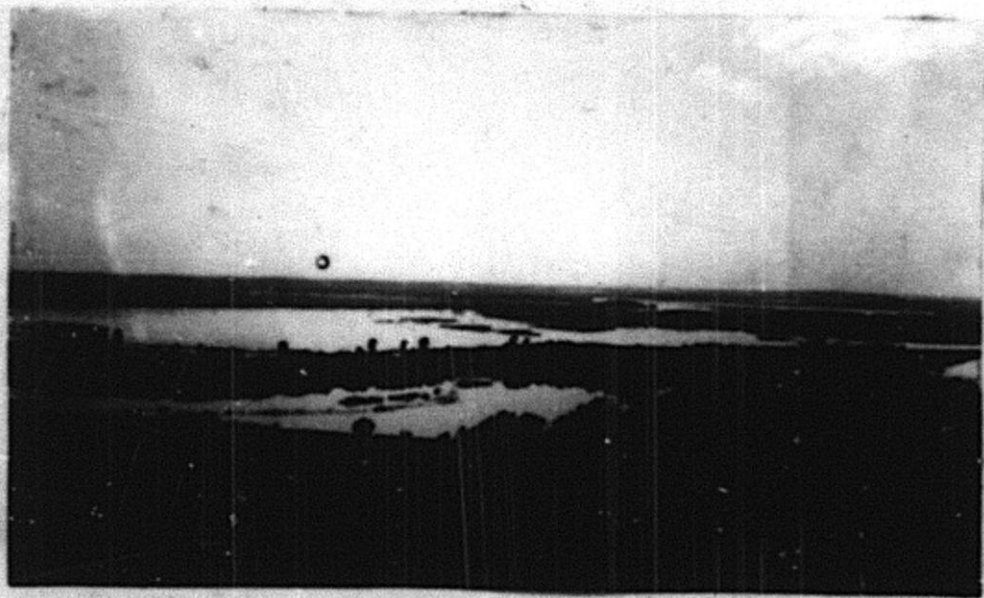
At the north end of this string is a much larger mound, # 6, fifty feet in diameter and fifty inches high. North-east of this on the crest of the narrow main ridge separating the tributaries, which connects with other ridges, growing wider the farther away from the bluff line and gradually merging into the general upland, is mound # 7, also a large mound.

The crests of the sharp ridges forming the bluff line and for some distance back, are almost bare of trees but support a good growth of prairie grasses, and judging by the stunted growth of the few trees that have established themselves, for a very long time have been so. The ravines on either side, however, are well wooded with three kinds of oak, shellbark hickory, and red and white elm.

The field notes of a location survey of the mounds of this group, with descriptions more in detail, sketch plans of the interior of those excavated, and photographs, follow.

Field Notes of a Location Survey of Mound Group No. 4,  
The Terry Mound Group, in Mills County, Iowa.

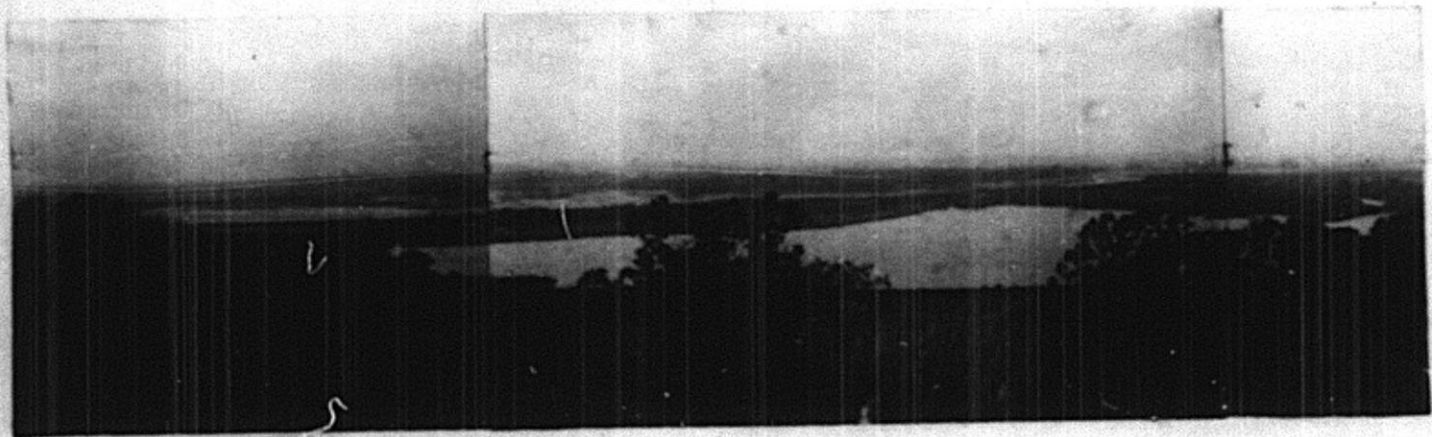
- Beginning at the 1/8 Section corner ( a forty corner) at the SW cor. of the NE NE Sec. 32, T. 75, R. 43 west of the 5th P.M. at the south end of a north and south sharp ridge forming the crest of the bluff line east of the valley of the Missouri river in Mills county, Iowa., and running thence;
- N 45 E, 47 ft. to the cen. of Mound No. 1, 18 ft. in diam. and 18 in. high. Old pit, 7 X 7 ft.
- N 5 W, 114 ft. to cen. of Mound No. 2, 12 ft. in diam. and 12 in. high. Old pit 4 X 4 ft.
- N 8 E, 69 ft. to cen. of Mound No. 3, 12 ft. in diam. and 6 in. high. Old pit 3 X 3 ft.
- N 4 E, 43 ft. to cen. of Mound No. 4, 12 ft. in diam. and 10 in. high. Old pit 3 X 6 ft.
- N 12 E, 138 ft. to cen. of Mound No. 5, 12 ft. in diam. and 10 in. high. Old pit 3 X 6 ft.
- N 15 E, 135 ft. to cen. of Mound No. 6, 50 ft. in diam. and 50 in. high. Old pit 7 X 7 ft
- N 63 W, 111 ft. to point.
- N 57 W, 150 ft. to point.
- N 27 E, 126 ft. to cen. of Mound No. 7, averaging 36 ft. in diam. and 24.5 in high, On crest of high divide bet. first ravine south of the Indian Hollow and the next one to the south of the first.
- July 18th, 1938.



View of Missouri river at flood, looking south-west from Mound No. 6 of Group No. 4.







PANORAMIC VIEW OF MISSOURI RIVER  
from Mound #4 Group #4  
MILLS COUNTY IOWA





Looking south-west across the Missouri river from Mound No.  
4



Rhoades and Orr cleaning up burials in Mound No. 4

### Mound No. 1

In Mound No. 1, 18 ft. in diam. and 18 in. high, the most southerly of those forming Group No. 4, is an old unfilled pit in the center and scattered about on the earth that was thrown out of it are numerous fragments of human bones. The owner of the land on which it is located and others that we talked with, believe that there was nothing in this mound but the skeletons found at the general level of the surrounding surface.

### Mound No. 2.

This Mound, 12 ft. in diam. and 12 in. high, like No. 1, had an old pit, 4 X 4 ft., in its center and fragments of human bones scattered about. No information could be had as to whether or not any other inclusions were found by those who did the digging.

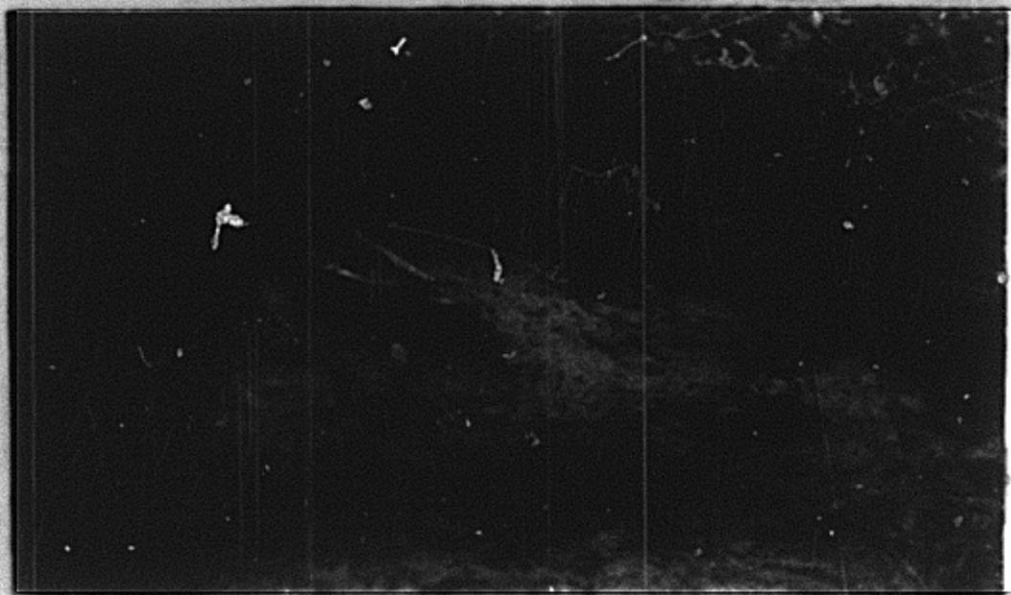
### Mound No. 3.

Like the preceding, and also as had numbers 4, 5 and 6, this Mound had been "dug" but the diggers failed to find the burials as was indicated by the absence of bone fragments.

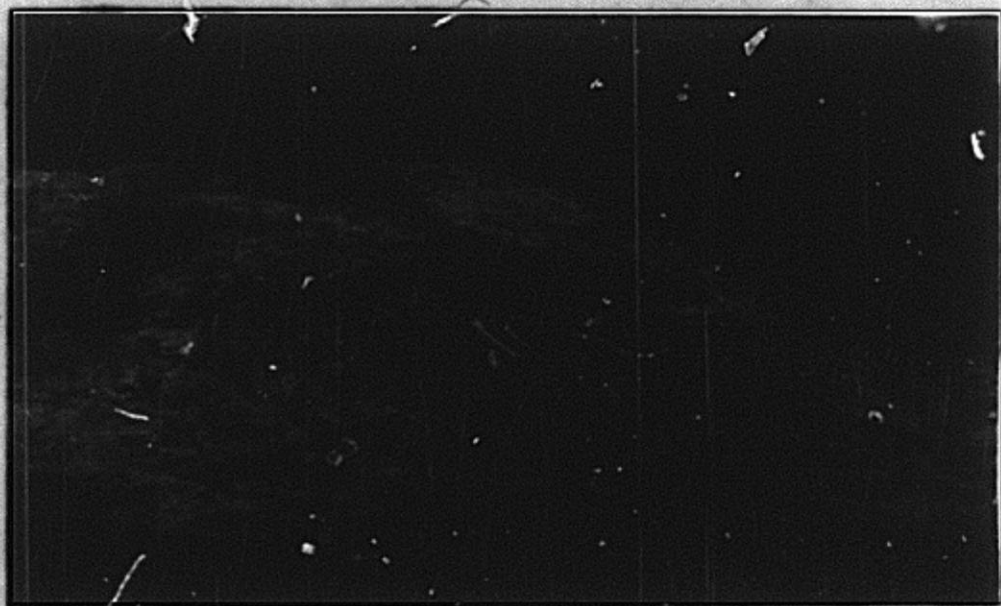
This was a barely discernable mound with a diameter of 12 ft. In it we excavated a pit 8 ft. north and south and 7 ft. east and west, finding at 30 in. N 30 E from the approximate center of the mound, and at 22 in. below the surface, a badly crushed skull, fragments of the shafts of two ulnae and one radius. Ulnae were .5 in. in diameter. The skull lay on its right side with face to the north-west.

At 30 in., N 10 W, on this burial floor, 22 in. below the surface, the east end of a bundle of the shafts of 2 femora, 2 tibiae and 2 fibulae, extending N 80 W, were found. The femora were about 15.5 in. and the tibiae, 13.5 inches in length.





Burials in Mound No. 3, Group No. 4, looking North-west.  
Nov. 2d, 1938.



Burials in Mound No. 4 of Group No. 4, looking south-west.  
Nov. 2d, 1938.

## Mound No. 4, - Description.

A slight (5in.) elevation, twelve feet in diameter, where a short spur runs west from the crest, towards the river, is the inconspicuous mound # 4.

In this a pit eight feet square was excavated down to the burial floor, 4 ft. north and south and 3 ft. east and west, the center of which was 3 ft. west of, and 12 inches below, the mound center.

On this floor were two burials oriented north and south. The most westerly of which was a flexed burial lying on its back with head to the north, the skeleton of which was fairly well preserved, only the smaller bones missing because of decay. All the bones were closely articulated and in place. The body was fully extended with the left fore-arm folded across it and the the lower extremities strongly flexed slightly to the left. The weight of the superincumbent earth had flattened all the bones except the skull well down on the burial floor.

Because this skeleton showed no disturbance, and except for decay, was entirely normal as to the position of its members, it is very possible that this was a burial in the flesh.

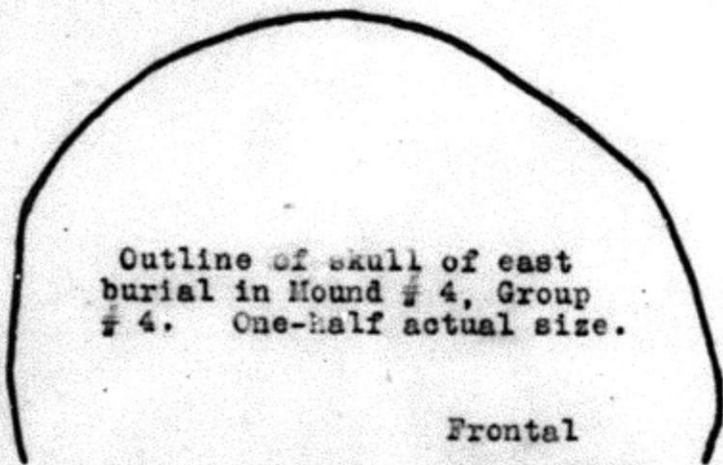
Because of nearness to the surface, the frontal and the facial bones, and those of the right shoulder, were entirely decayed.

The easterly burial lay parallel to the one just described, with head to the south, 16 inches separating them. The spinal column and ribs of the right side were well preserved and regularly in place and under these what remains of the bones of the arms are hidden. The pelvis was badly crushed and decayed.

The large bones of the lower extremities had been placed so as to approximate the position they would occupy if flexed.

The skull lay on its left side, - the upper jaw gone. The lower jaw had been placed just above the pelvis of the westerly burial. No supra-orbital ridges. Below is an outline of this skull from measurements while it was still in situ.

When this burial is studied the appearances seem to indicate that the flesh had decayed or had been stripped from the bones, leaving them still largely bound together by the ligaments when placed in the mound. We were fortunate in getting an unusually good photograph of the burials in this mound.



Outline of skull of east  
burial in Mound # 4, Group  
# 4. One-half actual size.

Frontal



## Mound No. 5.

In Mound No. 5, 12 ft. in diam. and 10 in. high, we found on digging an 8 ft. square pit, the burial floor at 24 in. below the surface of the Mound. On this floor lying fully extended east and west, with head to the east, and on its back, was a fairly complete skeleton of a person six feet high.

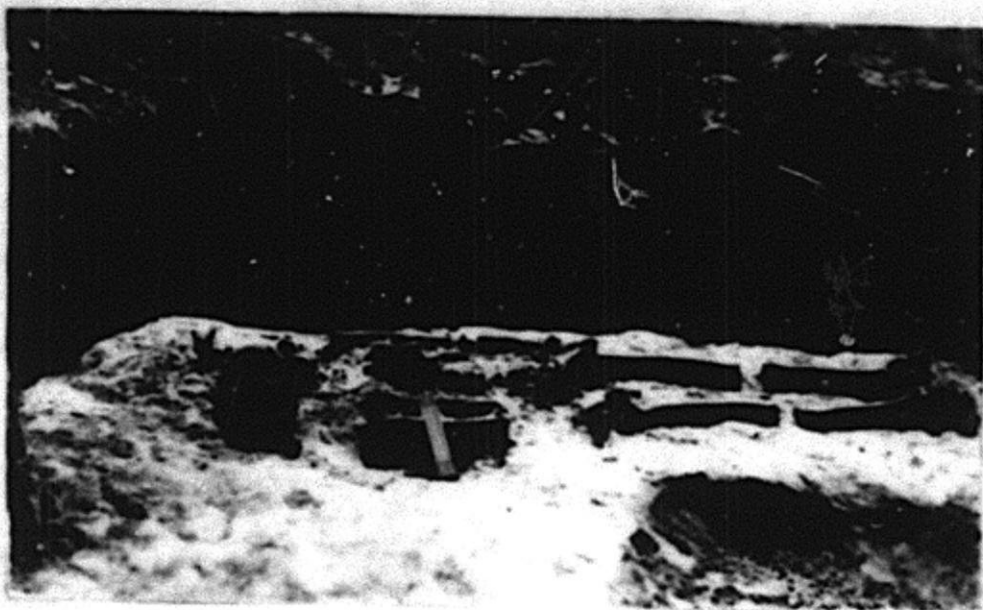
Except that the lower maxillary lay back of the skull, all the bone fragments were so regularly arranged as to indicate a burial in the flesh; or more likely, of one the bones of which were still largely united by ligaments.

A study of the photographs of the burials in mounds 3, 4 and 5 will probably give a better idea of the condition and arrangement of the skeletal remains in these three mounds than would a lengthy detailed description.

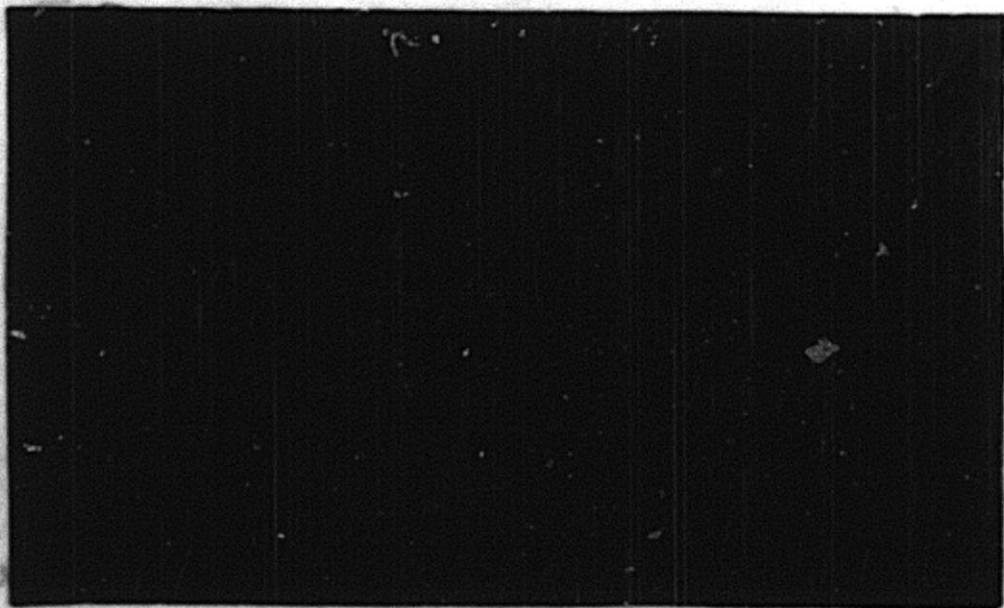
Note the heavy supra-orbital ridges and the pronounced longitudinal median ridge in the photograph of the skeleton in Mound No. 5. Although this was somewhat broken up we believed it could be restored and sent it in.



