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IOWA ARCHAEOLOGICAL REPORTS 1934 TO 1939

(TEN VOLUMES)

by Ellison Orr


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Report of a State wide
Reconnaissance Survey of Indian
Mound Groups, and Excavation of
Camp Sites, under Project 1047
of the Iowa Planning Board, by
Party under Dr. Charles R. Keyes.

Dr. Charles R. Keyes,        Supervisor.
Ellison Orr,                 Ass't. Supervisor.
Fred Orr,                    Field Worker.
Harrison Toney,              Field Worker.

By Ellison Orr
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**Mill Creek Pottery Photographs**

*Little Sioux - Survey in Valley of Dr. Kod, Paul Braunschweig, Mr. Little, Mr. Cross.*

*Mill Creek Culture - Mr. Stiles*
Report of a trip to Examine and Survey Prehistoric Indian Mound Groups and Campsites, under the Iowa Planning Board's Project S3-A2-1047, for the purpose of selecting Desirable Groups and Sites to Recommend to the Iowa State Board of Conservation to be set aside and reserved for the use, education and enjoyment of the people of the State of Iowa, and to study and excavate certain camp sites.

Dr. Charles R. Kyes, 
Supervisor of Project S3-A2-1047 
Iowa Planning Board. 

Dear Sir:

In pursuance of instructions, with two field workers, Harrison Toney who furnished and drove the car that carried the party, and who also assisted in excavation work, and Fred Orr, assistant in making surveys and excavations, we left Waukon, Iowa, on September 17th, reaching Spencer that evening via State Highway No. 9.

The following day, the 18th, under the guidance of Mr. A. C. Thompson, with his car, we visited and examined a site on Sec. 24, T. 95, R. 36, on the top of a one hundred and fifty foot high spur of the upland running south into the valley of the Little Sioux - Gillet's Grove, Clay County, on which there was once four mounds now entirely obliterated by cultivation. On this site, Mr. Thompson and others had from time to time picked up many small pottery fragments of shell-tempered (Siouan) pottery, arrow-heads and a few very small copper beads. While we were looking over the site, Mr. Thompson picked up a round copper bead about 1/8 in. in diameter.

In a pasture two miles northeast, on west side of Little Sioux in Sec. 25, T. 95, R. 36, are a few obscure scattered mounds which we also visited.

From there we drove across the Little Sioux Valley and south to a similar site on the top of a spur of the upland south of that stream and running north into its valley, on Sec. 34, T. 95, R. 36, same township and county, as the first one visited. Here we found small fragments of shell-tempered pottery and two millers.

From there we drove to Sutherland via the Paul Braunschweig and Wittrock sites. After noon, Dr. T. D. Kas of Sutherland, drove us around to other camp sites and introduced us to their owners.

On the forenoon of the 19th, we dug a pit five by five feet and five feet deep in the Paul Braunschweig site on the west side of the N. and S. highway that runs across its east half.

On Saturday, the 22nd, assisted by Boy Scouts from Spencer, two additional pits were excavated.

This site is near the center of the SW. 1/4 of Sec. 23, T. 94, R. 59, Waterman Township, O'Brien County, on a "high spot" in the flood plain of Waterman Creek, and has an area of about 500 feet in diameter. Its elevation above the bottom land is 4 feet.
At around 2 feet below the surface, we found many pottery fragments - not near so many were found above this level - of the Mill Creek culture, with many bones of the buffalo and elk with those of the dog and deer occurring less plentifully. All these were found in varying numbers down to 5-1/2 feet. Both bone fragments and sherds occurred in greater abundance, at all levels, in spots in connection with ash beds but there were no indications of fire pits.

The Mill Creek culture pottery is characterised by the great variety of its shapes and decorative designs and by its hardness and strength - only three or four times did we find a sherd that crumbled in handling. All the designs are made with straight incised parallel lines.

Ninety-two fragments of rims and necks of vessels taken from the three pits, with two exceptions, showed as many different designs either of shape or decoration.

Sufficient pieces of any one shape or having any one design were not found to show with any certainty the shape or the complete decoration design of a single pot.

Both pottery sherds and bones occurred apparently with some little attempt at arrangement in the burial of the pieces. The large bones, unlike those found in the northeastern part of the State, were not split lengthwise for the purpose of extracting the marrow but were broken short off. With these were found bone awls and tines from deer antlers; an occasional celt; and very rarely lens-shaped polished greenstone pieces about two inches in diameter.

On Thursday, Sept. 20th, a survey was made of a group of 4 nearly obliterated round mounds on the glacial gravel train terrace on the north side of the Little Sioux river, on the Sw. 1/4 Sec. 24, T. 94, R. 39. Pottery fragments and flints found on this terrace, which is nearly a half mile long and half as wide, indicate an extensive camp site. On the south side of the river a half a mile away on a terrace remnant on the NW. 1/4 of Sec. 25, is another camp ground but no excavations were made on either site.

On the same day, two groups of round mounds (the Patterson Mound Group) on the top of the plateau - bluff - lying between Waterman Creek on the west and the Little Sioux on the south, at their confluence, on the Se. of Sec. 26, T. 94, R. 39, were surveyed.

The mounds of the first, a group of four, lying in the extreme northeast corner of the quarter section, are well preserved and have a height of around two feet in spite of the fact that they lie in a field that has been cultivated for many years. The second group of three, lying at the extreme end of the spur of the plateau have a height of less than one foot.

One-half mile north of the Patterson mounds is a string of five round mounds along the west edge of the plateau bordering Waterman Creek on the east, on the NE. of Sec. 23, T. 95, R. 39.
This group and the enclosed area (camp site) on the NE. of Sec. 11, T. 95, R. 39, were surveyed on Friday, Sept. 21st. This last is the Wittrock site.

On Monday forenoon, a survey was made of seven small, low round mounds lying along the plateau edge - the top of a low bluff, on the west side of Mill Creek on Sec. 54, T. 95, R. 41.

Afternoon, we drove to Lake Okoboji, to examine some reported large mounds on the East shore of that Lake, which proved to be small Morainic hills.

Going west from there we spent the night at Lake Park.

In the morning, a search along a roadside bank on the North side of Silver Lake, yielded some small pieces of sand-tempered string-decorated pottery where we expected to find Siouan.

The Blood Run Mound Group was reached the same evening in time for a look-over. Working out of Larchwood, 10 miles East, we made a survey of this, - one of the notable groups of Iowa Mounds, on the following two days.
The Blood Run Mound Group.

Flowing west then north in a valley 40 rods wide which it has cut through a gravel train of the Wisconsin glacier, the Blood Run creek empties into the Big Sioux river in the SW. of Sec. 26, T. 100, R. 49, Lyon County.

The valleys of the two streams, one flowing north and the other south, enclose between them a northward projecting spur of this great, seventy feet thick, gravel train lying for miles along the foot of the bluffs bordering the valley of the Big Sioux on the East.