Orr Cleaning up Burials in Mound No. 4 for Photographing.  
Photograph by A. S. Workman, Oct. 26th, 1938.



Burial in Mound # 5 of Group # 4, - Terry Mounds.  
Twenty-four inches below Mound surface. Looking south.



Burials on Upper Floor of Mound # 6 of Group # 4.  
Thirty-four inches below the Mound surface. Terry Mounds.



## Mound No. 6, Group No. 4.

Mound No. 6 is located at the junction of the sharp crest of the bluff with the narrow divide running NE between the ravines cutting through the bluff front. At this place, as at others along the bluffs where a divide and the crest join or where spurs run out towards the river from the crest, there is a slight mound-like elevation. At such places it is often difficult to decide whether the elevations are natural or artificial.

As the excavation of No. 6 showed no old soil line, - all was homogeneous yellow loess, - it was impossible to tell how much had been added to the natural mound to raise it to the height it was when we excavated a pit in it, 40 ft. in diameter, Oct. 24 to 28.

At the bottom of this pit the floor was 12 ft. below the surface at the center of the mound. At the sides, 5 ft. inside the edge of the artificial mound, as near as we could determine it, we were 52 in. below the mound surface.

It is always difficult to determine where the exact periphery of a mound is, and especially so when the slope of the built-up part approaches that of the natural.

The center of the excavated pit was the approximate center of the mound. As we had drawn a blank in excavating Mound No. 1 of Group No. 10, the Boyce Mound, just previously, we determined to go deep enough to certainly miss no inclusions. The depth of 12 ft. below the surface at the center, for a mound the size of No. 6, seems excessive, but we were only 1 ft. below the floor of the lower burial, the first one encountered. Had we gone less deep by 2 ft. we would certainly have missed this lower burial floor with its ten burials.

As the excavation was started by trenching north and south along the west side, almost the entire pit was thrown out before encountering the first skull of the jumbled burials on the lower floor, No. 12.

Previous to that nothing had been found but a few flint spalls and hand size, mostly drift, pebbles, one small Woodland sherd, west 12 ft., 18 in. below natural surface, and two clam shells.

On the lower floor were the scant remains, in considerable disorder, of ten individuals, as evidenced by the skulls. On the upper floor, two. The arrangement of these can best be seen by examining the sketch plan, and photo graphs, one looking east and the other north.

Just east of skull No. II was a cache of small hand boulders.

Skull No. 1 lay on left side with face to E.

Skull No. 2 lay on its face with base to E.

Skull No. 3 badly crushed, lay on left side with face to north.

Skull No. 4 lay base up with face to E.

Skull No. 5 lay on right side facing SE.

Skull No. 6 only a fragment, lay upside down.

Skull No. 7 badly crushed.

Skull No. 8 base up, facing south - only crown.

Skull No. 9 complete, lay on left side facing NW.

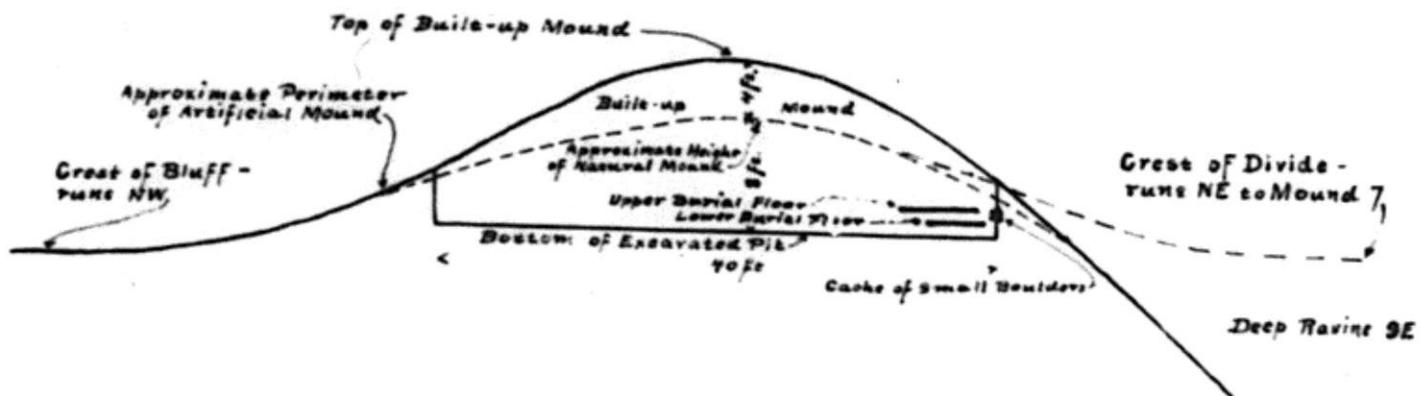
Skull No. 10 complete, lay on left side facing NW.

Skull No. 11 complete, lay on left side facing NW.

This skull connected with badly decayed spinal col.

Skull No. 12 badly crushed and decayed. This was the first found.

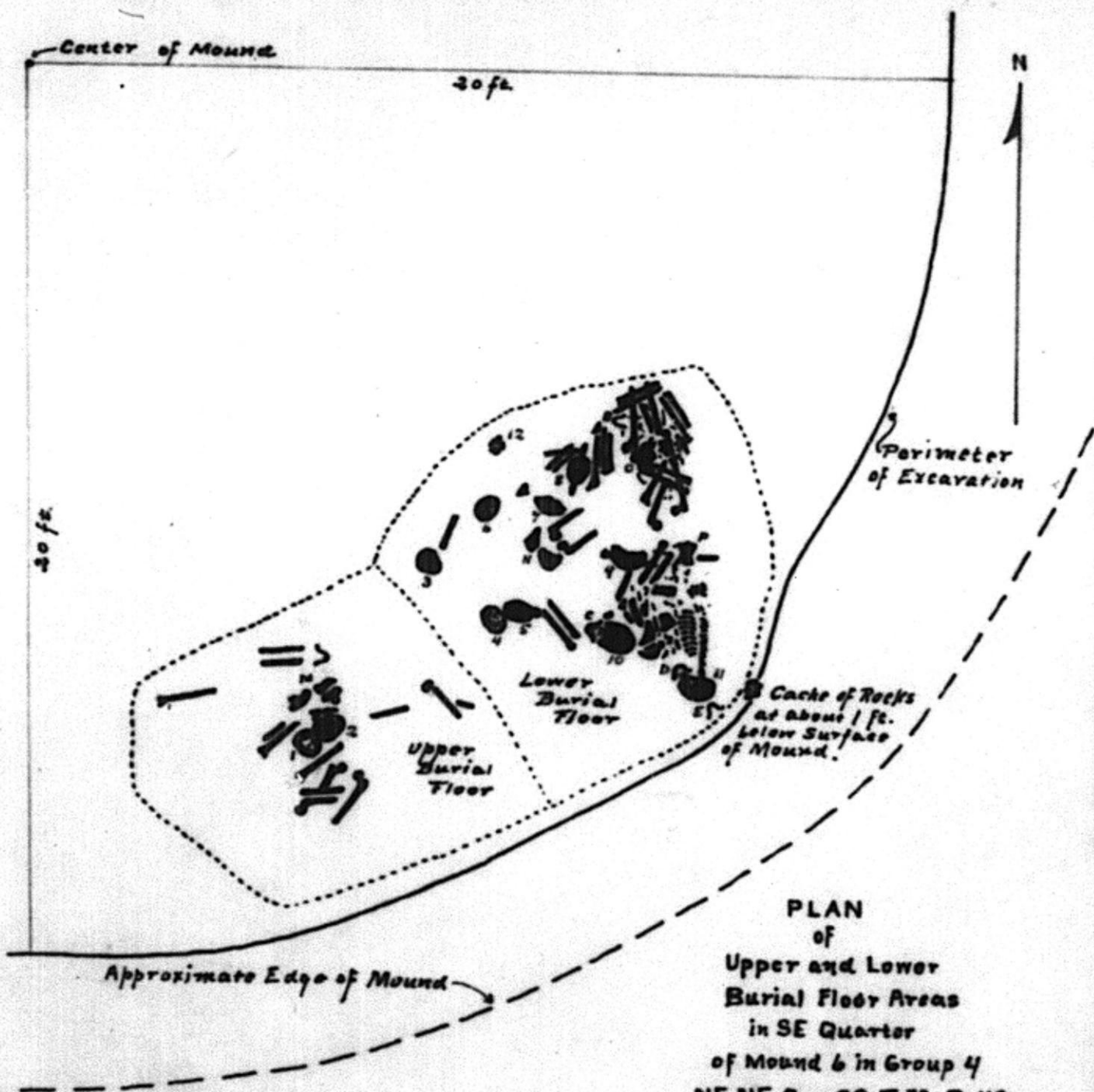
NW ← → SE



CROSS SECTION  
of  
MOUND 6, GROUP 4.

Scale, 10 ft. to inch





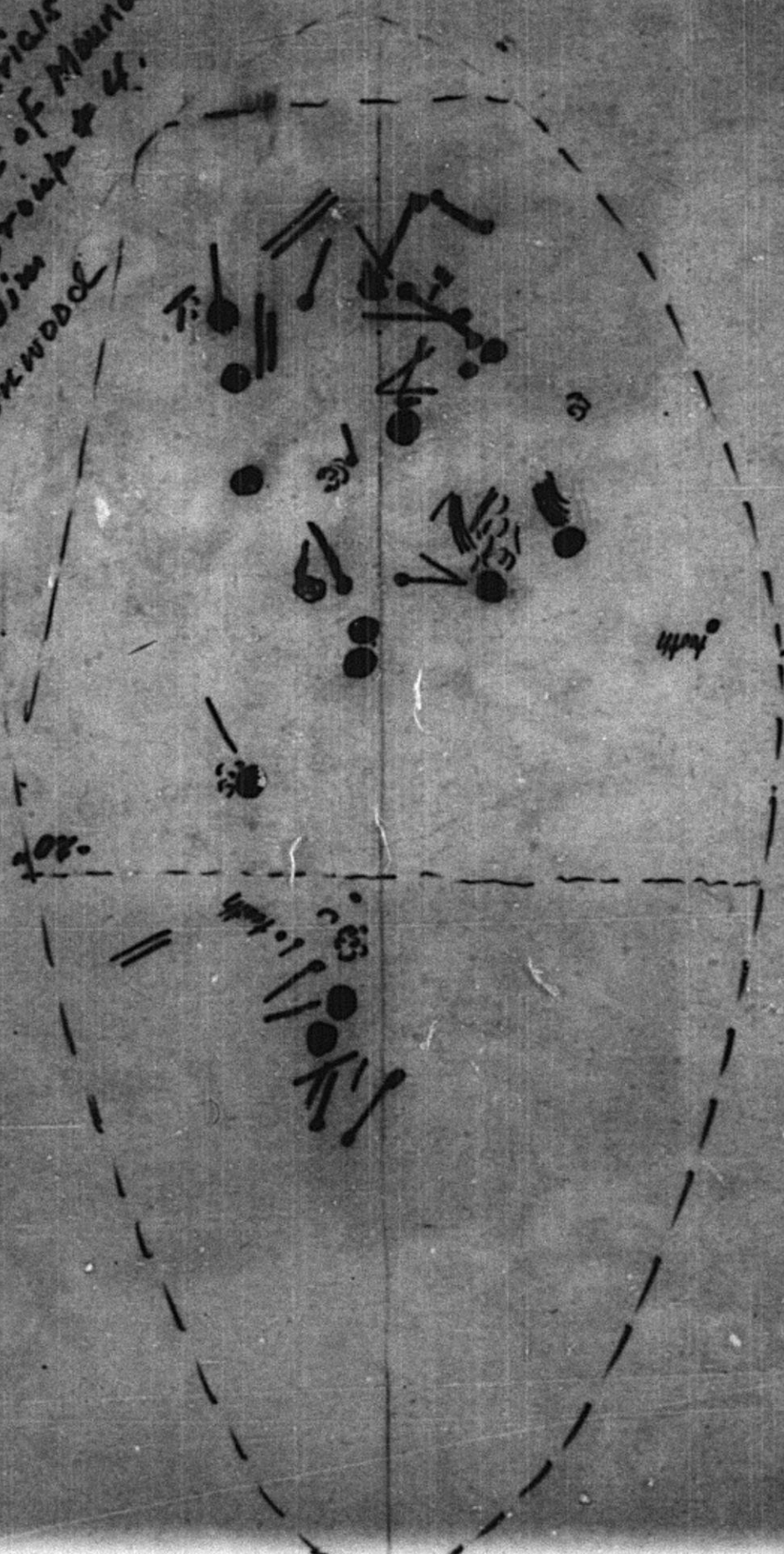
PLAN  
of  
Upper and Lower  
Burial Floor Areas  
in SE Quarter  
of Mound 6 in Group 4  
NE NE Sec. 32, T. 73, R. 48  
Mills County, Iowa.  
Survey by Ellison Orr, Oct. 29, 1938

Upper Burial Floor, 30 in. below Surface  
of Mound.  
Lower Burial Floor, 42 in. below Surface  
of Mound.  
I to 12, (in Red Ink) - Skulls.  
A to E, (in Red Ink) - Lower Jaws.  
M to P, (in Red Ink) - Pelvis.

Scale, 1 in. = 3 ft.

Plan of Burials  
in SE Part of Mound  
# 6 in Group # 4.  
By Jim  
Glenwood

N



both

100.

100.

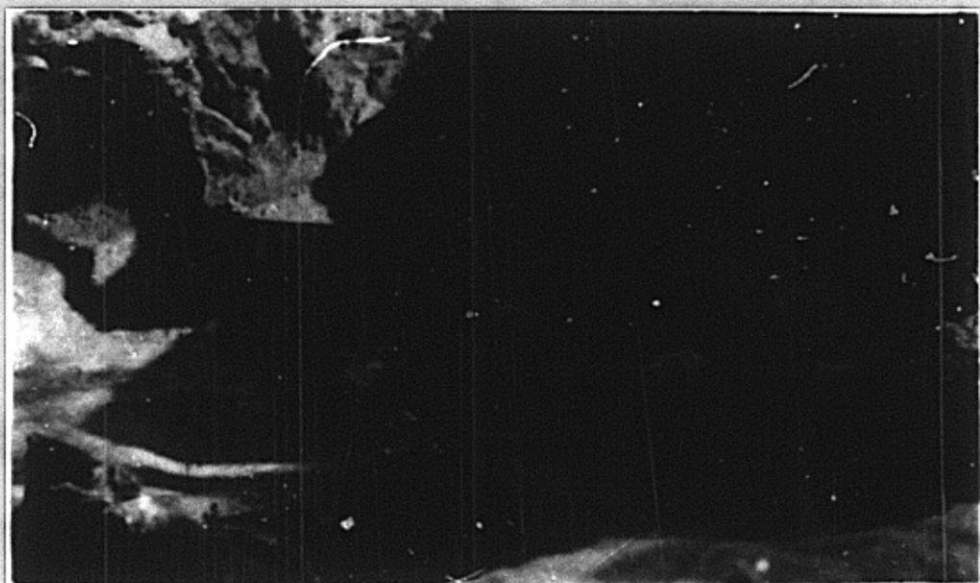




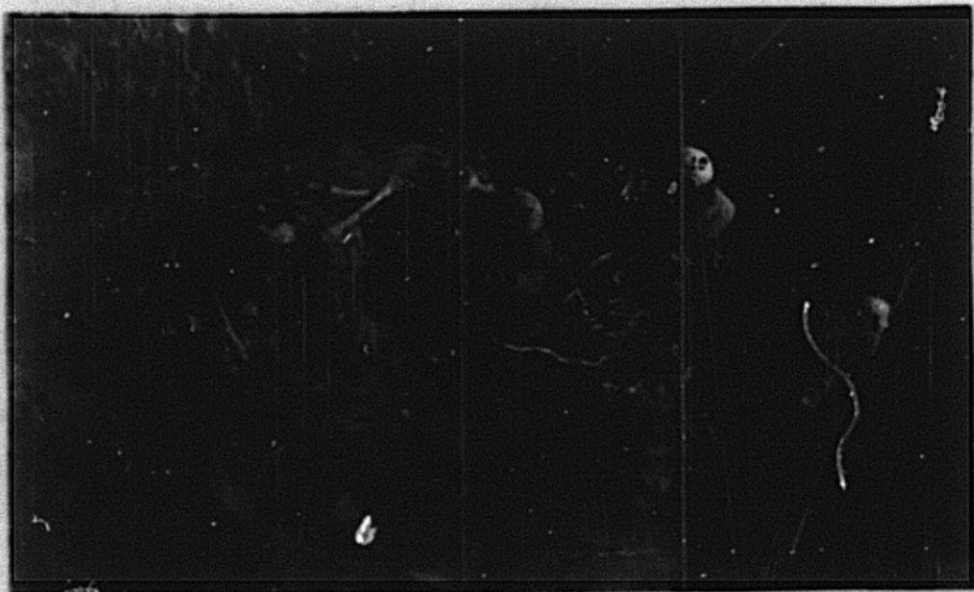
Mound No. 6, Group No. 4. Covered with prairie Grass.  
Looking North.



Mound No. 6, Group No. 4. Stripped of Grass. Looking West.



Jumbled Burials on Lower Burial Floor of Mound No. 6 , Group No. 4  
Looking North. Numbers of Skulls in Red Ink.



Jumbled Burials on the Lower Floor of Mound No. 6, Group No. 4.  
Looking East. Numbers of Skulls in Red Ink.  
Note Cache of Hand Boulders back of Skull No. II.



## Mound No. 7, Group No. 4. Description.

Mound No. 7 is located on the somewhat wider divide 387 ft. north-east of Mound No. 6. It is approximately 36 ft. in diameter and 24.5 in. high. Like No. 6 it was covered with a rank growth of the grass, *Andropogon scoparius*, and was partly shaded by four oak trees, none of which grew on the mound.

It is doubtful if any part of the river bottoms ever was visible from this mound.

In it a round pit was excavated having a radius of about 5 ft. less than that of the mound from center to the extreme feathered out edge. On the whole area of this pit excavation was carried down to a depth of 38 to 40 inches below the natural surface.

Scattered through it were 25 flakes and spalls of dark Nehawka flint, 100 of other varieties, and 50 small hand chunks of granite, diorite, quartzite, etc., and some half dozen of small, - 1 to 2 in., - sherds of Woodland pottery. One large sherd and a flint flake were found, at N 45 W, 10 ft., 24 in. below the natural surface; a lance head 2 in. long and 3/4" wide, north 8 ft., 24 in. below the natural surface; and a large flint "fist axe" (coup de poing) at S60E, 12 ft.