On the level top of the spur is the Blood Run group of fifty-five round burial mounds.

Lying scattered over an area 2600 feet long and 600 feet wide, these mounds, before the wild beauty of the primitive prairie on which they were built, was destroyed by cultivation and pasturage and fenced across and around, must have presented a truly imposing sight, all things considered.

It is easily the best group of mounds in Northwestern Iowa. In area covered; in average size; in the characteristic surroundings of a prairie river - the high, rounded grass covered bordering bluffs and the fringes of trees along the streams; and in the number of mounds, no other group approaches it.

All the tumuli are of the round or burial type. Here we may reasonably surmise lie the great of a numerous people. It may well have been the Appian way of a powerful dominant race.

Many of the mounds have been mutilated by vandals in search of "relics", but all can be restored by a small outlay of money. We doubt if the primary burials - the real secrets of the mounds - were uncovered in more than a half dozen cases. To the East across the Blood Run on the terrace, at the same level, in one of the similar mounds of the much smaller Martin Johnson Group, implements were found at a depth of eight feet, a depth that would discourage the ordinary relic hunter.

The Group can be reached by good public roads from Larchwood and Granite, except for the railroad between, the south east corner of the mound crowned terrace.

We cannot recommend too highly, nor urge too strongly, the acquisition of this Group by the State of Iowa, to be set aside as a preserve. So far as we have any knowledge, it is the only mound group in Northwestern Iowa worth while considering. Besides, it is located within less than five miles by a good highway of Gitchee Manito Park - well worth a visit.

On the slope of the terrace a few rods west of the corner to Sections 23, 24, 25 and 26, T. 100, R. 49, in the center of the group is a large granite boulder on one face of which several hundred polished cup-shaped pits from the size of a quarter to a half dollar and one-eighth of an inch deep have been cut. One wonders by whom and why. We only know that making them required an immense amount of labor and that they are prehistoric.

To preserve these mounds with their proper surroundings, the
entire terrace comprising, with the addition of two or three acres
of the bottom land of Mill Creek for parking and picnic use, approxi-
mately 60 acres should be purchased.

The land belongs to different owners, two of which are Estates. Prices could not be obtained but an estimated value is $60.00 per
acre.

It is not known by what people these mounds were built, but
tentatively they may be considered as Siouan as the abundant arti-
facts picked up on the surrounding terrace field were apparently
all made by some branch of that nation.

Scattered over the southern part of the Group, were formerly
numbers of rock (boulder) enclosed areas which were, according to
Mr. Martin Johnson who remembers them well, from eighteen to thirty
feet in diameter with an entrance on the SE. side having a wing wall
on N.E. side. Inside the ground was of the same level as outside
and the boulders forming the circle were from eight inches to two
feet in diameter.

A plot of this group and surroundings with photographs of the
"pitted rock" and of mounds #25 and 12, which had never been dis-
turbed and is still covered with the native blue-stem (turkey foot)
grass, follows.

Mrs. Rudt, who owns Sec. 25, says these circles were very
numerous on her land and that they hauled off the rocks and heaped
them along the E. edge of the terrace. We counted the boulders in
this wind row, a total of 1450.

Such rock enclosed areas also occur in South Dakota along the
Big Sioux and Missouri rivers.

(A note appended to the previous page states:

"Mr. Martin Johnson, at the request of Dr. Keyes, counted the pits
on this rock, marking each with chalk as he counted. The total was
743. See also Page 101"

Ed.)
On Thursday, Sept. 27th, the Martin Johnson group of 19 mounds on the terrace 1/8 mile NE. of the Blood Run Group, was surveyed. All but six of this group lie on cultivated ground. Only one, No. 8, has been excavated.

A plat of this group is attached to this report.

On the 28th, drove from Larchwood to Sioux City. On the way we watched closely the terrace field and bluff tops for mounds but saw none, nor could be learned of any or of camp sites at the farm houses and towns where we made inquiries.

On Friday, and on Saturday forenoon, we examined closely the walls of a pit-silo excavated in the NE. part of Broken Kettle Mound on the farm of Mr. S. T. Mosher, on Sec. 5, T. 90, R. 49, twelve miles north of Sioux City, and dug one pit, 5x5 feet, south of the center

On Saturday afternoon, we returned to Sutherland, spending Sunday there.

In order to get all the information possible concerning the contents of the mound-like camp sites in the valleys of Waterman and Mill Creeks and of the Little Sioux, it was thought best to spend all the time available for the purpose of making excavations, in digging in these sites, and in the mounds on the bluff top, to determine what connection there might be that these two evidences of occupation were both made by people of the same culture.

No evidences of burials had been found at any time in the course of our excavations in the camp sites. Where then were the evidently numerous people of the culture of the camp sites buried? We felt that further efforts should be made to settle these questions.

On Monday and Tuesday, four pits were dug in the Magnusson camp site near the SE. corner of Sec. 5, T. 95, R. 39, in Cherokee County. This, like the Paul Braunschweig site, was situated on the bottom land of the Little Sioux, west of and near that stream. The "relics" found were of the same culture as those taken from the Braunschweig site.

On Wednesday we drove 15 miles south of Sutherland, to a group of mounds on the bluff top on the East side of the Little Sioux, which the owner of the land had promised to let us excavate, but now he had changed his mind.

Driving to the Fred Bultman farm on the SE. of Sec. 11, T. 95, R. 38, 2 miles west of Linn Grove in Buena Vista County, we spent the remainder of the day in making three excavations in a camp site on the 40 ft. high terrace north of the Little Sioux, and at about 20 rods from that stream.

One of the pits was of unusual interest, - containing at a depth of 20 in., unusual evidences of a fire in the shape of burned earth and a thick ash bed on two sides of which were legs of charred oak 5 in. in diameter, in and around which were four fine celts. We were loath to leave this place and believe that further work here might result in important discoveries.

Thursday was spent in surveying a group of 3 mounds, one of which we excavated, on the bluff top on the farm belonging to Mr. Lewis Martin on the SW. NE. Sec. 14, T. 94, R. 39. The mound excavated was absolutely barren.

Mr. Martin's house, about one-fourth mile southwest, stands on a low terrace on the East side and along a bend in a former channel of Waterman Creek, and some years ago he found in his back
yard a fine meta of quartzite which he presented to us.

At the Academy of the Quaker settlement eight miles north and west of Sutherland, is a collection of local "Indian relics", among which are two of these unique - for Iowa - pieces.

On Friday, Oct. 5th, drove to Cherokee and spent the afternoon, with Mr. Gilchrist as guide, in locating mound and camp sites.

On Saturday dug two pits on Matt Brewster camp site on south side of Mill Creek on low spur of bluffs to East, at 20 rods S. of creek near the center of Sec. 4, T. 92, R. 40, the material obtained was the same as that found in the Waterman and Little Sioux valleys.

The highway crosses this site and on the bluff top to the NE. are two nearly obliterated mounds.

Down stream about 40 rods is what appears to be a very substantial fish dam constructed of boulders. (See photograph.)

Monday and Tuesday were spent on Fhipps site, a "high spot" west of center of bottom lands of Mill creek. Four pits were dug and same culture found as heretofore.

On the bluff top at and between the confluence of Silver Creek, running north, and the Little Sioux, running south, on the south half of Sec. 52, T. 91, R. 40, eight miles south of Cherokee, is, or rather was, a solitary mound, now entirely cultivated out of existence. The owner of the land, Mr. R. E. Little, digging in this mound some years ago, found at 14 in. below the surface, a "floor" of small hand pebbles and coarse gravel, and in the next spading below this, two broken but nearly complete pots with a few badly decayed fragments of human bones. The two vessels were Mill Creek culture pottery, and show that at least some of the people who used the camp sites in the valleys were buried in the mounds on the bluff tops. This pottery Mr. Little has given to the State Historical Society. (The fragments of these two vessels were restored by the Milwaukee Public Museum.)

Across the town line to the south on Sec. 5, was another solitary mound, also nearly obliterated, in which we dug but found only disturbed and much decayed bones. Some one had been there before us.

In the afternoon we made a survey of a group of seven small low mounds in a pasture on the N. side of the road along the south side Sec. 9, T. 90, R. 41, on a high bluff at the confluence of Rock Creek and the Little Sioux about two and one-half miles SW. of Quimby. This "high place" affords the grandest panoramic view in the valley of the Little Sioux.

On Thursday, the 11th, we drove down the valley of the Little Sioux to Smithland and from there to Sioux City.

On the way down the river we made inquiries at every town, and at many farm houses, about camp sites and mounds but after passing Washita, were unable to get any information except at Anthon. No one knew of any mounds or camp sites or of any one who had "Indian relics".

At Anthon it was different. Several people had a few pieces of Siouxan pottery, a few millers or flints, all apparently Siouxan. In the town, two mounds had been removed because of building operations.

A mile south, on the farm of Mr. Jacob Cross, on a low (4 ft. high) terrace were two mounds, one of which Mr. Cross had excavated some years ago and in which he found Siouxan pottery.

A short distance to the west of these mounds on a 20 ft. high
terrace along an old channel of the Little Sioux, was what he de-
scribed as an area regularly laid out in squares 70x70 ft., bounded
by "sidewalks" of boulders. There were 8 of these squares. At the
foot of the terrace to the East, there was a small lake and a
spring.

Unfortunately when Mr. Cross broke up the land it was necessary
to remove the boulder "sidewalks", and afterwards the area was used
for a gravel pit and all traces of the place destroyed. And now it
is impossible to ascertain what really was there - not what Mr.
Cross thought he saw.

At Anthon we very evidently were outside of the Mill Creek
Culture area. Mr. H. L. Stiles at Cherokee, who is well informed
on this culture, told us that its most southerly camp site was five
miles southeast of Washta on the East side of the river.

Besides a few pieces of Siouan pottery, Mr. Cross has a few
celts and flint pieces and a fine metate of red quartzite.

The fact that the latter was found on his farm outside the Mill
Creek culture area and that within the Martin metate or the two at the
Quaker school can with any certainty be connected with the Mill Creek
sites, may mean that they are Siouan.

Friday and Saturday, Oct. 12, and 13, working from Sioux City,
we excavated four pits in the Broken Kettle Mound, two to the NE.
near the pit-silo and two a little SE. of the center.

In digging we had found a few shreds of plain pottery that
puzzled us as they did not seem to be parts of the quite uniformly
regular shapes of the vessels whose broken parts we had encountered.
But in the last pit we found a complete vessel, except for a small
piece out of the rim, shaped like an old fashioned milk pan or a
wash basin with straight sides and a flat bottom. It was 10 in. in
diameter across the top and 3-1/2 in. deep. Near it we found nearly
half of another.

These pans were found at 3 feet below the surface, and in the
first spading of the same pit was a fine celt, the only one taken
by us from the Broken Kettle mound.

On Monday, the 15th, we drove to LeMars and down the valley
of Floyd river to Sioux City, making diligent inquiry for mound
sites and mounds but getting no information.
The Mill Creek Culture.

Up to Oct. 16th, twenty days were spent in locating and surveying mounds and mound groups; in excavating scientifically camp sites; and interviewing many persons in the area occupied by the people of the Mill Creek culture.

The evidences of this occupation consist primarily of what has been called camp sites. These are areas on the bottom lands, and gravel trains and other terraces in the valley of the Little Sioux and its tributaries, Waterman, Mill, Rock and Silver creeks in the Counties of Cherokee, O'Brien, Buena Vista and Clay, and one solitary site, the "Broken Kettle Mound", twelve miles north of Sioux City at the mouth of Broken Kettle Creek a tributary of the Big Sioux, in Plymouth County, and sixty-five miles as the bird flies, from the center of the culture area in the valley of the Little Sioux. In addition to these there are the mound burial mounds along the edge of the plateau, or bluff tops on both sides of the valley, some of which like the mound on the Little farm at the mouth of Silver creek, but not all with certainty, contain the remains of people of the Mill Creek culture. Still another evidence is an earthwork on the NW. of Sec. 11, T. 94, R. 39, O'Brien County, on the farm of Mr. Wittrock, on the East bank of Waterman Creek, consisting of a low embankment enclosing a roughly quadrangular area approximately 185x165 ft. with a shallow ditch outside. The owners of the land on which this earthwork lies, have never permitted it to be disturbed by cultivation, and except for the work of poaching diggers, it is as it was at the time of the first white settlement of the country.

It is locally believed that this was a palisaded camp but we were unable to get the evidence of the existence of remains of posts in the embankment that would certainly prove it.

The interior at the time of our survey, Sept. 21st, was so covered with a dense growth of weeds and prairie grass and flowers, that it was impossible to determine with any degree of accuracy what its surface was. We planned to come back later when the vegetation had been killed by the frost and dried, and burn the ground over, but were prevented from doing this because of rains.

We saw pottery sherds and some other artifacts that had been found in the interior of the area by two different persons. The pottery was typical Mill Creek.

As this Wittrock site is the only certain Mill Creek culture site not now under cultivation, and, except for desultory digging by "relic hunters", which might be restored, is intact, it is greatly to be desired that it be preserved, and we unhesitatingly recommend that all possible steps be taken, locally, and by the State Board of Conservation, looking towards that end (This Site was acquired by the State, 1926).

These "camp sites" are roughly circular areas having diameters of 200 - 300 ft. and an elevation of 3 - 4 ft., except the Broken Kettle Mound - which is not a mound as we usually think of one, that is a burial mound, but a camp site - which has an elevation of 8 ft., located on the low 3 - 6 ft. high, terraces forming the bottom lands, or on those 60 - 70 ft. high formed by outwash from the Wis-
Colson glacier, and on low spurs of the bordering bluffs.