The first indication of a burial encountered was along the south-east edge of the excavation at the natural level of the surrounding surface, - there was no original surface soil line, - apparently discolored by fire, containing bits of charcoal and burned earth, 5 ft. long and 2 ft. wide. The center of this area proved as a whole to be about 2 ft. east of the burials later uncovered, 24 in. lower down.

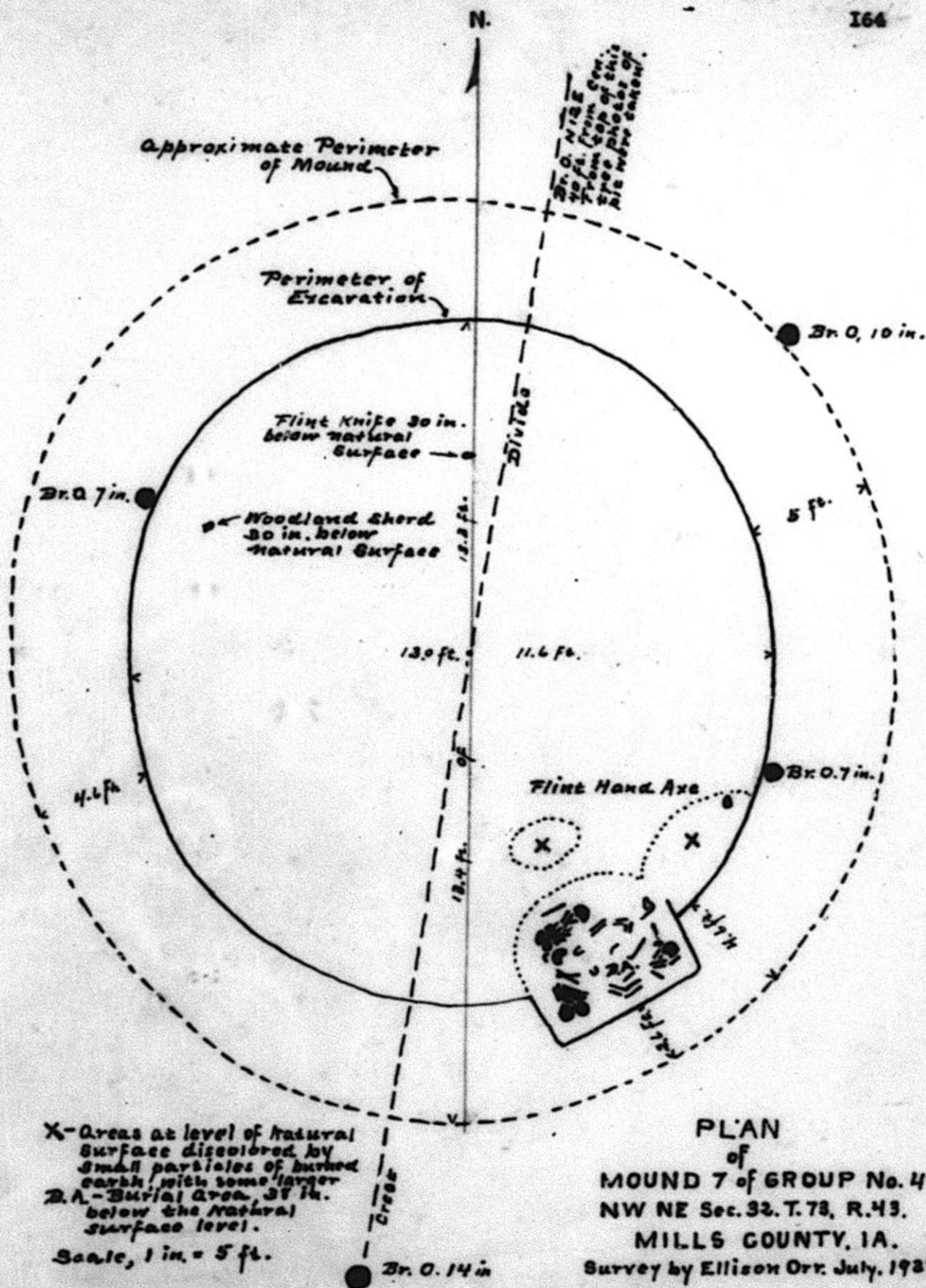
S 20 E, 9 ft. from the mound center there was also at about a foot lower, a lens shaped discolored deposit, 2 ft. in diam. and 4 in. thick, with pieces of burned clay, under which there were no burials. And to the west and south of these two areas, 1 ft. lower and directly over the burial area, was a third.

A little east of south of the center of the mound area, partly within the excavation and extending outside, to within about 2.5 ft. of the perimeter of the mound, at 38 inches below the natural surface, was the burial floor, roughly 7 ft. square.

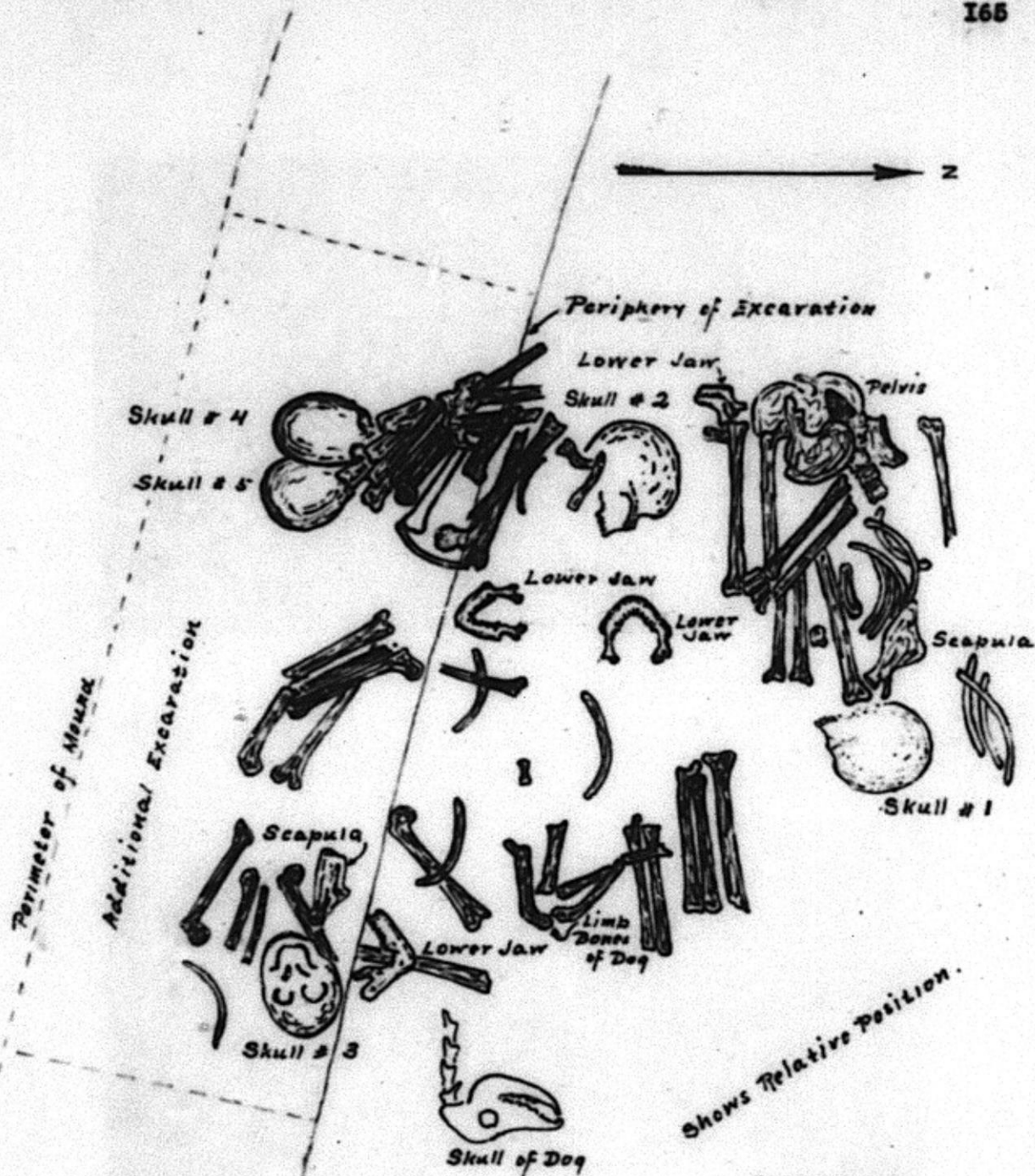
On this were three somewhat distinct assemblages of skeletal remains forming a triangle.

The northwesterly, oriented north-east and south-west and south-west and lying about 4 inches higher than the others, designated as No. 1, consisted of 2 adult skulls, one at each end of the bundle and one of which was somewhat separated from the other bones; a pelvis at the west end, badly crushed; six long bones, femur and bones of leg and humerus and bones of forearm, apparently articulated by ligaments when buried; four vertebrae, articulated; scapula; five ribs and a large number of decayed fragments of other bones.

A part of the skull of an infant lay beneath the above, and parts of four long bones north of and four inches lower may have been part of another burial.

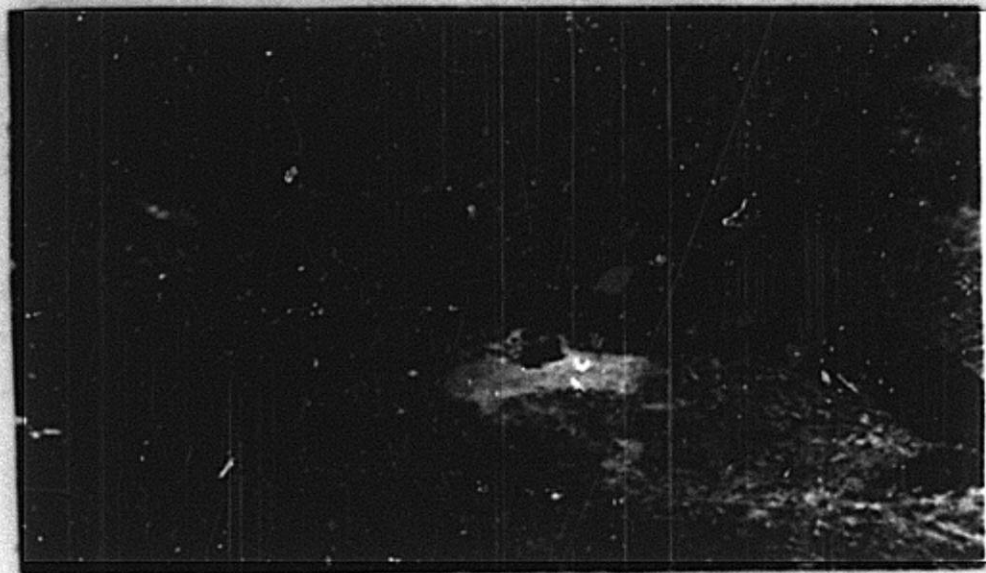






Scale, about  $\frac{1}{10}$ th.  
of actual size.

SKETCH  
of  
FIVE BUNDLE BURIALS  
IN MOUND 7 OF GROUP # 4  
ON NW NE Sec. 32, T. 73, R. 43.  
MILLS COUNTY, IOWA  
Mound Excavated by Ellison Orr  
July, 1938.

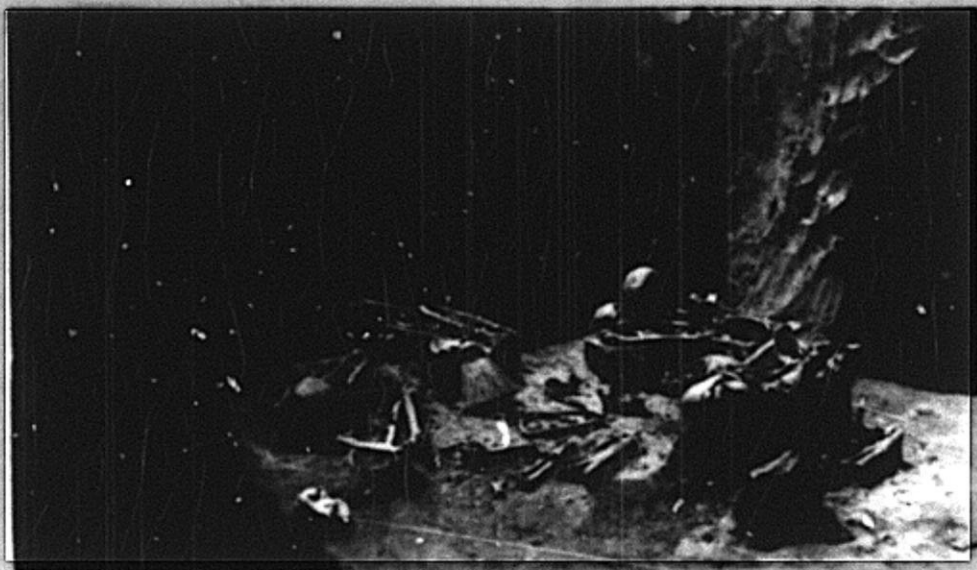


Looking South Across Pit Excavated in Mound No. 7, Group No. 4.  
From Elevation of 20 ft. in Tree.

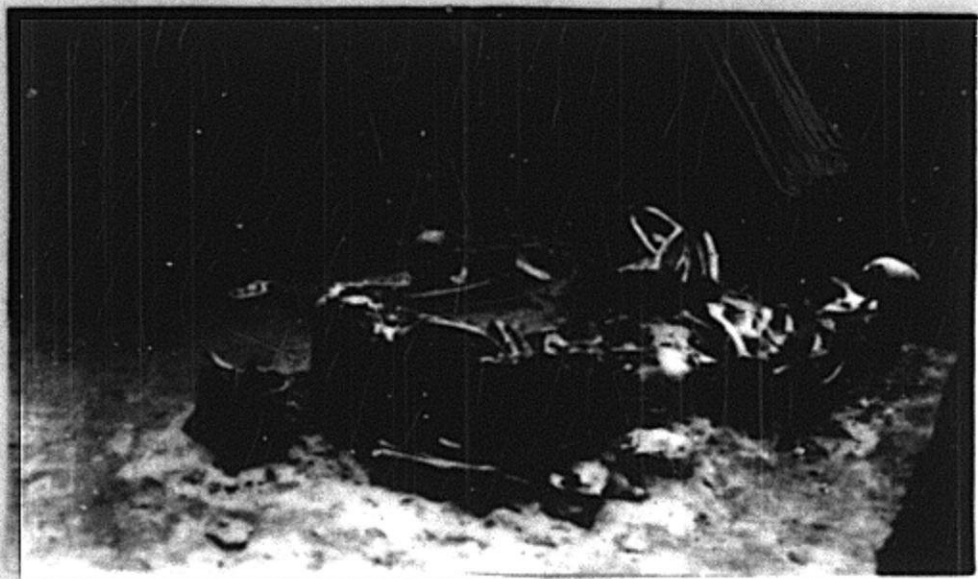


Burials in Mound No. 7, Group No. 4. Looking South from  
Looking South from Earth Thrown out of Excavation.





Burials in Mound No. 7 of Group No. 4. Looking south-east.



Burials in Mound No. 7, Group No. 4. Looking south-west

The south-westerly assemblage, No. 3, oriented north and south, the most compact of the three, consisted of three adult skulls lying together at the south end of a bundle of fourteen long bones, oriented north and south, 2 badly crushed pelves and many badly decayed fragments of other bones.

The bones constituting the remaining assemblage, No. 2, much scattered, consisted of an adult skull with attached mandible in place in which only one incisor remained in place. The crown of this was oval. In the upper jaw 2 chisel shaped incisors alone remained.

The bones of both lower limbs, flexed and articulated, and of one arm also articulated, were present but somewhat misplaced.

Scattered about over the burial area were also several more or less decayed long bones and 3 mandibles.

Near the skull at the west end of assemblage No. 1 was one of these mandibles, probably belonging to that skull, in which all the teeth were present except two middle incisors. The remaining ones had oval crowns parallel to the jaw bone.

Near the center of the burial area was a second mandible with all the teeth gone except the two last molars.

Ten inches south of this, the third had all the teeth in place, the incisors with oval crowns transverse to the jaw bone.

All skulls, as indicated were those of adults, as shown by the well worn molars of both upper jaws and mandibles.

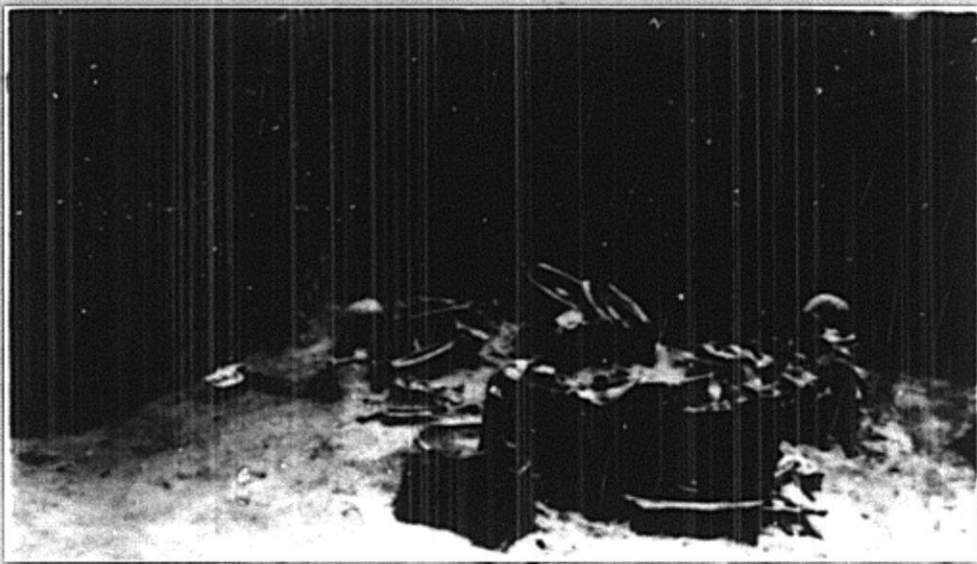
To the east of the human burials was the well preserved skull of a dog to which the cervical vertebrae were attached, and the bones of two fore legs in place.

Practically all the smaller bones, those of the feet and hands, vertebrae, clavicles, sternums, and the coccyges and pelves, were either missing or were so badly decayed as to be unrecognizable.

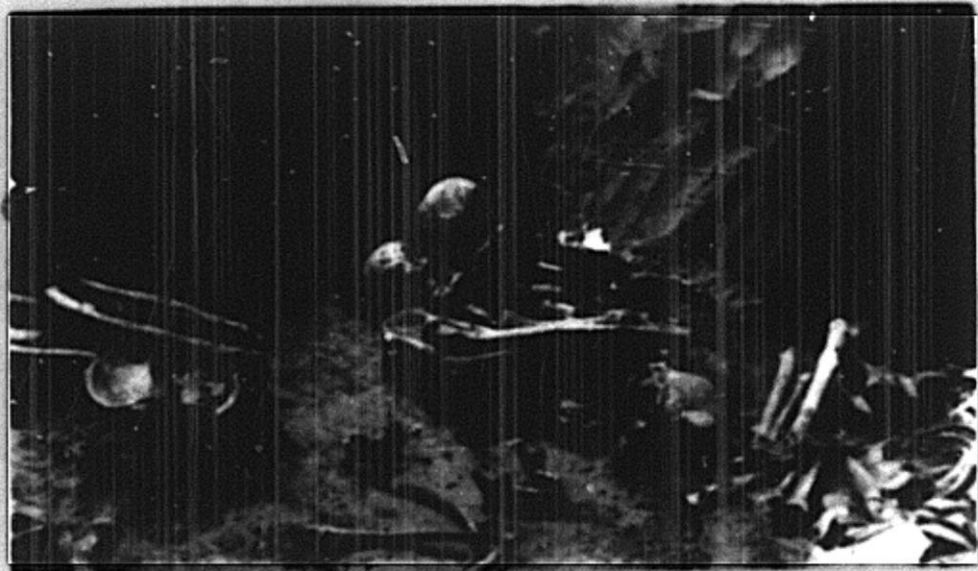
Many teeth were missing and molars badly worn and not seldom with cavities. There were no perfect bones. Even the best preserved long limb bones were more or less decayed either at distal or proximal ends.