The Brannscheig, Magnuson and Akers sites are examples of the first, the Hill and Bultman of the second, and the Matt Brewster and Phipps of the third.

All consist of an accumulation of camp refuse consisting of mostly well-preserved broken bones of buffalo, elk, deer, dog, turkey and other birds, and of fish and fish scales. With these are large numbers of pottery sherds; bone awls, often broken, and bones used for other purposes; and a very few inch long triangular notched arrow heads. One celt was found in the Broken Kettle mound and four were taken out of one pit in the Fred Bultman site. No axes, maulers or large flint pieces were found. A rare and characteristic artifact was a lens-shaped, polished piece of greenstone or quartz, 2-1/2 in. in diameter and about 1 in. thick, probably used in gaming.

All this material was scattered through a deposit of different kinds of earth and clay, most of which was apparently taken from the soil in the immediate vicinity but with which was mixed deposits of clay that must have been brought from some distance, and thin layers and lens-shaped deposits of ashes.

The pot sherds of these sites are far and away the distinguishing characteristics of the Mill Creek culture. The smaller notched arrow heads and lens-shaped pieces may also be considered as such. Also various rare odd pieces not found elsewhere.

The absence of mortars, maulers, axes and pipes is noticeable.

The grit-tempered pottery was apparently of all sizes from vessels having a diameter of 3 to those of 18 inches, with the walls of corresponding thicknesses up to more than 1/4 inch.

The commonest general type was of vessels of all sizes with globular bowls and rounded bottoms, and necks and rims of many patterns. Necks and rims and some times the upper part of the bowl, were ornamented with innumerable designs of straight incised lines, parallel, diagonal, cross hatched, forming triangles and other patterns. The bottoms of these pots were seldom other than plain.

At the end of one day's work, of 92 rim and neck sherds found, only two were of the same shape, or pattern of decoration.

Next in abundance were vessels of a light colored ware, from 6 to 10 inches in diameter with low, outwardly recurved neck. These were ornamented by parallel incised lines running entirely around and covering the entire outside. Some of the finest sherds were of this type.

A third type was a strong, fine grained ware, stained black—probably slip was used—and polished both inside and out till smooth. The only ornamentation was some large indentations in the low recurved neck.

Some small—3 in. in diameter—shapely vessels of this ware, of which we found a few large pieces, must have been real works of art.

Then there was the milk-pan type of rather coarse but strong material.

Actually bushels of sherds were found in the pits, usually in greatest abundance in connection with deposits of ashes.

Although in spots there were local evidences of stratification of ashes and clay, these camp sites when considered as a whole were of a homogeneous nature, evidently built up of loads of earth from nearby, thrown down promiscuously, with fewer loads of different kinds of clay brought from remote distances. This was particularly true of
Mill Creek Pottery, restored by the Milwaukee Public Museum, from sherds collected by Rev. F. L. van Voorhis of Sutherland, Obrien County, Ia. The upper from the Braunschweig village site, the lower from the Magnussen site, both on the low terraces in the valley of the Little Sioux - the Braunschweig Site on Sec. 23, T. 94, R. 39, the Magnussen on Sec. 10, T. 93, R. 39. The upper vessel, Van Voorhis says "was a toy pot", and the photo probably shows it about actual size. The lower one was larger. The darker parts of the photo are of the actual sherds, the lighter are the plaster-of-paris restorations. Collected 1934-35.
Collection of Paul Braunschweig, O'Brien county - Mill Creek culture.
3 rough grooved manos, 8-10 lbs
50 notched triangular arrow heads - 1 in. long

1 small irregular mortar
1 greenstone celt - 4 in. long.
2 lens-shaped pieces - "door knobs" - 1 black, 1 greenstone.
3 globular rubbing stones
1 quartzite rubbing stones
1 piece turtle carapace
5 shell beads
5 scrapers, - 1 bent end, 1 flake, 1 irregular.
5 triangular large, 2-3 in., arrow heads.
1 notched lance head, - 2 in. wide
2 eye ends of bone needles
1 small crude bird image with head gone, - lug
from rim of pot, - 1 in. long.
1 piece hematite, - 1 in. long.
3 horn pot handles.
3 bone awls.
1 bone smoother
1 small bear head - hole for string - probably
part of lug from rim of pot.
Collection of M.E. Hill, Obrien County—Mill Creek Culture.

1. Muller
2. 6 in. greenstone clubs
3. Greenstone maul 6" x 6", with groove.
4. 2 in. ball-not grooved
5. Axe—all round groove
6. Inferior granite war-club
16 notched arrow heads → 1 in. long.

1. Piece arrow shaft smoother — 1 in. long
2. Bone awls — 1 a bird's bill
3. Chipped pieces—knives — 4 in. long
4. Broken knife (?)
5. Pot handles—pair
6. Large pieces pottery—Mill Creek
7. Long bone awl
the Broken Kettle site. Those of the Little Sioux sites contained much less clay.

These camp sites were probably started at first on a "high spot" of the bottom lands or terraces. Then earth and clay was carried in and added, till, when they were abandoned, those in the Little Sioux valley had a depth of 3-5 ft., and the Broken Kettle of 8 ft.

Scattered through the entire deposit is the ashes, camp refuse and implements. Though accumulations of ashes were abundant, they appear not to have been in pits as no evidences of walls of them were seen. Except in the East pit dug in the Buistman site, no decayed or burned pieces of logs were found.

When one considers the large amount of work done in building these camps and the other evidences of long continued occupation by a numerous people, the question arises of what disposal was made of their dead. We know that some at least were buried in the not very numerous mounds on the bluff tops - the edge of the plateau, but the resting places of by far the greater number is as yet undiscovered.

At one mile north of the Broken Kettle, on the rounded peak of a high bluff, commanding a wide outlook of the valleys of the Broken Kettle Creek and the Big Sioux and the Missouri rivers, a farmer in cultivating his corn turned out a few human bones.

Digging here, at a depth of ten inches, we uncovered an ossuary consisting of bundle burials thrown in "every which way". Under a surface area of roughly 60 ft. square, they were packed solidly to a depth of 6 inches - with them we found one broken oint but no pottery or anything that would definitely connect them with the builders of the camp site in the valley below. No mound had been erected over this ossuary.

Reports were brought to us of the plowing out of parts of skeletons on the upland fields on either side of the Broken Kettle Creek but all were indefinite as to exact location. Nor could we learn of any mounds on the bluffs.

We were greatly assisted in our investigation of this culture by Mr. T. D. Kes of Stratford, and by Mr. Gilchrist and Mr. N. L. Stiles of Cherokee. With one exception we were given permission to enter on farms and make surveys and excavations whenever and wherever requested.