No inclusions were found directly associated with the burials.





Burials in Mound No. 7, Group No. 4, Looking South.



Close-up of south-west bundle of burial area in Mound No. 7, Group No. 4. Looking south-west

### Conclusions.

Notwithstanding no inclusions were found with the burials in Mound No. 7, the occurrence of small but certainly pottery sherds in it would seem to indicate that its building was the work of a people of some aspect of the Woodland culture.

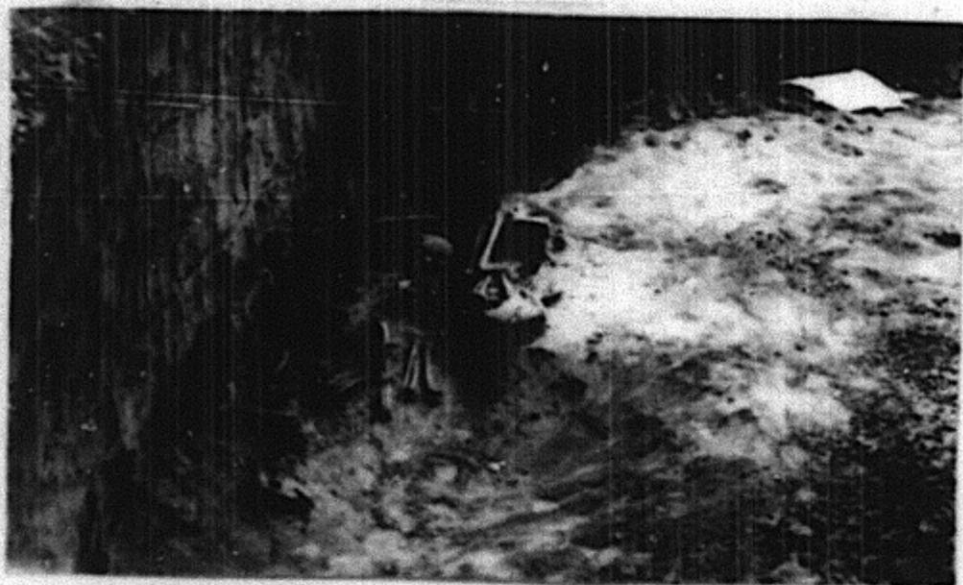
The finding of the single Woodland sherd in Mound No. 6, the place selected for its building, the large size, and the manner and the irregular arrangements of its burials, all seem to indicate that it was built by the same people and at about the same time.

Mounds 1 to 4 inclusive were apparently all built by one people, but very likely not Woodland. There is nothing about these very low mounds covering very shallow burials that gives us a clue to their culture. The builders were evidently a weak community not numerous to build a large mound, or else held their dead in less respect than did the Woodland people, as witness the covering of the face of one of the skeletons with less than four inches of earth.

No inclusions so far as known were found in any of the four.

The culture of the people who erected the mound over the extended skeleton in No. 5 is something of a problem. The misplacement of the mandible, it seems to us, would prohibit the presumption that it was a burial in the flesh. In this it would agree we believe with burials in the other mounds. But the skeleton was evidently that of a person of an inferior intelligence, as witness the generally coarse appearance of the skull with its heavy supra-orbital, and median ridge on the crown.

Fortunately this skull was not so broken up but that we believe it can be restored, and has been sent in for that purpose. This may help some in the solution.



That Part of the Burials in Mound # 7 of Group # 4 lying within the first excavation, looking south-west, Note wall at south (left) under which was remainder of Burial Area, later excavated.



## MOUND GROUP No. 10

## BOYCE GROUP

This Group consists of Two nearly Obliterated Mounds on a High Point of Bluff one-fourth mile east of Pony Creek, on the SW NW Sec. 27, T. 73, R. 43 west of the 5th P.M.

## Location Survey.

From the 1/4 Sec. corner on the west line of Sec. 27, T. 73, R. 43,

East, 322 ft.

Thence, north, 363 ft. to the center of Mound # 2, 25 ft. in diameter.

Thence N 47 E, 138 ft. to center of Mound # 1, 25 ft. in diam.

## Mound No. 1, Group No. 10.

In this nearly obliterated mound we dug a circular pit 25 ft. in diameter to a depth of 8 ft. below the surface.

At about 30 in. below the surface the darker soil changed to the pure yellow loess.

At this level, at the edge of the pit, a roughly made celt, 6.25 in. long, 2.00 thick and 4.5 wide, was found. (See photograph on page .

Four small sherds of Woodland pottery were found in different places at the same level.

At 5 ft. below the surface in the north part of the pit, 6 quite well preserved clam shells of different species were found in quite close association.

No skeletal remains and no other inclusions, except scattering hand boulders, were found.

SURVEY AND EXCAVATION  
of  
Mounds Certainly Built  
by  
People of the Glenwood  
Culture Aspect (?)



## Mound Group # 2. - The Hunt Group.

One hundred feet S 10 W of H.S.J., this Group like Group # 1, consists of but one oblong mound, its north and south diam. of 29 ft. being 3.5 ft. longer than the east and west.

As a pit 6 X 8 ft. had been dug in the center years ago by the owner and never refilled, it was difficult because of it and the embanked earth thrown out, to determine the height which was probably around 12 inches.

The entire mound area was excavated by us to a total depth of 3.5 ft. below the natural surface.

At N 45 W, 5 ft. from the mound center and 1 ft. below the natural surface, with no other inclusions near, was a trumpet shaped clay pipe, the first inclusion recovered.

At S 17 W, 6.5 ft. from the mound center and 2 ft. below the natural surface, was an area roughly 6 ft. in diameter, on which was found parts of three rims of Glenwood aspect pottery and many small sherds of the same culture.

Broken in seven pieces a whole plain Glenwood aspect culture pot, 3 in. high, 4 in. in diameter at shoulder, with vertical neck 3.5 in. in diameter and .5 in. high, without decorations. On the bowl were smoothed-out twisted cord decorations, ~~was found~~.

Like the pipe it had no other inclusions near and lay N 72 W, 6.5 ft. and 2 ft. below the natural surface.

S 45 ~~W~~ E 10 ft. from the mound center, 2 ft. below natural surface, a bead of some white material was found in the center of a lens-shaped deposit of dark colored earth, 2 ft. in diameter, containing much fine charcoal.

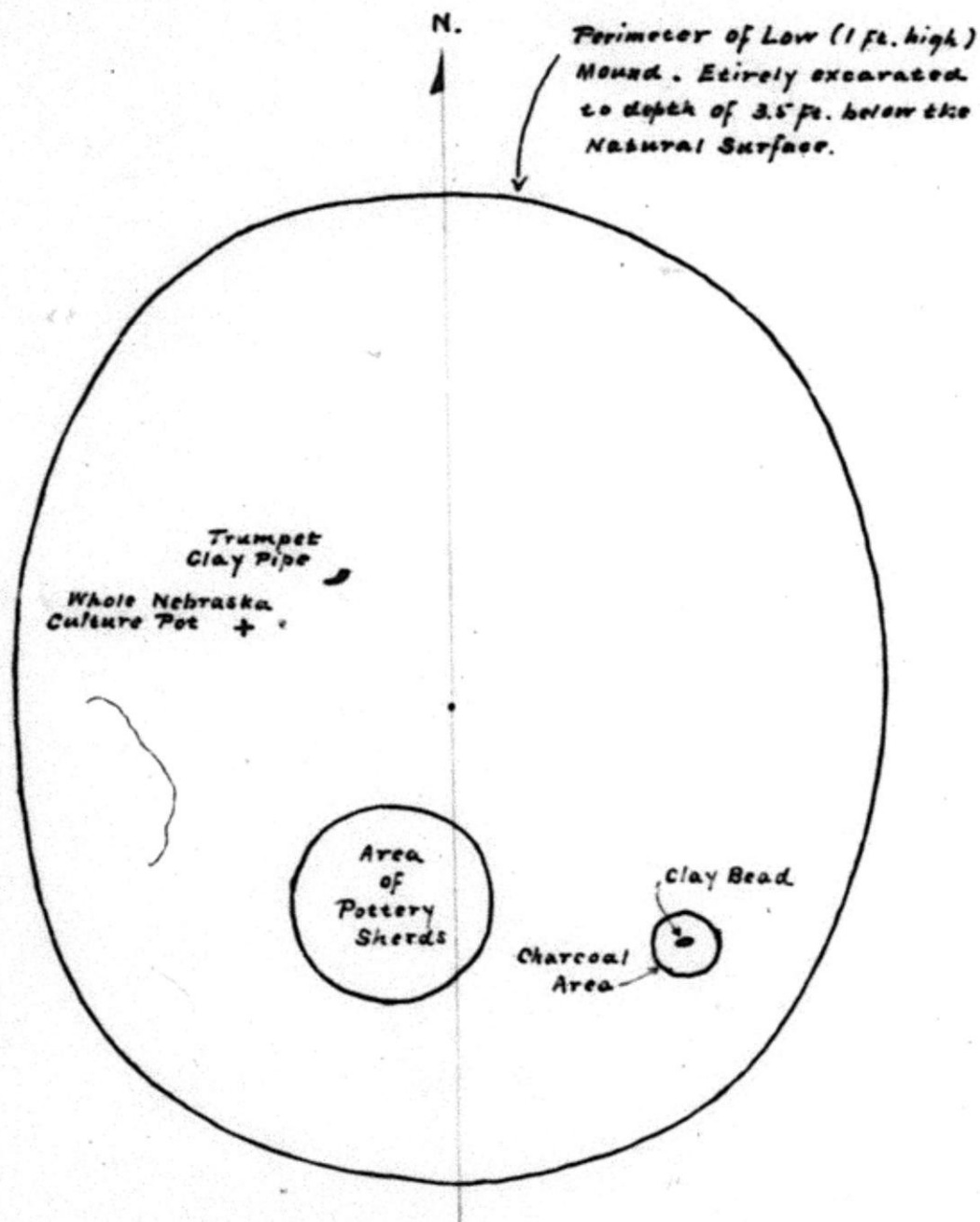
The son of the owner of the land on which this land is located told me that when his father "dug it" he found decayed bones, but in our work we found not the smallest fragment of bone.

This man, like all "relic hunters" dug quite a sizeable pit, probably 2 ft. deep, in the center, and missed all we found.

This mound was undoubtedly the work of people of the Glenwood aspect culture and may have been connected with the building of H.S.J. (2)

*Mar. 11, 1943 We have concluded that we may have been mistaken in our opinion expressed in above paragraph.*

*The bones which Hunt found were probably those of the builders of the mound - a Woodland people. The inclusions that we found, - Glenwood intrusions.*

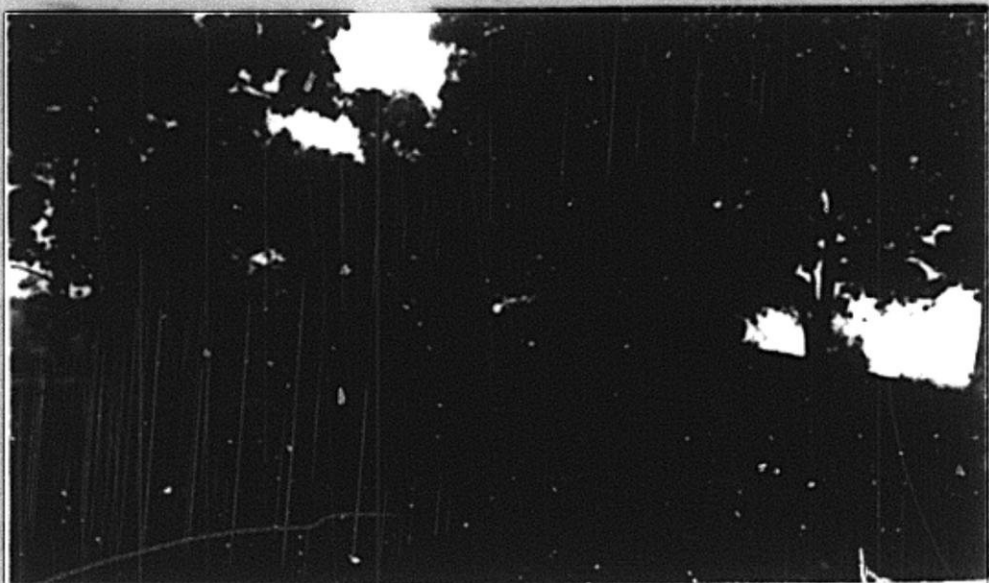


Not the smallest fragment of a bone was found in this supposed burial mound.

PLAN  
OF  
MOUND No. 2.

SW NW Sec. 10. T. 72. R. 43 west.  
N and S diam., 29 ft., E and W diam., 25.5 ft.  
Scale, 1 in. = 5 ft.  
Survey by Ellison Orr, July, 1935.





Mound # 1, Group # 2, restored. Looking north-east.



H.S.J., (restored) in center, partly hidden by brush and weeds. N 10 E, 100 ft.

Mound # 5, Group # 7. June 1st, 1938.

When making the Location Survey of Mound Group No. 7 we noticed on the surface of Mound No. 5 of of this group, the one at the north end of the string of five forming the group, almost obliterated by cultivation, a few large sherds on the surface and others protruding from the ground, one a plain, 1 in. high vertical rim sherd.

Securing permission from the owner we excavated an area, 8 X 12, finding scattered through the earth to a depth of 10 in., altogether 48 pieces of pottery. Four of these, including the rim, fitted together to form part of a yellowish unornamented pot from lip down to below the shoulder. The inside was black.

Then there were 21 pieces of the body of a vessel probably 10 to 12 in. in diameter, covered with the impressions made in shaping by paddle wrapped with a twisted cord.

Of the 21 remaining sherds, one slightly recurved plain rim was covered outside with a pinkish slip. Another small thin vertical rim had small finger indentations on the outside of the lip, pressed into the clay from the left.

With one exception, unornamented, the few rim sherds found in H.S.Q. had this style of ornamentation, but the indentations were made by pressure from the right. A plain "jug" handle and an unusually thick piece with string decorations constituted the remainder of the inclusions.

In the center of our pit, the top just below the depth reached by the plow, was a deposit of pure white ashes unmixed with any charcoal, approximately 30 in. in diameter and 3 in. thick.

Below this having the same area was a 3 in. thick deposit of burned earth.

Not a single pottery sherd was found below the level of the bottom of this fireplace.

Successive plowings had finally gotten below and turned over the shallowly buried pottery sherds which we found on the surface. Not a single fragment of bone was found but there was a small piece of deer horn.

Here was a mound with a fireplace and apparently a floor on which had been deposited broken pottery but a few inches below the natural surface, but no burials.

Oct. 14th, 1938.

Concluding that we should make a sufficiently large and deep excavation in Mound 5 of Group 7, to determine certainly if there were any burials, we returned today and made a pit, 17 X 20 ft., striking at a depth of 30 in. below the natural surface, a roughly rectangular area, the north-east corner of which was directly under the fireplace discovered in the first digging, roughly 6 ft. square.

Scattered about on this were 9 skulls, some of which were only fragments, others badly crushed and flattened. With these was associated some badly decayed other skeletal material.



A narrow strip of the burial floor extended south for a distance of seven feet, at the end of which were two skulls, badly crushed but retaining their shapes quite well. With these there were no other skeletal remains.

The location of all the skulls is shown on the plan following.

Four feet to the south-east of the center of the pit and about 1 ft. above the burial floor were two caches of pottery sherds, each of which may possibly afford a restoration.

All pottery sherds found in both the first and last excavations were beyond a doubt of Glenwood aspect culture.

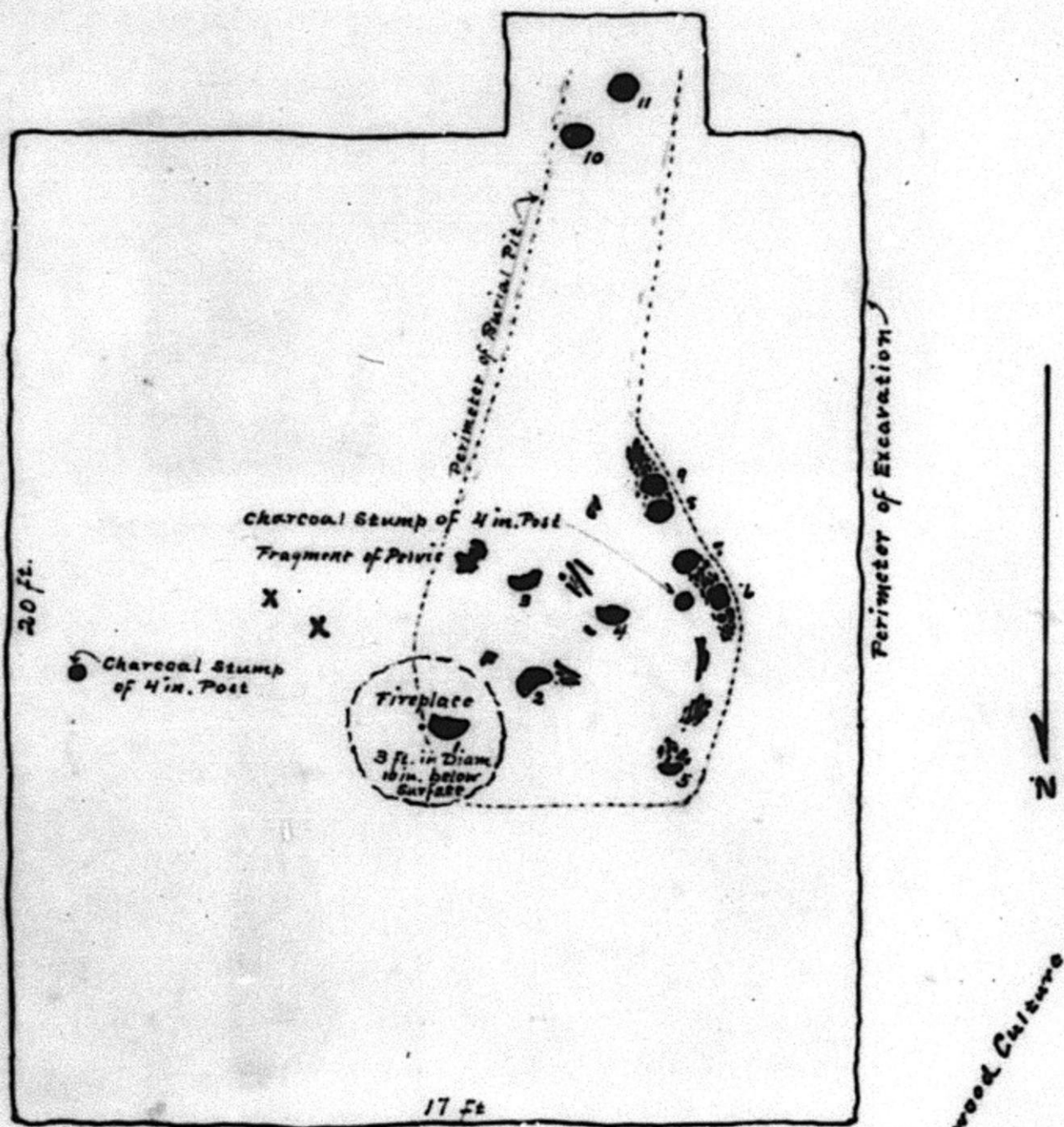
Adding to the uncertainty of whether this was a burial mound or an earth lodge with burials, at 7 ft. east and 1 ft. south of the center, was a charred stump of a 4 in. post, and at 60 in. west and 30 in. south was a second having the same diameter.