For permission to excavate we are especially indebted to Mr. Paul Braunschweig, Mr. Lewis Martin, Mr. Magnusson, Mr. Akers, Mr. Phipps, Mr. Matt Brewster, Mr. S. H. Mosher and Mr. R. L. Little.

On Nov. 18th, we returned again to the Broken Kettle Mound for further excavation, driving directly to Sioux City from Waukon. At this time eleven days were spent in digging a line of pits from the center to the SE circumference of that site. The object of this work was to determine if there was any stratification of the artifacts yielded by this mound. We found no indications of any change in the culture. The pottery shreds, the implements and general construction of the mound were the same from the lowest level to its surface 8 ft. above. However, we did find somewhat of a concentration of material midway between the bottom and the top.

We wish here to express again our appreciation of the privilege given us by Mr. S. H. Mosher to dig anywhere in the mound which lies wholly in his barn yards.
Wednesday, Oct. 17, we spent an route from Glenwood to Stratford, Hamilton County, via Highway #36 to W. Bodaway river, then N. on #71 to Carroll, then N. on #30, the Lincoln Highway, N. on #169 to Dayton and E. by county roads across the Des Moines river to Stratford.

West - SW. and NW. from this place on the bluff tops along the Des Moines, prehistoric Indian mounds are found singly and in groups on nearly every salient point on both sides of the river. Many of them have been destroyed, and others badly damaged, by cultivation, and enterprising amateur diggers have dug in most of the remainder, but their pits were shallow and we were unable to learn of anything being found.

In fields, where were mounds, now under cultivation, small pottery sherds, small scrapers, occasional arrow heads and flakes can be picked up, while on the terraces camp sites have been located none of which yield much in the way of pottery fragments or chipped material. An occasional ax or celte is found. We were told of one that weighed 9 lbs.

On the 16th, Mr. E. H. Hawbaker very obligingly went with us around to the different promising sites and located others on the map. On Sec. 25, T. 97, R. 27, on top of a spur of the East bluff is the neatly kept Vogers cemetery. Here is buried the first white woman to die in Webster County. Her monument tells us that she "died of exposure at the time of the raid by the Sioux under Inkpaduta" that terminated with the Spirit Lake massacre.

In this cemetery is a string of five round mounds on four of which are white burials.

We urged Mr. Hawbaker and others with whom we came in contact, to start a move to have an appropriate marker placed on the fifth, the unoccupied one and farthest back from the point of the spur - calling attention to these really fine mounds. This group at least is safe from the plow and spade.

Next we visited and walked over the Brushy Creek site on the irregular plateau on top of the bluff lying between the valleys of the Des Moines river and Brushy Creek. This is on the NE. of Sec. 15, T. 97, R. 27, on land belonging to the Des Moines River Improvement Land Co. Both the plateau and the slopes and ravines on either side are heavily wooded.

The group consists of 29 linear and 9 round mounds in "strings" of from 2 to 6 with two round and two linear singles.

The round mounds have elevations of from less than one foot up to two, while the average height of the linear is probably less than 6 inches.

If the mounds of this group compared with those of NE. Iowa in size, it, with its surroundings and outlook from the top of the 200 ft. high bluff, would be a magnificent group to preserve. This is known as the Brushy Creek Mound Group and is accessible from a public road about 1/2 mile East.

Afternoon we hunted over the Engstrom camp(?) site on a 20 ft. high terrace on the N. side of the Des Moines, for field finds and dug two large pits but found only a handful of sherds and a large scraper made from a boulder flake, with a very few bits of charcoal scattered through the black soil to a depth of 30 in. - certainly very little to indicate anything more than transient occupancy.

A few years ago, we were told, a skeleton was uncovered here by the plow and with it was a complete pot, badly broken up, and a sandstone pipe. This site is on Sec. 25, T. 97, R. 26.
One mile west of the Brushy Creek Group is the Hawbaker Group of mounds on the farm belonging to Mr. Wickwire. This group of 12 round and 9 linear mounds is located on the plateau - bluff top - North of the Des Moines River on the SW. SE. Sec. 9, and NW. NE. Sec. 16, T. 67, R. 27. The two most westerly round mounds are separated from the remainder by a small field, but the entire group with the exception of two round mounds on the E. edge of this field, are on level clean pasture with scattering trees. All the round mounds are of good size, ranging from two to four feet high, very symmetrical, and with three exceptions, not damaged by digging. It is certain that none of the burials have been disturbed.

The linear mounds are very distinct in the closely cropped pasture but have a height of not to exceed 6 in. This lack of height is characteristic of the linear mounds of the Boone - Ft. Dodge area of the Des Moines River valley, in contrast to those of the Mississippi valley in NE. Iowa, which were quite uniformly from 18 to 24 in. in height.

Because of the level area on which they are located, this group shows up to good advantage; the view of the wooded Des Moines valley is fine; accessibility by a dug-way from a public road on the river bottom below, 500 ft. south, would not be difficult.

A detailed survey of this group and its surroundings was made on the Oct. 19th and 20th.

On Sec. 15, T. 67, R. 27, near its SE. corner, and 100 ft. S. of Mr. Wickwire's house, is a fine round mound just at the edge of the plateau. A deep ravine separates it from the group on the west.

The diameter is 50 ft., the height 3 ft.

About 40 rods NW. of this mound in the field was a nearly obliterated round mound in which on the 22nd. we dug an 8x8 ft. pit 4 ft. deep, but found no traces of a burial.

Afternoon surveyed a group of 8 large mounds on SE. Sec. 1, T. 98, R. 28, on edge of plateau, overlooking valley of Des Moines river to West. These mounds lie in a N. and S. string nearly touching each other. The one farthest south has a diameter of 65 ft., and a height of 7 ft. It has been extensively excavated but those with whom we talked thought only three skeletons had been found - no relics. The middle mound is 66 ft. in diameter and 7 ft. high. The one farthest North has a diameter of 60 ft., and a height of 5 ft. The town of Lehigh is one mile south of this group.

After survey of this group, looked over a plowed field on NE. Sec. 20, T. 89, R. 27, for field finds. One small piece of pottery and one 2 in. rough knife found. There is a mound 70 ft. in diameter and 3 ft. high in this field 500 ft. south of farm house at end of road 40 rods E. of gravel pit.

On 23rd., surveyed the Eslick Mound Group. At this point the surface rises from the river bottoms with a gentle slope with three intervening terraces up to the level of the plateau on the south of the Des Moines river.

The first terrace is a well defined river valley terrace 1/4 mi. long and about the same average width. On it Mr. Walter Eslick has picked up some pottery sherds but nothing else. He says that all of the eighteen axes in his collection have been found on the plateau or on the slopes of the bluffs leading down to the river. A search of this terrace yielded us only a nice bone awl - no pottery.

On the second terrace - glacial - are two round mounds just East of the 1/8 Sec. corner on the W. side of the SW. of Sec. 15, T. 67, R. 27.
On the third terrace are three round mounds, all of which have been excavated - one forty years ago and the others in recent years. Mr. Ellick says that only skeletons were found in one - nothing in the others. To the west of these are 12 linears averaging 137 ft. in length, 15 ft. in width and 1 ft. in height. The entire group lies in the SW. corner of the SW. SW. Sec. 15, T. 87, R. 27. (See Flat).

On the plateau above, on the NE. NE. Sec. 22, are three linears. To the SW. of the Ellick group on the SE. of Sec. 16, and the NE. of Sec. 21, T. 87, R. 27, on plateau E. of Des Moines river, which here runs north, were a number of linear mounds a few of which are now barely to be made out.

While we were looking over this site, which lies in an open field and pasture, a fine red fox came loping up over the crest of the plateau towards us but as soon as he got our scent turned off to one side - in no great hurry - and down into the valley. One of the men ran out to the edge and had another good look at him.

South of this group on the same section, is a large isolated mound and a group of three, also large, still farther SW, could be seen but were not visited. One of them is known as the Armstrong mound.

On the SW. Sec. 22, T. 87, R. 27, is a long mound through which the road cuts. This mound is 8 in. in height. Not far North on the opposite side of the N. and S. road, is an old church.

On the SW. of Sec. 22, T. 87, R. 27, we were told, was a quite large group, now cultivated out of existence, and on the N. side and close to the E. and W. road across Sec. 20, is a group of 3 round mounds in a pasture. This group is not far East of the W. line of Sec. 20, and has never been disturbed.

On a salient of the plateau on the E. side of the Des Moines River near the Sec. line between Secs. 9 and 10, T. 86, R. 27, was a group of mounds, two large ones 4 ft. high, of which, though badly mutilated, still remain. The remainder lying in what is now an orchard have disappeared under cultivation.

All these mounds and mound groups described, located in what may be called the Boone-Ft. Dodge area of the Des Moines valley, were, with two exceptions, visited, examined, and surveyed as noted. We would recommend for preservation: the group of mounds 1 mi. N. of Leheigh, which may be called the Leheigh Mound Group, because of the large size of the individual mounds; the compactness of the group; the scenic outlook; its nearness to a town and to Deliber State Park; and its accessability.

The Hawbaker (Wickwire) Group, because of the number of large well preserved round mounds and of linear mounds characteristic of the area; for its distribution and location on a perfectly level plateau surrounded on three sides by heavily timbered deep ravines, the one on the south being the valley of the Des Moines river; for its scenic outlook; for its fine scattering shade trees; and for its accessability from a public road 500 ft. away.

The Brushy Creek Group, because of the large number and characteristic layout of its linear mounds; for its scenic location; because of its location in the center of a large forested area of rough land suitable of itself for a forest preserve; because of its accessability.

We were greatly assisted in locating these groups by Mr. E. H. Hawbaker of Sutherland, for which we desire here to express our appreciation.

On Oct. 25, we drove from Sutherland via Boone - crossing the
Northwestern railroad just in time to see the first transcontinental stream lined train pass - to Ames and south through Des Moines to Knoxville. The next morning we returned to the historic "Red Rock" on the Des Moines river.

After Blackhawk was defeated at Bad Axe and his tribe nearly exterminated they were forced to give to the whites a large tract of land in East central Iowa, the west boundary line of this cession began at this "Red Rock of the White Breast".

We learn that "George Harrison, for the government, met here a delegation of the Indians on fixing upon a mound on one of the high red stone ledges north (East) of the river, ran a meridian north and south from thence through the Indian country", for the boundary line.

On the top of the wooded 150 to 200 ft. high bluff, with the river valley on the south and west and deep ravines on the north and east, are five large mounds, one of which, probably No. 4 (See Plat) just above the Red Rock Ledges at the west end of the bluff, was the initial point of this boundary line survey. Across or near the east end of this bluff ran an old Indian trail.

From the now abandoned quarry at the SW angle of the bluff was taken the "Iowa Stone" in the Washington monument at the nation's capital. A survey of the group and surroundings was made. The parties owning the land will have cut this winter the heavy growth of large, mostly elm timber on the bottom land to the south of the bluff, and it is quite likely that another decade will witness the clearing off of the timber on the bluff top and the consequent destruction of the historic mound.

Because of the historic importance of the mounds; beautiful park like wooded area; fine scenic views; the historic old quarry; and its accessibility, immediate steps should be taken to acquire for the State, the entire Red Rock bluff.

Our next drive was to Burlington, working out of which surveys were made of the Patterson-Cornell and Malchow groups. The Patterson-Cornell group of thirteen mound and one long mounds are located along the bluff top about five miles south of the business center of Burlington and about 1/4 mile from highway No. 61.

Along the bluff tops between Burlington and the mouth of the Iowa river a distance of eighteen miles, besides the Malchow Group, there are over one hundred mounds - singles and groups of two to four. A day was spent in looking some of these over to see if any should be considered for preservation, but no surveys were made.

The Malchow Group, twelve miles north of Burlington and one north of Kingston was surveyed on the 20th of Oct.

This fine group of forty-nine round and ten linear mounds is situated on the bluff top south of the center of Sec. 36, T. 72, R. 2 in Des Moines County.

Because of the large number; size and compactness of the mounds; their undisturbed condition; its park-like level area of scattering trees; magnificent scenic outlook across the wide bottom lands of the Mississippi river to the Illinois bluffs miles away; its accessibility from a primary highway; and nearness to one of the large cities of the State, we regard this as far and away the outstanding group of burial mounds in Iowa.

The acquisition of a tract of seventeen or eighteen acres would include the mound group and all the heavily wooded bluff side to the East at the foot of which runs the highway. The matter of its purchase should be taken up with the Commercial Club or some other organization of Burlington.
Proceeding the survey of the Mabeyow mounds, on October 26th, and 27th, spending the night at Wapelle six miles northwest, we made surveys of the Toolesboro and Hook mound groups.

Just outside the limits of the little old town of Toolesboro on the bluff top north of the opening of the valley of the Iowa River into that of the Mississippi, is a group of six unusually large -fled Iowa- mounds that have attracted more notice and are better known to Archaeologists than perhaps any other group in Iowa.

About the year 1875, Mr. W. H. Pratt and Mr. Charles E. Harrison for the Davenport Academy of Sciences, excavated three or perhaps four of this group which he says consisted of twelve mounds and in one of which—the 3rd. one opened with the help of teams and scrapers, they found 2 curved base effigy (bird) pipes and 4 copper axes. One effigy (bird) pipe and a copperawl were found in the second mound. The finding of curved base pipes and copper rails or axes indicate that these mounds were built by people of the Hopewell culture.