*Pentstemon grandiflorus.*

From the tops of the sharp, grass covered bluffs along the Missouri river, Mills county, Iowa. 1938.

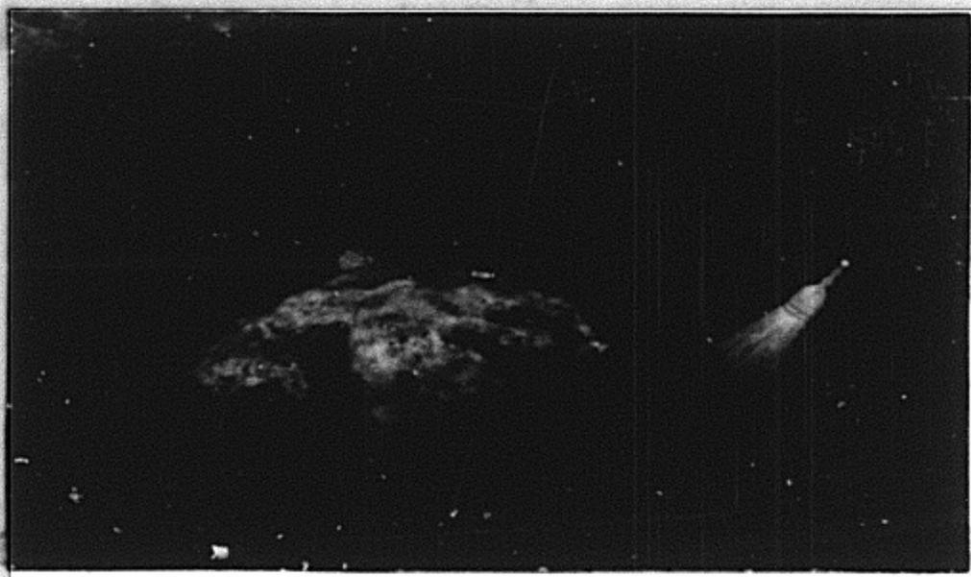
Common along with a species of yucca.



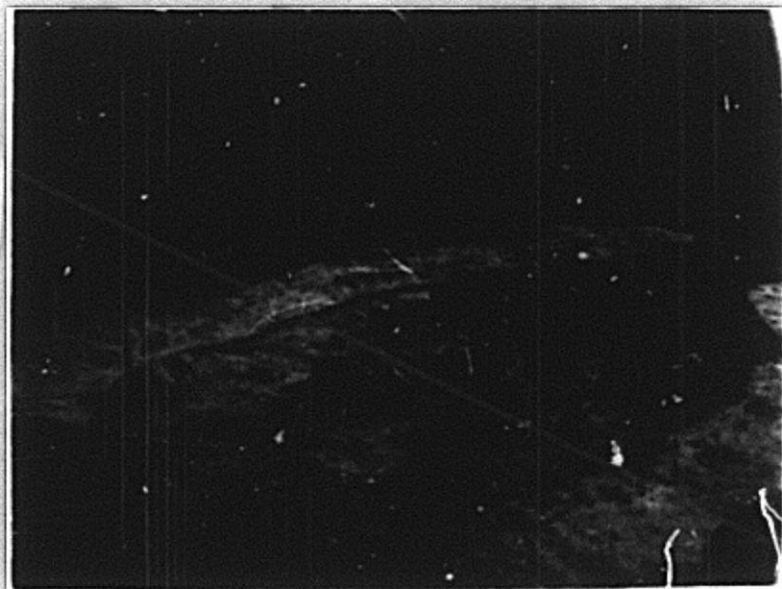
**PLAN OF BURIAL FLOOR**  
 of  
**MOUND No. 5 of GROUP No. 7**  
 Floor, 28 to 36 in. below Surface  
 1 to 11 - Remnants of skulls.  
 X - Cakes of Pottery Shards -  
 Scale, 3 ft. to Inch

Surrey by Ellison Orr.  
 Oct. 17, 1938

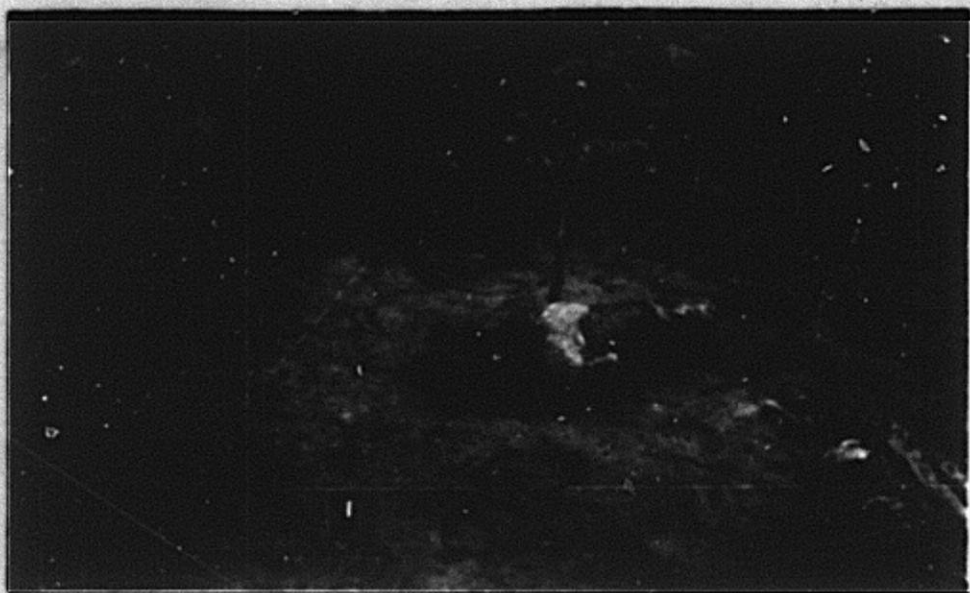




Photograph of Fireplace, Ten Inches Below the Surface of Mound No. 5, Group No. 7.



Photograph of Burial Floor of Mound No. 5, Group No. 7 from the north-west. Stake at Left with Skull by it indicates location of Fireplace, 24 in. above, Stake at Right, the location of charred stump of 4 in. post.



Skull No. I, on Burial Floor of Mound No. 5 of Group  
No. 7. From the North.



Skulls IO and II on Burial Floor of Mound No. 5 of Group No.  
7. From the North.



**MOUND GROUPS**  
**of Which Location Surveys**  
**Were Made, but of Which no**  
**Individual Mounds Were**  
**Excavated.**

1938

## Mound Group No. 1.

## The Tipton Village Mound.

Three-fourths Mile West of the Corporate Limits of Glenwood, Ia.

This Mound is located on the crest of the divide between Keg and Pony creeks at 170 ft. south of the center of the road from Glenwood to Old Pacific. According to S. V. Proudfit, in a paper read before the Academy of Science, at Des Moines, Iowa, Apr. 1881, it is near the center of a crescent shaped series of seven earth lodges and had a diameter of 70 ft. north and south, and a height of 10 ft.

Unless House Sites X-29 and X-28, about 2100 and 2400 ft., respectively, north of the mound, and X-42, a nearly obliterated site, 225 ft. south, are a part of the series, then the sites composing it are lost.

This mound now is about 6 ft. high. It has been much dug over and on it are oak stumps 10 - 12 inches in diameter.

In it Proudfit excavated a pit, 4 X 7 ft., to a depth of 9 ft., finding at 8 ft. "a layer of rough limestone, overlying which was a thin layer of ashes." He says: "Former explorations of the mound resulted in finding several skeletons, buried at a depth of about 5 ft. under a course of stone." He could not learn whether the bodies were buried at full length or not.

We made an effort to get permission to excavate and spread this mound out so that the site could be cultivated but were unsuccessful.

This mound was, with the exception of, probably H.S.X-33 and Mound Group No. 12, at the head of the Indian Hollow, the only earthworks which we were able to locate from Proudfit's descriptions.

## Mound Group No. 3.

This is a single obscure, isolated mound, approximately 40 ft. in diameter, located in a field on the line of the bluff crest, here well back from the river bottoms, near the center of the SE SE Sec. 32, T. 73, R. 43.

About 300 ft. south-east an area of about an acre is very prolific of flint chips, flakes and spalls. We have indicated it on the general map as a camp site.

As there are no determinable land corners near no regular location survey was made.



## Mound Group No. 5.

## Case Mound Group.

A group of 4 mounds, of which one, No. 3, is very noticeable from the road 150 ft. east. The remaining three are small but still easily discernable. In a field west of the road from Old Pacific to the head of Indian Hollow, where the crest of the divide between the Missouri river and Pony Creek is intersected by the crest of the divide between the ravines on either side of Mound No. 7 of the Terry Group.

In cultivating the field this summer much burned earth was turned up on the site of No. 1, 8 in. high.

Permission to excavate any of this group could not be obtained.

## Field Notes of Location Survey.

From SW corner of Sec. 28, T. 73, R. 43,  
 N 80 E, 150 ft. to the center of mound No. 1,  
 30 ft. in diam., 8 in. high  
 Thence, N 35 E, 90 ft. to the center of mound No. 2,  
 30 ft. in diam., 8 in. high.  
 Thence, N 24 E, 75 ft. to the center of mound No. 3,  
 40 ft. in diam., 42 in. high.  
 Thence, N 23 E, 50 ft. to center of mound No. 4,  
 20 ft. in diam., 6 in. high.

---

 Mound Group No. 6  
 Picnic Ground Group.

A single mound, the north circumference of which is cut by the east and west north line of the NW SW Sec. 28, T. 73, R. 43, at a point 135 ft. east from the center of the road from Old Pacific to the head of Indian Hollow.

Thirty feet in diameter and thirty inches high. Has been much dug up years ago.

About forty feet to the south-west is a much dug over questionable small mound.

This mound is located on a cut over brush "forty" that will eventually become well timbered. It belongs to a party in Council Bluffs, who has, just east of the mound, cleared off the brush, built a brick fireplace and built a long table for picnic parties, and posted it as a private preserve. If he would clean off the big mound and restore it he would have something to show to his guests.

Mound Group No. 7  
Wells Mound Group.

A procession of five round mounds on a high point of the divide between the Missouri river bottoms and Pony Creek.

On SW SW Sec. 21, T. 73, R. 43, in an open field from which there is a wonderful view in every direction.

Mound No. 5 of this group was excavated by us and permission could have been obtained to excavate the remaining four had we had the time to do it.

Field Notes of Location Survey.

From a point 50 ft. south of the center of H.S.Q.

N 40 W, 518 ft. to center of gate.

Thence N 52 W, 141 ft. to center of mound No. 1,  
25 ft. in diam., 8 in. high.

Thence N 28 W, 78.5 ft. to center of mound No. 2,  
35 ft. in diam., 18 in. high.

Thence N 20 W, 86 ft. to center of mound No. 3,  
35 ft. in diam., 12 in. high.

Thence N 11 W, 135 ft. to center of mound No. 4,  
25 ft. in diam., 8 in. high.

Thence N 5 E, 173 ft. to center of mound No. 5,  
25 ft. in diam., 10 in. high.

Thence N 5 W, 113 ft. to 1/4 Sec. line fence.  
N. line of SW SW Sec. 21, T. 73, R. 43.

Mound Group No. 8.

Field Notes of Location Survey.

From the 1/8 Sec. corner at the north-west corner of the NW SW Sec. 21, T. 73, R. 43 :

east, 340 ft. to post;

Thence, N 86 E, 69 ft. to center of mound No. 8, obscure.

.. S 20 E, 136 ft. to center of mound No. 7, obscure.

.. S 35 E, 55 ft. to center of mound No. 6,  
40 ft in diam., 40 in. in height.

.. S 47 E, 149 ft. to center of mound No. 5,  
30 ft. in diam., 18 in. high.

.. S 47 E, 78 ft. to the center of mound No. 4,  
30 ft. in diam., 24 in. high.

.. S 62 E, 92 ft. to center of mound No. 3,  
23 ft. in diam., 12 in. high.

.. S 38 E, 72 ft. to center of mound No. 2,  
17 ft. in diam., 10 in. high.

.. S 32 W, 83 ft. to the center of mound No. 1, obscure.



Mound Group No. 9.

On the NW NW Sec. 21, T. 73, R. 43. A Group of two Mounds.  
 Mound No. 1, 40 ft. in diameter and 2 ft. high, is 60 ft. west and 15 ft. south of the NW corner of the SE/2 of the NE NW Sec. 21, T. 73, R. 43., in small cultivated field on the north end of a spur projecting from the upland north towards Wall Hollow.  
 Mound No. 2 is N 40 W, 70 ft. from mound No. 1. Is 30 ft. in diameter and 1 ft. high.

---

Mound Group No. 11.  
 Sayles Group.

A house site, (H.S.W.) and two low mounds, on a spur of the upland divide between the Missouri river and Pony Creek, running NW from the head of Indian Hollow and parallel to it on the south side.

Mound No. 1, 35 ft. in diam. and 1 ft. high, is N 55 E, 58 ft. from H.S.W. From center of mound No. 1 to center of mound No. 2, is S 27 E, 74 ft. Mound No. 2 is same diameter and height as No. 1.

This group lies just west of the north and south section line between Secs 28 and 29 on the NE NE Sec. 29, T. 73, R. 43.

---

Mound Group No. 12.  
 Sayles Group No. 2

Consists of a single mound, 40 ft. in diam., and 14 in. high. In open field on divide between Missouri river and Pony Creek at about forty rods east of the head of the Indian Hollow Road. South 246 ft. from the center of H.S.X -33. Lies just half-way and nearly in a straight line between H.S.X. - 33 and H.S.X.-34 on the NW NW Sec. 28, T. 73, R. 43.

The Barbour Mound Group.  
Mound Group No. 13

Mound Group No. 13 is a string of very low mounds in a cultivated field along the narrow crest of a divide, the front of the river bluffs directly east of the Barbour terrace. On the NE NW Sec. 16, T. 72, R. 43.

The Barbour farm road up a short spur running west, where it reaches the top of the bluff, turns south. In the angle is a low mound. From this an old burned cottonwood stub stands N 20 W, 300 ft. From the cottonwood mound No. 1 of the string bears N 20 W, 100 ft. Thence N 20 W, 95 ft. to Mound No. 2, 12 ft. in diam., 6 in. high.  
 .. N 20 W, 100 ft. to mound No. 3, 15 ft. in diam., 10 in. high.  
 .. N 20 W, 70 ft. to mound No. 4, 20 ft. in diam., 18 in. high.  
 .. North, 80 ft. to E & W Sec. line between Secs 9 and 16.

Because of burned earth turned up by the plow, mound No. 1 was hurriedly excavated on the last day but one of the season's work.

Red earth in irregular varying quantity was encountered south of the mound center for 16 ft., with a width of 6 ft. and depth of 36 in.

At the bottom of this deposit at 13.5 ft. south of the mound center, a fragment of human pelvis with one lumbar vertebra was found, and at 1 ft. below the surface and 5 ft. east of the center, part of a human mandible, burned black, was found in some very black earth and charcoal.

A widening and deepening of the excavation, which was not done for lack of time, might have given more information.

The Wilson Mound Group.  
Mound Group No. 14.

Of mound Group No. 14, only one of, - according to the owner of the land, - the three original mounds, can now be located on the crest between two ravines on the north one-half of the SE SW Sec. 27, T. 73, R. 43.

From this mound it is 200 ft. south to the line dividing the north and south halves the SE SW Sec. 27, and thence, west, 400 ft. to the Sw corner of the north half of the SE SW Sec. 27.



LOCATION SURVEY NOTES  
of  
EARTE LODGES  
NOT EXCAVATED

#### Earth Lodge B

Located in the extreme north-west corner of the SW SE Sec. 13, T. 72, R. 43 west of the 5th P.M., on State Farm in corner of field south-west of Hog Houses.

---

#### Earth Lodge C

The south perimeter of the surface basin of this site is out by the south line of the SW SW Sec. 13, T. 72, R. 43 west of the 5th P.M. From center of H.S.C., west along the south line of the SW SW Sec. 13, 320 ft. to the point of intersection of said line with the east line of the C. B. & Q. R. R. North-west of large elm tree. On State Farm.

---

#### Earth Lodge D

In the South-west corner of the NE NW Sec. 24, T. 72, R. 43 west of the 5th P.M. From the I/16 sec. corner in the center of the NW of Sec. 24, north 360 ft.; thence, east, 100 ft. to the center of this lodge, which lies on the slope of the hill to the north at about 10 ft. higher than the flood plain of Horse Creek which is here joined by a small brook coming down from the north-east, the I/16 sec. corner being in the water at the junction.

Swearingen and McDowell have dug quite extensive pits in this site and have found besides much broken pottery and other material, three complete pots without ornamentation. See photographs on pages 133, 134 and 135. On State Farm.

---

#### Earth Lodge E (?)

This supposed site lies at the junction of the slope of the north hill with the bottom land along Horse Creek, a little east of south of H.S.C. McDowell had dug a pit here and found, besides a few pottery sherds and flints, a couple of dozen of hand size boulders. No survey was made of it. On the State Farm.

---

#### Earth Lodge H.

##### Marcia Williams (Starbuck) Site.

From the north-west corner of the S 1/2 of the NE SE Sec. 10, T. 72, R. 43 west of the 5th P.M., east along the line of said S. 1/2 of NE SE of Sec. 10, 5.35 ch.; thence, south, 1.05 ch. to the center of H.S.H., in pasture with scattering trees. Thirty-six feet in diameter, basin, 48 inches deep. Only the basin of H.S. X-18, the W.C.Lohse Site, exceeded this one in depth.



#### Earth Lodge I

From the center of H.S.H. S 40 and 1/2 E, 3.11 ch. to center of House Site I. Surface basin all but obliterated by cultivation.

---

#### Earth Lodge L

This site is located on the east end of a spur running out east from the upland towards Horse Creek, on the SE NW Sec. 24, T. 72, R. 43 west of the 5th P.M. Ft. east and ft. north of the south-west corner of the SE NW Sec. 24.