On making a survey of this group, we were able to find but half of the number found by the Pratt party, these lay along the edge of the bluff overlooking the valley of the Mississippi, or as Pratt says, of the Iowa.

The three most northerly, numbers 4, 5 and 6 of our survey, have been almost leveled by excavation. In the next one to the south, No. 2, a cistern has been dug in the center and a root cellar, now used for a garage, in the southeast side.

Back of the yard surrounding the last house to the north in Toolesboro are numbers 2 and 1, their perimeters touching the edge of the bluff. Number 1, the most southerly of the group, has a diameter of 70 and height of 6 ft. Mound No. 2 has a diameter of 80 and height of 8 ft.

The remaining six mounds of this group as found by Pratt, lay, or at least four of them did, 3/4 mile south of Toolesboro, all of which were excavated the same year by local parties, using teams and scrapers. From these were taken a copper "axe" (selt); five copper awls; a curved base pipe and a considerable quantity of broken pottery.

Mounds No. 1 and 2, are intact except for shallow pits less than one foot deep in the center.

Because of their history; the culture which they represent; their size; scenic outlook; and their location right on a public road, every effort should be made to preserve the remaining two fine mounds of this group. They are located on or near the NE corner of Sec. 10, T. 73, R. 2.

The Hook Group of sixty-nine low burial mounds, only nine of which have a height of 24 in. or over, scattered thickly over eight acres of level plateau or bluff top about one mile north of the Toolesboro Group. A field 24 rods wide separates it from the public road. The area occupied is in pasture with scattering shade trees and only one mound has been excavated.

About one mile to the north on the opposite side of the same road which here runs along the edge of the bluff, is a similar group of about the same number of mounds located on a piece of brushy ground from which the timber was cut some years ago.

Pratt says that at about one-fourth mile northwest of the Toolesboro mounds, was an embankment enclosing fifteen to twenty acres, of an octagonal form on which many small triangular unnotched arrow heads, scrapers and fragments of shell-tempered pottery, were found by his party on this site.
From Wapello we drove to Mt. Vernon via Muscatine and Davenport, at which latter place Mr. Putnam kindly showed us the pipes and axes taken from the Tocolesboro mounds.

On Nov. 1st, we surveyed the Burge mounds, a procession of burial tumuli lying along the peak of an elongated, rounded glacial hill along the edge of the bottom lands and on the north side of the Cedar River.

Located on Sec. T. 92 R. 5, about 3 miles southwest of Mt. Vernon. Highway No. 261 crosses the Cedar about half a mile to the south and "The Palisades" State Park is up that river three and a half miles by road.

This is a fine undisturbed group, ranging in diameter from 20 to 40 ft., and in height from 8 to 36 inches. The hill now is, and probably will remain a closely cropped pasture with many scattering trees of several species - white oak, basswood, sugar maple. There is a fine outlook over the surrounding fields and the river valley.

Because of its nearness to the Palisades - within a quarter of a mile of a road which could be graveled, making a short cut from #261 to the park, this group should be made an annex to the larger park.

Travelers north on #261, desiring to see the Palisades, could take this short cut and visit the mounds as well as the park, returning by a direct good hard surfaced road to #261 at Mt. Vernon, or, if coming from the north, reverse the route.

After survey of Burge Mound Group, we returned home via Makoqua and Dubuque for election.

After election worked on plats while field workers visited sites on Upper Iowa river where excavations were made and completed some unfinished restoration work.

From Nov. 7th to 10th, inclusive, we worked on survey of effigy mound group, north of Marquette, returning to Waukon for over night. A very complete survey was made of this group and some time spent in McGregor. An effort to get an organised effort started to raise funds to purchase this site.

This group of ten "bear", and three "bird" effigy mounds, with two linears, is located on the bluff top over 200 feet above and one-fourth mile west of the Mississippi River, surrounded by precipitous bluffs Separated by deep heavily wooded ravines. It is located on Government Lot 3, Sec. 3, T. 95, R. 5, now controlled by a trust under the direction of the court, and Government Lot 4 adjoining, in the same section, belonging to Mr. Lew Liebhardt of Denver, Colorado. Lot 4 is covered with a heavy growth of white and red oak, sugar maple, basswood, white birch, poplar, ironwood, red cedar and many species of shrubs, as is also the rougher part of Lot 3.

The north part of the group, in Lot 3, lies on a 70 ft. high spur of St. Peter sandstone running out northward on to the bluffs of Oneota terrace, from the higher ground to the south. The north end and east side of this spur is almost vertical, the north being covered with white birch beneath which in perpetual shade, is a luxuriant growth of ferns and mosses. The Old Military trail to Ft. Atkinson, coming up a steep ravine from the river, winds around this spur. Many and many a six mule drawn army wagon loaded with supplies for the fort has passed over this trail when all about was yet "Indian country".
From the sandstone spur is a procession of the great earthen animals up the gentle wooded slope on Lot 4, almost to the general level of the upland prairie, and just where the old trail leaves the lot are two of the flying birds - night-hawks perhaps.

The bear mounds are from seventy-five to one hundred feet in length, an average of 87 feet, with an average body width of 35 feet and a height of from two to three feet. The hind legs show a tendency to curve forward, quite decided in some cases, but the front ones are straight. Both decrease in height almost to the vanishing point at the (feet) end. The average length is 55 feet for the hind and 54 feet for the front, with a width next to the body of 24 feet for the front and 25 feet for the hind.

The three flying bird effigies have an average length of head, body and tail - a conventional form - of 18 feet. The extended rapier wings have an average distance from point to point of 64 feet. The height at the junction of wings and body is 18 inches.

All the bears lie on the right side and all are headed in a southerly direction. The birds also are flying south.

The two linear earthworks at the north end with lengths of 198 and 92 feet, respectively, a width of 19 feet, and height of 2 feet, lie in a northwest - southeast direction along the ridge of the spur.

With one trifling recent exception, no excavating has been done in these mounds, they are intact.

Twenty-six acres from the East part of Lot 5, extending from the west side of the sandstone spur, East to the river, including all the mounds on that lot and the Old Military Road, can be purchased for $25.00 per acre. A move is now on foot to raise the money to buy this. What the Liebhardt land can be bought for, cannot be learned. An effort will be made to induce the owners to donate it to the State.

The holders of Lot 3, desire to dispose of the property. Should some enterprising farmer buy this land, one of the first things he would be likely to do would be to plow up the top of the sandstone hill which is good corn land and the mounds on that would be destroyed. The State of Iowa cannot afford to let this group, the most important in the State, go that way.

On November 12th, we left Waukon again to do additional excavating at the Broken Kettle Mound, the purpose of which was to determine if the culture of the lower strata, next to the natural flood plain surface, contained the same culture as those at the top of the mound six or seven feet down. A practically continuous trench five to seven feet wide was dug for the full depth of the mound earth from the center to circumference in the southeast part of the mound, but no difference was found in the culture. This work was completed on the 23rd, and on the 26th we made a survey of the Caldwell mounds.