Swearingen and McDowell riddled this site with pits and found quantities of broken pottery and hand boulders but no carbonized posts and could give no definite information as to the storage-refuse pits or pit walls or posts.

---

#### Earth Lodge M

The most easterly of a string of three house sites on the SE SW Sec. 33, T. 73, R. 43 west of the 5th P.M. See page 77 for notes of location survey. Twenty-four feet in diameter.

Surface basin 10 in. deep. At twenty feet out to the NW and NE from center the surface slopes down at an angle of 30° from the horizontal, and at forty feet SE, slopes still steeper down to Pony Creek.

A pit 25 ft. square was dug down to the house floor, 24 in. below the surface on the east, north and west sides, and 32 inches at the west side. Fireplace of ashes and red earth at center. One carbonized post, 7 in. in diameter at west perimeter of pit. Deposit of red earth at 8 ft. north of fireplace on house floor.

At pottery focus, S 17 W, 5.5 ft. was all the pieces of a thin handled pot with plain vertical rim 7/8 in. high, and about 3.5 in in diameter, with the shoulder almost a right angle. Bottom globular. Body plain, 5 in. in diameter. Whole pot about 4 in. high.

Four feet east of the above pottery focus was 4/5 of a plain vertical rim, 3/4 in, high, with large attached body sherd ornamented with twisted cord impressions.

---

#### Earth Lodge I-36

From a point 12 ft. east of center of bridge across the dry run just north of point where road up valley leaves river road, N 15 E, 450 ft. to H.S.P at south end of old cemetery on SE NE Sec. 5, T. 72, R. 43 west of 5th P.M. Basin 40 ft. in diam.

**Earth Lodge R**  
**Terry House Site.**

On SE NE Sec. 32, T. 73, R. 43 west of the 5th P.M. Surface basin 36 ft. in diameter.

From center of H.S.P. N 35 E, 225 ft. to sec. line between sections 32 and 33; thence, N 51 E, 125 ft.; thence S 76 E, 200 ft.; thence, S 45 E, 558 ft. to Burr Oak tree on east side of road; thence, S 34 E, 210 ft. to east and west half section line at angle in road.

**Earth Lodge S**

A small H.S. on the east slope of a spur on the west side of Pony Creek at an elevation of about 25 ft. above the flood plain of the creek. Twenty-four feet in diameter. No survey made.

On SW SE Sec. 4, T. 72, R. 43 west of the 5th P.M.

**Earth Lodge T**  
**Wickersheim Site**

Because of our inability to discover the plan of the first three house sites that we excavated south of Glenwood, and the fact that the posts that we did find might as well been those of a round house as of a square one with round corners, we were very desirous of excavating H.S.B and H.S.C on the State Farm, and H.S.T. We were unable to excavate the first because the crop was harvested so late and H.S.C because of its location in an alfalfa field.

H.S.T lies on the crest of a spur of the upland north of Horse Creek near the east line of the NW NW Sec. 30, T. 72, R. 42 west of the 5th P.M. The surface basin, after years of cultivation, was easily located and had a diameter of 35 ft. and depth of 1 ft.

It is 850 ft. south of the north-east corner to a point on the forty line; thence west 100 ft. to center of Basin.

North through this basin we excavated a trench 6 ft. wide and down to the yellow loess, but although the dipping down of the black earth, just as in other house sites, was easy to see, there was no other evidence of a house site. There was no burned earth, no charcoal, no wattle or clay plaster, no charcoal stumps of posts, no pottery sherds and no inclusions of any other kind.

Disappointed, we filled in the trench and left it.



**Earth Lodge U**

A small house site in the pasture east of the farm buildings, 25 ft. in diameter.

580 ft. west and 400 ft. north of the South-east corner of the SW SW Sec. 19, T. 72, R. 42 west of the 5th P.M.

---

**Earth Lodge V**

A small House Site on the low flat spur of the divide on the west side of Pony Creek, on SE NE Sec. 28, T. 73, R. 43 west of the 5th P.M. This site was all but destroyed in grading a relocation of the road. About 20 ft. above flood plain of Pony Creek.

---

**Earth Lodge W**

**Sayles West House Site.**

On the NE NE Sec. 29, T. 73, R. 43 west of the 5th P.M., a little west of the crest of the ridge, is a well defined surface bowl of a house site, 40 ft. in diameter, surrounded by an embankment of yellow clay. In a field long under cultivation.

From the center of the north and south road to the east, west along the 1/8 section line on the south side of the NE NE Sec. 29, 420 ft.; thence, north, 160 ft. to the center of H.S.W.

---

**Earth Lodge X-1**

**West Henderson House Site.**

From the north-east corner of the SE SW Sec. 34, T. 73, R. 43, west of the 5th P.M., west, 70 ft. along forty line; thence, south, 200 ft. to center of H.S.X-1, 25 ft. in diameter. No alfalfa growing in basin which has a depth of 10 inches.

---

**Earth Lodge X-2**

**East Henderson House Site.**

This house site, 30 ft. in diameter lies 105 ft. due east of H. S.X-1

**Earth Lodge X-5**

A large site on the SW NW Sec. 34, T. 73, R. 43 west of the 5th P.M. Adjacent land owners told us that the basin of this site was large and deep but that it had been filled in with a scraper. The depression is still easily made out. A survey locates it at 120 ft. north and 150 east of the north-west corner of the S 1/2 of the SE NW of Sec. 34, in the center of the right angle in the road.

---

**Earth Lodge X-5**

The road along the east side of the NW SE Sec. 9, T. 42, R. 43 west of the 5th P.M. cuts through the east side of a house site of which there is no indication on the surface. On gentle slope about 25 ft. above the flood plain of Pony Creek.

---

**Earth Lodge X-7**

North of the Wilson residence on the NW SW Sec. 35, T. 73, R. 43 west of the 5th P.M., about 150 ft., was a house site which was destroyed when a partly above ground cistern was built where it was located.

---

**Earth Lodge X-8**

On high point in field on the SW NW Sec. 35, T. 73, R. 43 west of the 5th P.M. This site has been entirely obliterated by cultivation. The approximate location is, south to east and west 3/2 section line, 1100 ft.; thence, east, along 1/2 sec. line, to center of paved road, 275 ft.

---

**Earth Lodge X-9**

In rye field on NE SE Sec. 27, T. 73, R. 43 west of the 5th P.M. Stille Site No. I. All but obliterated by cultivation. 330 ft. south of the center of east and west road and 330 ft. east of the north and south road.

---



**Earth Lodge X-12**

**Stille House Site No. 2**

In field on the SE SE Sec. 27, T. 73, R. 43 west of 5th P.M. Surface basin almost obliterated by cultivation. From a point 27 links north of the 1/8 sec. corner at the Cross roads, the Sw corner of the SE SE Sec. 27; thence N 35 1/2 E, along the center of the road, 10.22 ch. to angle in road; thence, N 9 3/4 W, 1.51 ch. to stake; thence, S 28 1/4 E, to center of H.S.X-12

---

**Earth Lodge X-13**

**Stille Site No. 3**

In field on SE SE Sec. 27, T. 73, R. 43 west of 5th P.M. Basin obliterated by cultivation. Approximate location: From stake set in survey of H.S.X-12, N 32 1/2 W, 5.41 ch. to H.S.X-13

---

**Earth Lodge X-14**

All surface traces obliterated. On NW NE Sec. 34, T. 73, R. 43 west of the 5th P.M. On south side of Cyclone cellar south of farm residence.

---

**Earth Lodge X-17**

**Pitzer House Site No. 2**

On the NW NE Sec. 27, T. 73, R. 43 west of 5th P.M. Surface basin all but obliterated. In alfalfa field but no alfalfa grows on site. Soil in these house sites is mucky and holds water which is not favorable to the growth of alfalfa.

This evidently was a large site about 60 ft. in diameter.

From the 1/4 sec. corner on the north side of Sec. 27, east along section line, 11.75 ch.; thence, S 18 1/4 E, 14.27 to center of H.S.X-17

---

**Earth Lodge X-18**

**W.C.Lohse House Site**

On spur on west side of divide between Pony Creek and East Branch of same, on north side of fence on the south line of the SE NE Sec. 33, T. 73, R. 5 west of 5th P.M. at 750 ft. west of the Se corner of SE NE Sec. 33. In pasture with Scattering timber. 40 ft. in diameter, basin, 48 in. deep. See page 9 for photograph.

### Earth Lodges X-19 and X-20

#### The Knickman House Sites.

These two house sites lie on the sloping end of a spur of the upland between Pony Creek and the East Branch of same that runs west. On the SW SE Sec. 33, T. 73, R. 43 west of the 5th P.M.

From the point of intersection of the line between sections 4 and 33 with the center of the Pony Creek hollow road, north along the center of road, 174 ft. ; thence, N 35 1/2 E, 213 ft. to center of H.S.X-20, 35 ft. in diameter and 30 in. deep, on gentle slope about 80 ft above the bottom lands of the creek.

From center of H.S.X-20, N 35 1/2 E, up the slope, 403 ft. to the center of H.S.X-19, 35 ft. in diameter, basin, 30 in. deep. From this last site the top of the spur runs level for several hundred feet east and then rises to the crest of the divide between Pony Creek and its tributary.

Pasture land with scattering trees.

### Earth Lodge X-21

A small site in the south-west corner of a timber lot, the SE SW Sec. 28, T. 73, R. 43 west of the 5th P.M. 65 ft. north and 15 ft. east of the SW corner to SE SW Sec. 28. 30 ft. in diameter and bowl 12 in. deep.

### Earth Lodge X-22

#### Case House site.

In alfalfa field, but none growing in basin, on SW SW Sec. 28, T. 73, R. 43 west of 5th P.M. Diameter, 40 ft. Basin 18 inches deep. 300 ft. north and 90 ft. west of the SE corner of the SW SW Sec. 28

Both house sites X-21 and X-2 on wide spur of divide between the Missouri river and Pony Creek, running east.

### Earth Lodge X-24

#### Earth Lodge X-24

Said to have been a large lodge but surface indications now destroyed by cultivation. Located on knob of high divide between two branch valleys of Pony Creek. On NE SE Sec. 28, T. 73 R. 43 west 5th P.M. 7.86 ch. south and 8.90 ch. east of the south-west corner of the NE SE Sec. 28.



## Earth Lodge X-25

On high divide between Pony Creek and a tributary on the west, on the NE NW Sec. 22, T. 73, R. 43 west of the 5th P.M. In corn field but basin still plain, 40 ft. in diameter and 12 in. deep.

From 1/8 sec. corner on the north line of the NW of Sec. 22, south along forty line, 1100 ft.; thence, east, 120 ft to center of H.S.X-25.

---

## Earth Lodge X-26

## Plumer House Site No. 1

On SE NE Sec. 10, T. 73, R. 43 west 5th P.M. In timber south-east of rustic lodge built by Mr. Plumer. Diameter, 35 ft., basin, 36 inches deep.

From South-west corner of the SE NE Sec. 10, ~~XXXXXX~~ north along 1/8 sec. line, 550 ft. to center of road; thence, north along 1/8 sec. line, 615 ft., thence, west, 235 ft. to center of H.S.X-26. See photograph of site, page 10.

---

## Earth Lodge X-27

## Plumer House Site No. 2

On NE SE Sec. 10, T. 73, R. 43 west of the 5th P.M. On short, low spur running from upland east into shallow valley of tributary of Pony Creek from the west. Twenty-five ft. in diameter, basin 12 in. in depth. In timber.

From south-west corner of SE NE Sec. 10.; thence, south, along 1/8 sec. line, 400 ft.; thence, east, 130 ft. to center of H.S.X-27.

---

## Earth Lodge X-28

On SW NE Sec. 10, T. 73, R. 43 west of the 5th P.M. On divide between branches of Pony Creek on the west and Keg Creek on the east. 33 ft. in diameter, outlined by a heavy growth of barnyard grass. Basin, 10 in. deep.

From 1/8 sec. corner, the north-west corner of the SW NE Sec. 10, thence, east along 1/8 sec. line, 2.26 ch.; thence, S 29 1/2 E, to center of H.S.X-28 in field.

Earth Lodge X-29

On the SW NE Sec. 10, T. 73, R. 43 west of the 5th P.M.  
53 ft. in diameter, indicated by heavy growth of barnyard grass.  
Basin, 12 in. deep. S 26 1/2 E, 3.50 ch. from the center of H.S.  
X-28.

---

Earth Lodge X-30

*Well* Bogart House Site No. 1

On the SE NE Sec. 10, T. 73, R. 43 west of 5th P.M. From NW  
corner of SE NE Sec. 10, east 4.08 ch. to stump on 1/8 sec. line;  
thence, S 20 E, 5.01 ch. to center of H.S.X-30. Diameter, 35 ft.

---

Earth Lodge X-31

*Well* Bogart House Site No. 2

From center of H.S.X-30, S 34 3/4 E, 5.50 ch. to center of  
pottery sherd area in corn field; thence, S 2 W, 9.37 ft. to  
center of House Site X-31, 66 ft. in diameter, basin, 24 inches  
deep.

Has been long under cultivation. Surface depression, -  
basin, - grows only barnyard grass.

---

Earth Lodge P

Small site on NE NW Sec. 35, T. 73, R. 43 west of 5th P.M.  
Located at 549 east and 478 ft. north of intersection of  
south line of NE NW Sec. 35 with the east line of Highway  
275. After we had gotten the excavation of this house well  
started we learned that Rowe and Delevan had been ahead of us  
but that they found but very little but sherds.



## Earth Lodges X-33 and X-34

## Sayles House Sites No. 2 and 3

House Site X-33 and X-34 both on the NW NW Sec. 28, T. 73, R. 43 west of the 5th P.M. Following are field notes of survey of these two and of mound # I of Group # I2:

" From the north-east corner of NW NW Sec. 28, T. 73, R. 43 west of 5th P.M.; west 3.29 ch.; thence, south, 3.70 ch. to center of H.S.X-33, 33 ft. in diameter and basin 10 in. deep; thence, south, 3.70 ch. to mound # I of group # I2, 40 ft. in diameter and 14 in. high; thence, S 27 E, 3.75 to H.S.X-34, 30 ft. in diameter and basin, 8 in. deep; thence, east, 2.00 ch. to 1/8 sec. line fence.

---

## Earth Lodge X-35

On crest of spur through which is very deep rail road cut. On NE NE Sec. 13, T. 72, R. 43 west of the 5th P.M., east of rail road. 40 ft. in diameter and 12 inches deep. No survey made. In cultivated field. Owner of land said that it had been much dug into and that<sup>s</sup> had once buried a horse there.

---

## Earth Lodge X-37

## Ed Hoover House Site

On the SE NW Sec. 32, T. 73, R. 43 west of the 5th P.M. On not very steep slope of bluff on the north side of the ravine running up into and draining the east half of section 32, at about 100 ft. above the flood plain of the Missouri river. Above this the bluff is much steeper up to the top where is located mound group # 4. All traces of surface basin have been obliterated by cultivation.

---

## Earth Lodge X-40

On SE NE Sec. 23, T. 72, R. 43 west of the 5th P.M., on spur of divide between Horse creek on the north and a ravine on the south opening into the flood plain of the Missouri. South along center of road from the north-east corner of the SE NE Sec. 23, T. 72, R. 43, 500 ft. ; thence, west, 400 ft. to approximate site of H.S.X-40, all traces of which have been destroyed by cultivation. Mr. Cheeny located this site in a field road at a stepped distance north of a gate. He said that not many years ago the basin was plain.

### Earth Lodges X-38 and X-39

These two House Sites are located in what was this summer, 1938, the "cabbage patch" of Swearingen and McDowell, who excavated a part of X-38 in a desultory way, finding much broken pottery, some flint and bone implements and many hand boulders. In the south-west part apparently near the perimeter of the house pit, they found a human skeleton, which they gave to Dr Dye, the superintendent of the Institution, and which we did not see and about which the boys were able to give us but little information. Nor did their digging, as they did it, afford any information about the plan of the house. No carbonized posts were found.

A survey located this site as follows:

From corner to sections 13 and 24, T. 72, R. 43 and sections 18 and 19, T. 72, R. 42, west of the 5th P.M., north, 17.86 ch. to fence running west, the forty line, ( at 39.50 west at the NW corner of SW SE Sec. 13, on the south side, is H.S.B ); thence, continuing north along the center of the road and on the section line, 21.08 to a point in line with fence on the north side of the street running west through the Institution grounds.; thence west along fence, 5.88 ch.; thence, north, 8.57 ch. to approximate center of H.S.X -38

H.S.X-39 is located south-east of H.S.X-38 about midway between it and the Garden Greenhouse. The east half of this site was excavated after restoring H.S.X-38. When the boys were about half through, because of the cleaning off of the garden field and the fall plowing, they were obliged to refill their pit.

Much broken pottery, some of it very good, flints and bone implements, including parts of elk antlers, and an abundance of hand boulders, were found. They certainly found one good pit, but as they "just dug anywhere", nothing else was definitely located but the fireplace, which with the pit, showed that their work was all in the east half. A carton of the material from this house site was sent in.

This site is located at 4.30 ch. west and 4.36 ch. north of the point on the section line opposite to and in line with the fence running west on the north side of the street.

As the boys, Swearingen and McDowell, have helped us in our survey work and have contributed very generously to the State Historical Society of their finds resulting from their digging on the State farm, and because this digging is one of the few ~~such~~ spots <sup>Arigha</sup> in their lives, we have refrained, although authority was secured from the Superintendent, from excavating on the Institution farm.

Though they made no complaint or objection we know that they felt that digging on the farm should be left for them.

These two sites are on a spur of the general upland running north-west towards Keg Creek. They were located by the boys in the center of small areas where were "lots of pieces of pottery and flint." They told us of three other places where there were similar surface indications.



Earth Lodge X-45 (H.S.X-45)

On NW NW Sec. 15, T. 72, R. 43 west of 5th P.M.

From 1/16 Sec. corner in the center of the North west one-fourth of Sec. 15, west along forty line fence, 340 ft. to gate; thence, north, 75 ft. to center of H.S.X-45. Basin all but destroyed by cultivation. Brewer says that 10 years ago he helped to harvest a crop of hay on this forty and that then the basin was a foot deep.

---

Earth Lodge X-46 (H.S.X-46)

On SW NW Sec. 15, T. 72, R. 43 west of the 5th P.M.

Now no surface indications of site. Brewer says that 10 years ago when he made hay on this forty there was a basin indicating this site, that was a foot deep. He located it 200 ft. south, and 20 ft. east of H.S.X-45

---

Earth Lodge, House Site X-47 (H.S.X-47)

On NE SW Sec. 27, T. 73, R. 43 west of the 5th P.M. Well down the slope of a spur of the upland between two tributary valleys of Pony Creek on the east side. Twenty-five feet in diameter and basin 18 inches deep. A small test pit sunk in the center of the basin uncovered fireplace and a few pottery sherds.

From SW corner of the NE SW Sec. 27, 150 ft. east and 150 ft. north to center of H.S.

---

Earth Lodge, House Site X-50 (H.S.X-50)

On NW NE Sec. 1, T. 71, R. 43 west of the 5th P.M. On gravel terrace at foot of bluffs bordering the big easterly bend of same bordering the flood plain of the Missouri river, south of the mouth of Bomar Creek. 30 ft. in diameter. Basin, 18 inches deep. From 1/8 section corner north of center of Sec. 1, 980 ft. east and 200 ft. north to center of H.S. South-east of farm residence.

Earth Lodges X-42 and X-48  
Old Fair Ground House Sites

These are the two sites mentioned by S.V.Proudfit in his paper read before the Academy of Science at Des Moines, April, 1881.

There are now no longer surface indications of their location, but Mr. W.C.Marshall remembers well enough where they were to locate them approximately for us.

From center of state road # 34, west along the north fence of the Old Fairground, - the south fence of the dirt road, - 600 ft.; thence, south, across the old race track, 335 ft. to the center of a slight indication of a basin where we picked up a few small pottery sherds, probably the center of H.S.X-42.

H.S.X-48, according to Mr. Marshall, was just back of the grand stand that stood north of the race track and near the north fence of the fair grounds at about half way between the north-west and south-west corners.

Earth Lodge X-42

The site of this house, barely discernable now, is 225 ft. south of the center of the "Big Mound, which with the, then 7, associated house sites, constituted Prodfit's "Tipton Village"

From the center of this mound it is 170 ft. north to the center of the public road to Old Pacific, at the crest of the divide, one and one-fourth miles west of the center of Glenwood.

On the NW SE Sec. 10, T. 72, R. 43 west of the 5th P.M.

Earth Lodge X-43

Located by Brewer who had known of its location for many years. 120 ft. south and 225 ft. east from a point on the section line between sections 10 and 15, (on the NE NW Sec. 15), 25.00 ch. east of the south-west corner of Sec. 10, T. 72, R. 43 west of the 5th P.M. There are now no surface indications of this site.

Earth Lodge X-44

Located by Brewer and the owner of the land on a sharp divide between two tributary valleys opening into Keg Creek from the west. Both agreed that it was about 200 ft. north of the south line of the farm. On SW NE Sec. 15, T. 73, R. 43 west of the 5th P.M.



Earth Lodge, House Site X-49 (H.S.X-49)

Paul Rowe and Brewer both said that there was a house site on the end of a spur projecting east into the valley of a tributary of Keg Creek that flows through the west part of Glenwood and north of the road to Old Pacific, and pointed out the location as we drove over the road. At my suggestion Brewer went over to see if it was obliterated as he had not seen it for a number of years. He reported that he found it easily and that there was still a good surface basin of a large site.

As it was almost the end of the season we were unable to get time for a survey. Located on the SE SW Sec. II, T. 72, R. 43 west of the 5th P.M.

---

Earth Lodge, House Site X-51 (H.S.X-51)

On the next ridge across the valley east from H.S.X-44 according to Beyers and the owner of the land, there is a sizeable house site. Beyers has not seen it for some years but the owner says that there is still a very noticeable surface basin.

For lack of time we were unable to make a location survey.

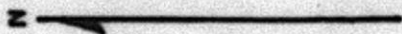
Altogether we located 72 earth lodges or house sites, 14 of which we excavated. Of these latter, two brought no results, one, H.S.P. having been previously dug by Rowe and Delevan, and the other, the Wickersheim site, H.S.T., a site that wasn't a site.

Of the 58 remaining sites, all were located either by the evidence of definite surface basins, or on information of reliable persons who were able to fix their locations closely.

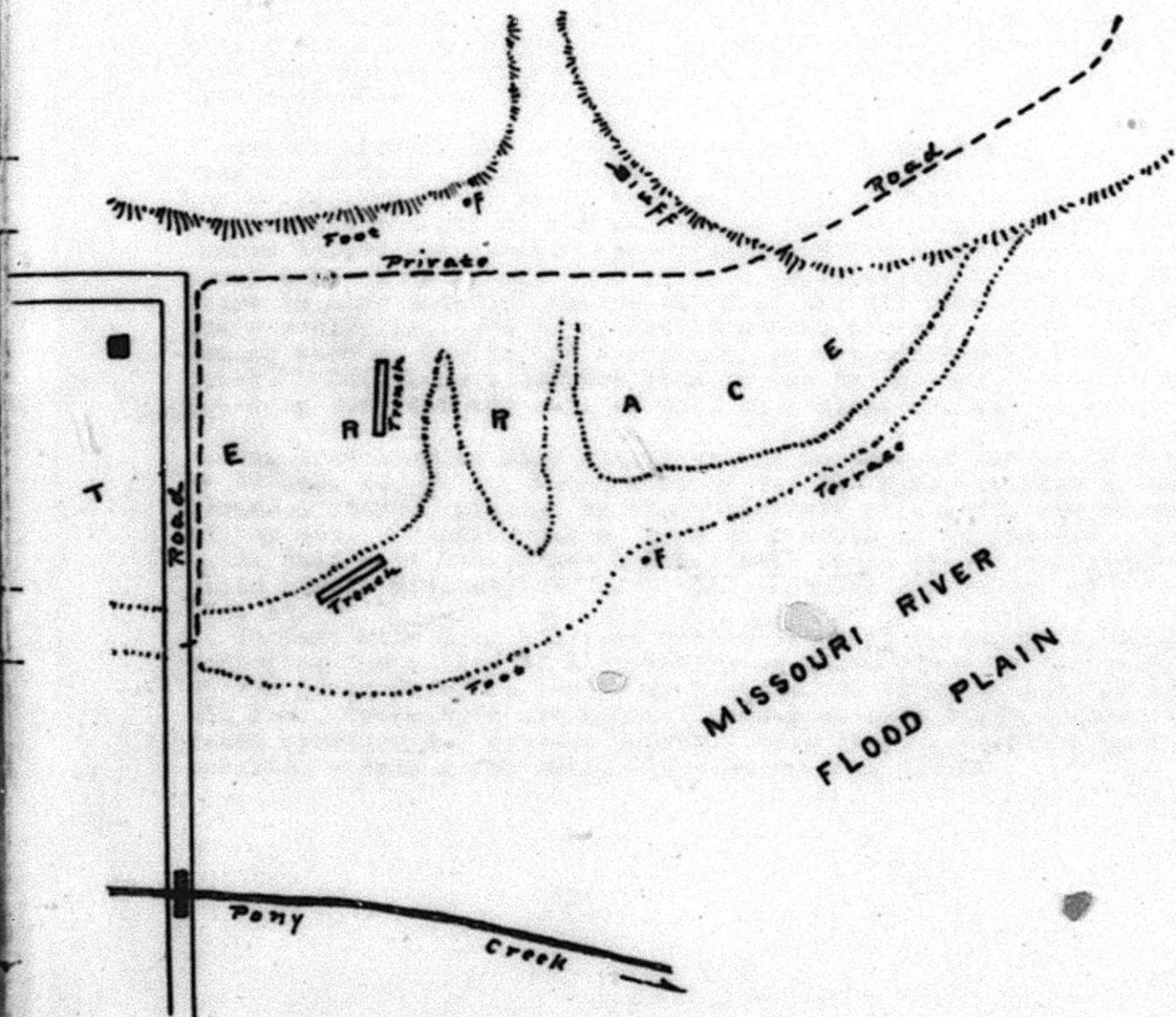
We are satisfied that all the 58 sites were at one time clearly discernable and still exist, and may be exactly located by the memoranda given. There should, of course be no difficulty in locating those of which the surface basin is still in evidence and of which location surveys were made. In spite of all our efforts and the generous help that was given us we are satisfied that we did not find them all.

Mr Fred Brewer, who lived for the most of his life in the region where we worked, and who has worked on and knows every acre of the land where house sites might be located, and who remembers their locations, has been very helpful telling us where there were sites that we never would have found by searching for them over the three by ten mile territory on which we worked.

BARBOUR'S TERRACE  
 NW NE Sec. 16, T. 72, R. 43 west  
 Scale, 100 ft. to 1 inch.



HIGH BLUFF





### CAMP SITES (G.S.)

Wherever there is, in the Mills County area, a concentration of pottery sherds, flint flakes, spalls and worked pieces, there, quite certainly has at some time been either a house or camp site.

Such indications on the uplands probably indicate only house sites. These on the obscure terraces in the valleys, usually where they debouche into the valley of the big river, are quite likely, though not certainly, camp sites.

The Barbour terrace and two others a quarter of a mile farther up Pony Creek, and two on the State Farm on a tributary of Horse Creek, appear to be camp sites as artifacts are found scattered over considerable areas at these places and to a depth of 24 to 30 inches.

In the Barbour terrace we dug two trenches 50 ft. long and 4 ft. wide to a depth of 30 inches. We found scattered Glenwood culture sherds, but not very abundant, to a depth of 24 inches, or down to the pure yellow clay. At that depth there were a very few Woodland sherds. On the whole, nothing unusual except that the evidence seemed to be conclusive that the Woodland culture preceded the Glenwood.

On the Barbour and other large camp sites seeming to indicate long occupation, there has been and still is good hunting ground for collectors after every hard rain storm. The reason for this is that the run-off of the rain water carries away the soil and leaves behind the heavier inclusions. These washed out, sometimes as much as a half inch of soil, creates the impression that there is more material in the earth of the old camp site than there really is. We do not believe that the terrace as a whole and as deep as inclusions are found, is extraordinarily rich in these. But these sites have been in use for a very long time to build up two feet and over of soil on a slope subject to erosion.

Our trenching on Camp Site A on the north-east corner of the NW NE Sec. 24, T. 72, R. 43 west of the 5th P.M., besides a few Glenwood sherds, yielded us about one-half of a soft, unornamented toy pot. Digging was carried to a depth of 36 inches.

In this site Swearingen and McDowell found an almost complete plain vessel without handles. See page 135 for photo. of this "Pot A".

In Camp Site B on the very gentle slope of the south hill side bordering the valley of a tributary of Horse Creek on the south, on the State Farm, on the NW NW Sec. 19, T. 72 R. 42 west of the 5th P.M., Swearingen and McDowell had done much digging over, and found considerable pottery sherds. Our digging produced poor results, - only a few small Glenwood culture sherds.



|                  | Plain Collared Rim | Plain Collared Rim with Handles | Collared Rim with Indentations on Shoulder | Collared Rims with Indented Rims and Handles | Plain Vertical Rims | Plain Vertical Rims with Handles | Plain Vertical Rims with Lugs | Vertical Rims with Indentations on Outer Lip | Vertical Indented Rim with Handles | Vertical Indented Rim with Lugs | Recurved Plain Rim | Recurved Plain Rim with Handles | Recurved Plain Rim with Lugs |
|------------------|--------------------|---------------------------------|--|--|---------------------|----------------------------------|-------------------------------|--|------------------------------------|---------------------------------|--------------------|---------------------------------|------------------------------|
| H.S.A.           | 18                 | 1                               | 2  | 6  | 8                   |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.G            | 12                 | 1                               | 77   |  | 22                  | 2                                | 1                             |  |                                    |                                 |                    |                                 |                              |
| H.S.F            | 4                  |                                 | 30   |  | 4                   |                                  | 1                             |  |                                    |                                 |                    | 1                               |                              |
| H.S.K            |                    |                                 |  |  | 5                   |                                  |                               | 1  |                                    |                                 |                    |                                 |                              |
| H.S.P            |                    |                                 |  |  | 12                  |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.Q            |                    |                                 |  |  | 4                   |                                  |                               | 7  |                                    |                                 |                    |                                 |                              |
| H.S.J            | 4                  |                                 | 6  |  | 32                  |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.O            | 1                  |                                 | 6  |  | 75                  |                                  |                               | 9  | 1                                  | 1                               |                    |                                 |                              |
| H.S.N            |                    |                                 | 5  |  | 1                   |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.M            |                    |                                 |  |  | 1                   |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.X            | 8                  |                                 | 30   | 3  | 41                  | 8                                |                               | 29   | 2                                  |                                 |                    | 1                               |                              |
| H.S.X-10         | 7                  |                                 | 55   | 1  | 80                  | 5                                |                               | 34   |                                    | 3                               |                    | 3                               | 5                            |
| H.S.X-16         | 3                  |                                 | 17   |  | 24                  |                                  |                               | 14   |                                    |                                 |                    | 5                               | 6                            |
| H.S.X-11         | 6                  |                                 | 57   | 1  | 63                  | 11                               | 2                             | 30   | 3                                  |                                 |                    | 30                              |                              |
| H.S.X-15         | 2                  |                                 | 14   |  | 13                  | 1                                |                               | 16   |                                    |                                 |                    | 15                              |                              |
| Mound 1 Group 2  |                    |                                 |  |  |                     |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| Mound 1 Group 10 |                    |                                 |  |  | 2                   |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| Mound 6 Group 4  |                    |                                 |  |  |                     |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| Mound 7 Group 4  |                    |                                 |  |  |                     |                                  |                               |  |                                    |                                 |                    |                                 |                              |
| H.S.X-38         | 2                  | 1                               | 19   |  | 3                   | 2                                |                               |  |                                    |                                 |                    | 4                               | 3                            |
|                  | 67                 | 3                               | 318  | 11   | 390                 | 29                               | 4                             | 140  | 6                                  | 4                               |                    | 59                              | 14                           |



Recurved Rim with Indentations on Outer Lip

Recurved Indented Rim with Handles

Recurved Indented Rim with Lugs

Incurved Rims

Plain very low Rims

Collared Rims with Incised Lines or Patterns on Face

Incised Body Sherds

"Two-story" Rims

Very Small (Toy) Rim Sherds

Plain (?) Body Sherds

Body Sherds with Twisted Cord Impressions - Made with Cord-wrapped Paddle

Body Sherds with Incised Lines

Body Sherds with Incised Patterns

H.S.A

H.S.G

H.S.F

H.S.K

H.S.P

H.S.Q

H.S.J

H.S.O

H.S.N

H.S.M

H.S.X

H.S.X-10

H.S.X-16

H.S.X-11

H.S.X-15

Моунд 1 Групп 2

Моунд 1 Групп 10

Моунд 6 Групп 4

Моунд 7 Групп 4

H.S.X-38

/

22

208

4

326

284

1

147

72

29

32

56

68

41

95

288

270

10

33

8

193

317

7

696

458

222

164

15

1

5

1

1

606

567

1

1

2

285

368

70

12

3

2

10

23

15

1

2

6

1

23

3006

2971



|                  | Unusual Types of Body Sherds | Incurved Rims | Incised Rim |  | Whole Pots with Collared Rims | Whole Pots with Vertical Rims | Whole Pots with Recurved Rims | Whole Toy Pots | Restorable Pots - Collared | Restorable Pots - Vertical Rims | Restorable Pots - Recurved Rims | Restorable Pots - Collared Rims with Handles | Restorable Pots - Vertical Rims with Handles |
|------------------|------------------------------|---------------|-------------|--|-------------------------------|-------------------------------|-------------------------------|----------------|----------------------------|---------------------------------|---------------------------------|--|--|
| H.S.A            |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.G            |                              |               |             |  |                               | 1                             |                               |                |                            |                                 |                                 |  |  |
| H.S.F            |                              |               |             |  |                               |                               |                               |                | 1                          |                                 | 2                               |  |  |
| H.S.K            |                              | 1             |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.P            |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.Q            |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.J            |                              |               |             |  |                               |                               |                               |                | 2                          |                                 |                                 |  |  |
| H.S.O            |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.N            |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.M            |                              |               |             |  |                               |                               |                               |                |                            |                                 | 1                               |  |  |
| H.S.X            |                              |               |             |  |                               |                               |                               |                | 2                          |                                 |                                 |  |  |
| H.S.X-10         | 1                            |               |             |  |                               |                               |                               | 1              |                            | 3                               |                                 |  |  |
| H.S.X-16         |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.X-11         | 1                            |               |             |  |                               |                               |                               |                | 1                          | 1                               | 2                               |  |  |
| H.S.X-15         |                              |               |             |  |                               |                               |                               |                | 1                          | 1                               |                                 |  |  |
| Mound 1 Group 2  |                              |               |             |  | 1                             |                               |                               |                |                            |                                 |                                 |  |  |
| Mound 1 Group 10 |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| Mound 6 Group 4  |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| Mound 7 Group 4  |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
| H.S.X-38         |                              |               |             |  |                               |                               |                               |                |                            |                                 |                                 |  |  |
|                  | 2                            | 1             | 4           |  | 1                             | 1                             |                               | 1              | 7                          | 6                               | 4                               |  |  |



## SHEET 4

|                  | Restorable Pots, - Re-curved Rims with Handles. | Toy Pots, - fragments. | Body Sherds, Warped and Fused. | Pottery Handles, - Detached. | Pottery Lugs, - Detached. | Pottery Caches, - some Restorable. | Shell Tempered Pottery. | Pottery Sherds, - Stained Red. | Woodland Pottery | Lump of Blue Clay. Pottery Aggregate. | Vertical Rims with incised lines on the sides. | Oval Worked Limestone Ornament. |
|------------------|---|------------------------|--------------------------------|------------------------------|---------------------------|------------------------------------|-------------------------|--------------------------------|------------------|---------------------------------------|--|---------------------------------|
| H.S.A            | 1   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.G            |   |                        |                                | 3                            |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.F            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.K            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.P            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.Q            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.J            |   |                        |                                |                              |                           |                                    |                         |                                | 2                |                                       |  |                                 |
| H.S.O            |   |                        |                                |                              |                           |                                    | 2                       |                                |                  |                                       |  |                                 |
| H.S.N            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.M            |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.X            |   |                        |                                | 4                            |                           |                                    |                         | 1                              |                  |                                       |  |                                 |
| H.S.X-10         |   |                        | 14                             | 10                           |                           |                                    |                         | 8                              |                  |                                       | 1  |                                 |
| H.S.X-16         |   |                        |                                |                              |                           |                                    | 1                       | 4                              |                  |                                       |  |                                 |
| H.S.X-11         | 1   |                        |                                | 2                            |                           |                                    | 6                       | 17                             | 2                | 1                                     | 5  | 1                               |
| H.S.X-15-        |   |                        | 18                             | 5                            | 5 caches                  |                                    |                         | 4                              |                  | 1                                     |  |                                 |
| Mound 1 Group 2  |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| Mound 1 Group 10 |   |                        |                                |                              |                           |                                    |                         |                                | 5                |                                       |  |                                 |
| Mound 6 Group 4  |   |                        |                                |                              |                           |                                    |                         |                                | 1                |                                       |  |                                 |
| Mound 7 Group 4  |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
| H.S.X-38         |   |                        |                                |                              |                           |                                    |                         |                                |                  |                                       |  |                                 |
|                  | 2   |                        | 32                             | 24                           | 5                         | 11                                 | 9                       | 34                             | 10               | 2                                     | 6  | 1                               |







## SHEET 6

|                  | Pottery, - Animal Head Effigy, - Handle of Pot. | Sherd showing part of Arm and Hand, - | "Fish Tail" Lug. | Thin Triangular Notched Arrow Point. | Rough, Large Triangular Arrow Point. | Rough, Stemmed Arrow Point. | Lance Point, - Flint | Knife, - Flint | Snub-nose Scraper | Scraper, - Large curved Flakes. | Scraper, - Others. | Celt, - Flint. | Coup de poing (Fist Axe) - Flint. |
|------------------|---|---------------------------------------|------------------|--------------------------------------|--------------------------------------|-----------------------------|----------------------|----------------|-------------------|---------------------------------|--------------------|----------------|-----------------------------------|
| H.S.A            |   |                                       |                  |                                      | 13                                   |                             | 1                    |                | 11                | 1                               | 3                  |                |                                   |
| H.S.G            |   |                                       |                  |                                      | 3                                    |                             | 2                    |                | 3                 | 4                               | 1                  |                | 1                                 |
| H.S.F            |   |                                       |                  | 2                                    | 6                                    |                             |                      | 2              | 9                 | 1                               | 11                 |                |                                   |
| H.S.K            |   |                                       |                  |                                      |                                      |                             | 1                    |                |                   |                                 | 1                  |                |                                   |
| H.S.P            |   |                                       |                  |                                      |                                      |                             |                      |                | 1                 |                                 |                    |                |                                   |
| H.S.Q            |   |                                       |                  |                                      |                                      |                             | 2                    |                | 2                 |                                 | 3                  |                |                                   |
| H.S.J            |   |                                       |                  |                                      |                                      |                             |                      | 1              |                   |                                 | 4                  |                |                                   |
| H.S.O            |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 | 4                  |                |                                   |
| H.S.N            |   |                                       |                  |                                      |                                      |                             |                      |                | 1                 |                                 |                    |                |                                   |
| H.S.M            |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
| H.S.X            |   |                                       |                  | 2                                    |                                      |                             |                      |                | 9                 |                                 | 7                  |                |                                   |
| H.S.X-10         |   |                                       | 1                |                                      | 5                                    |                             |                      |                | 12                |                                 |                    |                |                                   |
| H.S.X-16         |   |                                       |                  |                                      |                                      |                             |                      |                | 1                 |                                 |                    |                |                                   |
| H.S.X-11         |   | 3                                     |                  | 3                                    | 11                                   |                             |                      | 1              | 14                |                                 | 16                 |                |                                   |
| H.S.X-15         | 2   |                                       |                  | 2                                    | 4                                    |                             |                      | 1              |                   |                                 | 10                 | 1              | 3                                 |
| Mound 1 Group 2  |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
| Mound 1 Group 10 |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
| Mound 6 Group 4  |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
| Mound 7 Group 4  |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
| H.S.X-38         |   |                                       |                  |                                      |                                      |                             |                      |                |                   |                                 |                    |                |                                   |
|                  | 2   | 3                                     | 1                | 9                                    | 42                                   |                             | 6                    | 5              | 63                | 6                               | 60                 | 1              | 4                                 |



## SHEET 7

|                  | Graver, - Flint | Piercing Implement (AWL)<br>Flint. | Other Worked Flints | Flint with Drilled<br>Hole. | Flint Flakes. | Cache of Fine Large<br>(Curved Flake) Nehawka<br>Scrapers. | Flint Cores. | Quartz Flakes. | Bone Awls. | Bone Fish Hooks. | Cut Bones, - Remnants. | Gnawed Bones | Animal Jaw Bones |
|------------------|-----------------|------------------------------------|---------------------|-----------------------------|---------------|--|--------------|----------------|------------|------------------|------------------------|--------------|------------------|
| H.S.A.           |                 |                                    | 1                   |                             | 62            | 30   |              |                |            | 1                |                        |              |                  |
| H.S.G            |                 | 1                                  | 4                   |                             | 82            |  |              | 1              |            |                  |                        |              |                  |
| H.S.F            |                 |                                    | 1                   |                             | 56            |  |              |                | 2          |                  |                        |              |                  |
| H.S.K            |                 |                                    |                     |                             | 19            |  |              |                |            |                  |                        |              |                  |
| H.S.P            |                 |                                    |                     |                             | 10            |  |              |                |            |                  |                        |              |                  |
| H.S.Q            | 1               | 1                                  |                     |                             |               |  |              |                |            |                  |                        |              |                  |
| H.S.J            |                 |                                    | 3                   |                             |               |  |              |                |            |                  |                        |              |                  |
| H.S.D            |                 |                                    |                     |                             | 33            |  |              |                |            |                  |                        |              |                  |
| H.S.N            | 1               | 1                                  |                     |                             | 21            |  |              |                |            |                  |                        |              |                  |
| H.S.M            |                 |                                    |                     |                             |               |  |              |                |            |                  |                        |              |                  |
| H-S-X            |                 |                                    |                     |                             | 119           |  | 1            |                | 3          |                  | 1                      |              | 2                |
| H-S-X-10         |                 |                                    | 2                   |                             | 211           |  | 1            |                |            |                  |                        | 1            | 1                |
| H-S-X-16         |                 |                                    |                     |                             | 7             |  | 2            |                |            |                  |                        |              |                  |
| H-S-X-11         | 1               |                                    | 1                   |                             | 162           |  |              |                | 3          |                  |                        | 1            | 1                |
| H-S-X-15         | 2               |                                    | 12                  |                             | 23            |  |              |                | 5          | 3                | 1                      |              |                  |
| Mound 1 Group 2  |                 |                                    | 6                   |                             | 25            |  |              |                |            |                  |                        |              |                  |
| Mound 1 Group 10 |                 |                                    |                     |                             |               |  |              |                |            |                  |                        |              |                  |
| Mound 6 Group 4  |                 |                                    |                     |                             |               |  |              |                |            |                  |                        |              |                  |
| Mound 7 Group 4  |                 |                                    |                     |                             |               |  |              |                |            |                  |                        |              |                  |
|                  | 5               | 3                                  | 30                  |                             | 830           | 30   | 4            | 1              | 13         | 4                | 1                      | 2            | 2                |

(2 broken)



## SHEET 8

|                  | Shoulder-blade Digging Implements. | Other Bones. | Elk Tines. | Shoulder Blade, - Perforated. | Bone Bead. | Clam Shells | Clam Shells, - Worked. | Worked Bone. | Fish Hooks in Making. | Diseased Bone. | Buffalo Horn | Paint (Iron) Stone. | Bone Fragments. |
|------------------|------------------------------------|--------------|------------|-------------------------------|------------|-------------|------------------------|--------------|-----------------------|----------------|--------------|---------------------|-----------------|
| H.S.A            | 1                                  | 3            |            |                               |            |             |                        |              |                       | 1              | 1            | 2                   |                 |
| H.S.G            | 3                                  | 3            | 1          |                               |            | 23          | 1                      |              |                       |                |              | 5                   |                 |
| H.S.F            |                                    | 5            |            |                               |            |             |                        | 1            |                       |                |              | 1                   |                 |
| H.S.K            |                                    | 1            |            |                               |            |             |                        |              |                       |                |              | 1                   |                 |
| H.S.P            |                                    |              |            |                               |            |             |                        |              |                       |                |              |                     |                 |
| H.S.Q            |                                    | 1            |            |                               | 1          | 1           |                        |              |                       |                |              | 4                   |                 |
| H.S.J            |                                    |              |            |                               |            |             |                        |              |                       |                |              | 2                   |                 |
| H.S.O            |                                    |              |            |                               |            | 10          |                        |              |                       |                |              |                     |                 |
| H.S.N            |                                    |              |            |                               |            | 50          |                        |              |                       |                |              |                     |                 |
| H.S.M            |                                    |              |            |                               |            |             |                        |              |                       |                |              |                     |                 |
| H.S.X            |                                    | 6            |            |                               |            | 17          |                        |              |                       |                |              |                     |                 |
| H.S.X-10         | 7                                  | 4            |            |                               |            | 49          |                        | 1            |                       |                |              | 5                   |                 |
| H.S.X-16         | 1                                  | 1            |            |                               |            | 30          | 1                      |              |                       |                |              | 3                   |                 |
| H.S.X-11         | 11                                 | 19           | 3          |                               |            | 30          |                        |              | 1                     |                |              | 41                  |                 |
| H.S.X-15         |                                    | 8            |            |                               | 2          | 26          | 2                      | 6            |                       |                |              |                     |                 |
| Mound Group 2    |                                    |              |            |                               |            |             |                        |              |                       |                |              |                     |                 |
| Mound 1 Group 10 |                                    |              |            |                               |            |             |                        |              |                       |                |              |                     |                 |
| Mound 6 Group 4  |                                    |              |            |                               |            | 3           |                        |              |                       |                |              |                     |                 |
| Mound 7 Group 4  |                                    |              |            |                               |            |             |                        |              |                       |                |              |                     |                 |
| H.S.X-38         |                                    |              |            |                               |            | 50          |                        |              |                       |                |              |                     |                 |
|                  | 23                                 | 51           | 4          |                               | 3          | 299         | 4                      | 8            | 1                     | 1              | 1            | 64                  |                 |



## SHEET 9

|                  | Diorite Lens-shaped<br>Artifact. "Door Knob" | Diorite Celt. | Smoothing and Rubbing<br>Stone. | Rough, (Hand) Stones. | White (Paint) Stones. | Axes, - Broken. | Bird Bone. | Scoria. | Abraiders. | Concretion. | Hammer Stone. | 1/4 of Plain, Thick cru-<br>dely Made Pot, - Resem-<br>bles that found by S.M.C. | Bone Fish Hooks. |
|------------------|--|---------------|---------------------------------|-----------------------|-----------------------|-----------------|------------|---------|------------|-------------|---------------|--|------------------|
| H.S.A            | 1  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| H.S.G            |  | 1             | 2                               |                       |                       |                 |            |         | 5          |             |               |  |                  |
| H.S.F            |  | Row 2         |                                 | 4                     |                       |                 |            |         | 4          |             |               |  |                  |
| H.S.K            |  |               | 1                               |                       |                       |                 |            |         | 1          |             |               |  |                  |
| H.S.T            |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| H.S.Q            |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| H.S.J            |  |               | 3                               |                       |                       |                 |            |         | 1          |             |               |  |                  |
| H.S.O            |  |               |                                 |                       |                       | 1               |            |         |            |             | 1             |  |                  |
| H.S.N            |  |               |                                 |                       |                       |                 |            |         | 7          |             |               |  |                  |
| H.S.M            |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| H.S.X            | 5  | 2             | 2                               | 30                    | 19                    |                 |            |         | 3          | 1           |               |  |                  |
| H.S.X-10         |  | 1             |                                 |                       |                       |                 | 1          |         |            |             | 1             | 1  |                  |
| H.S.X-16         |  |               |                                 |                       |                       |                 |            |         | 6          |             |               |  |                  |
| H.S.X-11         |  |               | 6                               | 210                   | 4                     |                 |            | 2       | 8          |             | 2             |  |                  |
| H.S.X-15         |  |               |                                 |                       |                       |                 |            |         | 14         |             | 1             |  |                  |
| Mound 1 Group 2  |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| Mound 1 Group 10 |  | large 1       |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| Mound 6 Group 4  |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| Mound 7 Group 4  |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
| H.S.X-38         |  |               |                                 |                       |                       |                 |            |         |            |             |               |  |                  |
|                  | 6  | 7             | 14                              | 244                   | 23                    | 1               | 1          | 2       | 49         | 1           | 5             | 1  | 3                |

(See P. 210)



## SHEET 10

|                  | Circular Disk, - Part of Spool-shaped Ear Ornament. | Piece of flat bottom of pan-shaped (?) Pot. | Collared Rim with Indented Shoulder and Scalloped Edge. | Recurved Rim with short Vertical Indentations. | Rim Sherds with Indentations on the Inside. | Charcoal. | Small Vertical Rim<br>Large Expanding Body. | Plain Vertical Rim with Horizontal Handle with 3/8 vert. Hole. | Recurved Rim with Indented Outer Lip and Vert. Half Moon Lag. | 10 Row Corn. | 6 Row Corn. |  |  |
|------------------|---|---|---|--|---|-----------|---|--|---|--------------|-------------|--|--|
| H.S.A            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.G            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.F            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.K            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.P            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.Q            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.J            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.D            |   |   |   |  | 2   |           |   |  |   |              |             |  |  |
| H.S.N            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.M            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.X            |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.X-10         |   | 1   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.X-16         |   |   |   |  |   |           |   |  |   | 6            | 2           |  |  |
| H.S.X-11         |   |   | 1   | 2  |   |           | 1   | 1  | 1   |              |             |  |  |
| H.S.X-15         | 1   | 1   |   |  |   |           |   |  |   |              |             |  |  |
| Mound 1 Group 2  |   |   |   |  |   |           |   |  |   |              |             |  |  |
| Mound 1 Group 10 |   |   |   |  |   |           |   |  |   |              |             |  |  |
| Mound 6 Group 4  |   |   |   |  |   |           |   |  |   |              |             |  |  |
| Mound 7 Group 4  |   |   |   |  |   |           |   |  |   |              |             |  |  |
| H.S.X-38         |   |   |   |  |   |           |   |  |   |              |             |  |  |
|                  | 1   | 2   | 1   | 2  | 2   |           | 1   | 1  | 1   | 6            | 2           |  |  |



## SHEET 11

|                  | Globular Pot without Rim, - Lug with Vertical Hole. | Thick, Coarse Vertical Rim decorated on Outside edge with row of Knobs. | Square top of Lip with Diagonal Incised Lines. | Skulls sent in. | Skeletons Uncovered. | Fossil Brachiopod, Pro-ductus. A Fetish? | Wattle | Carbinized Corn | Shoulder with plain vertical neck with attached handle through which vertical hole has been punched. Shoulder decorated with V shaped zig-zag lines Photographed | Beaver Incisor. | Fragment of Pelvis. | Leg bone with drilled round hole. |
|------------------|---|---|--|-----------------|----------------------|--|--------|-----------------|--|-----------------|---------------------|-----------------------------------|
| H.S.A            |   |   |  |                 |                      |  | 1      |                 |  |                 |                     |                                   |
| H.S.G            |   |   |  |                 |                      |  | 5      |                 |  |                 |                     |                                   |
| H.S.F            |   |   |  |                 |                      |  |        |                 | 1  | 1               | 1                   | 1                                 |
| H.S.K            |   |   |  |                 |                      |  | 1      |                 |  |                 |                     |                                   |
| H.S.P            |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| H.S.Q            |   |   |  |                 |                      |  | 1      |                 |  |                 |                     |                                   |
| H.S.J            |   |   |  |                 |                      |  | 8      |                 |  |                 |                     |                                   |
| H.S.D            |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| H.S.N            |   |   |  |                 |                      |  | 3      |                 |  |                 |                     |                                   |
| H.S.M            |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| H.S.X            |   |   |  |                 |                      |  | 19     |                 |  |                 |                     |                                   |
| H.S.X-10         | 1   | 1   | 3  |                 |                      | 1  |        |                 |  |                 |                     |                                   |
| H.S.X-16         |   |   |  |                 |                      |  | 4      |                 |  |                 |                     |                                   |
| H.S.X-11         |   |   |  |                 |                      |  | 21     |                 |  |                 |                     |                                   |
| H.S.X-15         |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| Mound 1 Group 2  |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| Mound 1 Group 10 |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| Mound 6 Group 4  |   |   |  | 4               | 12                   |  |        |                 |  |                 |                     |                                   |
| Mound 7 Group 4  |   |   |  | 2               | 5                    |  |        |                 |  |                 |                     |                                   |
| H.S.X-38         |   |   |  |                 |                      |  |        |                 |  |                 |                     |                                   |
| Mound 5 Group 4  |   |   |  | 1               | 1                    |  |        |                 |  |                 |                     |                                   |
| Mound 4 Group 4  |   |   |  |                 | 2                    |  |        |                 |  |                 |                     |                                   |
| Mound 3 Group 4  |   |   |  |                 | 2                    |  |        |                 |  |                 |                     |                                   |
|                  | 1   | 1   | 3  | 7               | 22                   | 1  | 53     |                 |  | 1               | 1                   | 1                                 |



## SHEET 12

1/2 large Muller

Buffalo Tooth

Penal Bone of Coon

Burned Mud-dauber's Nest.

Flint with hole drilled Drilled through it.

Fused Body Sherds.

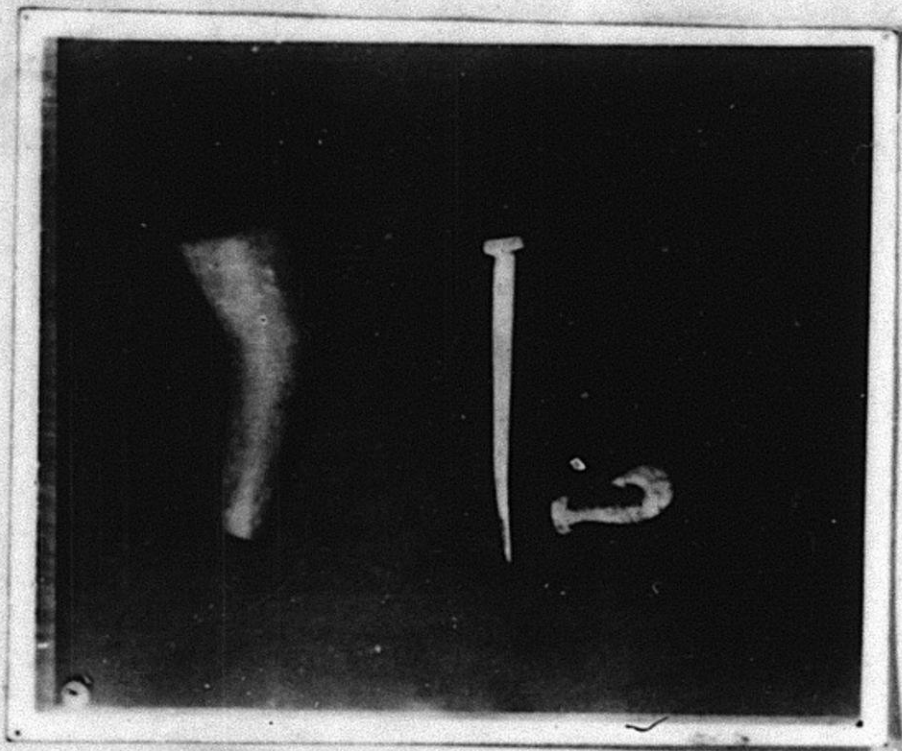
Total

|                  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |
|------------------|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------|
| H.S.A            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 402  |
| H.S.G            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 896  |
| H.S.F            | 1 | 1 | 1 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 382  |
| H.S.K            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 94   |
| H.S.P            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 23   |
| H.S.Q            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 154  |
| H.S.J            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 207  |
| H.S.D            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 706  |
| H.S.N            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 133  |
| H.S.M            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2    |
| H.S.X            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 897  |
| H.S.X-10         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1790 |
| H.S.X-16         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 520  |
| H.S.X-11         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2026 |
| H.S.X-15         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 805  |
| Mound 1 Group 2  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |
| Mound 1 Group 10 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |
| Mound 6 Group 4  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |
| Mound 7 Group 4  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |
| H.S.X-38         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |      |

1 1 1 1 1 1

Grand Total 9037





Photographs given me by Mr. Workman of Glenwood, Iowa, of pottery pipe, bone bodkin and fishhook of Nehawka flint, local field finds of some collector whose name I did not learn.

The trumpet pipe and bodkin are quite certainly of Glenwood culture. The fish hook of flint may be Algonquin.

We found no flint fish hooks in the house sites. All were of bone. Photographs one-third actual size.