This compact group of eleven linear mounds is located twelve miles southeast of Iowa Falls on the SE. Sec. 6, T. 86, R. 19, on the bluff top south of the Iowa river, in Hardin County.

This fine group of all linear well grassed over mounds on perfectly level pasture with scattering trees and some brush, in lengths of from 66 to 115 feet, and heights of from 18 to 22 inches, with the
160 ft. deep valley of the Iowa river on the north and deep ravines East and West, presents an attractive nearby appearance and a fine scenic outlook.

A public road lies 1/4 mile south. We were unable to get either a price or option. The owner is Mr. Frank Sheldon, Eldora, Iowa.

After completing this survey, we drove to Waukon, reaching there the same evening, completing our state wide work.
Altogether surveys were made of twenty-one Mound Groups:

- Blood Run
- Martin Johnson
- Paulina
- Lewis Martin
- Hill
- Webb
- Patterson
- Quimby
- Cross
- Broken Kettle
- Lehigh
- Hawbaker
- Brushy Creek
- Elish
- Caldwell
- Red Rock
- Patterson-Cornell
- Malchow
- Toolesboro
- Hoek
- Burge
- Jennings-Liebhardt

Lyon County
O'Brien
O'Brien
O'Brien
O'Brien
O'Brien
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Of these, we have selected because of their location in different parts of the State; to show the characteristics of mound groups in the particular locality; compactness and number of mounds in group; size of individual mounds; state of preservation; character of area on which located and surroundings; scenic outlook; and accessibility, we have selected the following which we recommend for acquisition by the State in the order named:

1. Jennings - Liebhardt
2. Malchow
3. Blood Run
4. Toolesboro
5. Red Rock
6. Brushy Creek
7. Burge
8. Caldwell
9. Lehigh
10. Wittrock Enclosed area.

The Fish Farm Group in Allamakee County has been purchased and is now held in trust for donation to the State.

The Turkey River Group in Clayton County has also been purchased by parties in Dubuque, we understand also for donation to the State.

The owners of the Toolesboro group listed above, also contemplate a gift of the same to the State.

Except in one instance, that of the Wittrock area, we have been unable to get definite prices on sites quoted to us by the owners, or to get options. In the case of several the owners are non-resident.
Blood Run Mound Group.

This fine group of fifty-two large burial mounds scattered irregularly for half a mile along the crest of the terrace spur, with the valley of the Big Sioux and bordering Dakota bluffs on the West, and that of Blood Run and the Iowa hills on the East, must have been before the white men came, without a peer in Iowa. Even now, with a part under cultivation and some of its mounds mutilated by relic hunters, it still stands unequaled in the State as an imposing monument to an unknown people, of whose history we in all probability will never know more than that these heaps of earth cover all that remains of them.

Briefly the following recommend this group for preservation: large group; large mounds; large area; some mutilated, but with three or four exceptions, easily restored; slightly location along crest of 60-70 ft. high terrace between two valleys; fine scenic outlook; only worth while group of prehistoric earthworks in northwestern Iowa.

Between 60 and 70 acres of the terrace spur should be acquired. Only the railroad right of way, to cross which an under crossing could be made, lies between the mound area and a highway.

Unable to get prices for which it could be bought, or options. There are four different owners.

If entire area were fenced and put into pasturage, no maintenance, except to guard against excavations, required.

It is important that immediate steps be taken to acquire this mound group. The sooner cultivation is stopped, the better.

If made a preserve, it would have a recreational as well as historic and scenic value. People of the prairies of Dakota as well as Iowa, resort to the Big Sioux, where there is native timber, for picnics and fishing. Often it is difficult to get permission to go in on private lands.
COPY NOT

SUITABLE FOR

MICROCARDING
Martin Johnson Mound Group
The Broken Kettle Mound which has received considerable newspaper notoriety, is a heap of camp refuse and earth located on the south side and at a bend of Broken Kettle Creek, where this stream, coming from the north, makes an abrupt turn to the west on the farm belonging to Mr. E. H. Mosher, and near the 1/4 section corner on the west line of Section 3, Township 90, Range 48, West of the 5th P. M., in Hancock Township, Plymouth County, Iowa.

Broken Kettle Creek here flows in a self eroded ditch in its flood plain, forty feet wide at the top and twelve feet deep - a stream ten feet wide and a foot deep. Its flood plain, with the first and only terrace, is something better than a half mile wide.

On either side the picturesque, mossy hills covered with short prairie grass, rise in jumbled heaps to a height of one hundred and fifty or more feet.

The winding stream, fringed with box elder, elm and cottonwood trees, empties into the Big Sioux river a mile to the Southwest, along which is a very considerable growth of bottom-land timber.

With its undoubted abundance of game - buffalo, elk, deer and grouse on the prairies, wild turkeys along the timber fringed streams, and fish in the nearby river, this place must have formed a very attractive gathering place and habitation for a prehistoric people.

The average diameter of the mound may be said to be three hundred feet and its height at the center, eight feet.

Into its northwest part the creek has cut out a section like a huge piece of pie, its apex reaching almost to the center of the mound, or, possibly it was built, or rather accumulated, as we now see it.

On it for many years has stood a much dilapidated cow and horse barn on the site of an older one. As the mound shows no wearing away around this barn it has probably been reduced but little in height, but the trampling of cattle has undoubtedly spread the sides out making the apparent diameter somewhat greater.

The discovery years ago that this mound contained "Indian Relics" was followed by desultory digging and considerable pottery sheds and some other material was found and carried away, of which Morningside College at Sioux City, secured a part.

Into the northeast part, Mr. Mosher dug a "pie" site some three or four years ago and in the excavated earth was found much broken grit tempered pottery, animal bones - principally of the buffalo - bone awls and a few other implements of bone, red stone used for paint, and rarely other artifacts, the absence of chipped material and of celts, axes or mauls, was noticeable.

A nearby farmer, a life-long resident, told me that a Mr. secured an appropriation by the legislature or from other State source, to explore the mound and that with a force of laborers "he dug a trench entirely across the mound through the barn". Dr. Keyes a few years ago dug a little in the mound and secured some additional sheds from Mr. Mosher in addition to what he himself may have found.
On Sept. 27th, and 28th, and again on Oct. 12th, and 13th, we with the help of two field workers, Fred Orr and Harrison Toney, dug a total of five pits, 5 by 5 feet, in the east part of the mound at about fifty feet from the center, to a depth of six feet.

The material encountered was principally black bottom land soil with which was mixed streaks and lens-shaped layers of ashes and areas of ash-colored soil; an occasional thin layer of yellow or greenish yellow clay, some running out horizontally, in which was found at any level, broken buffalo bones; a few bones and teeth of elk; a few bones of birds and fish scales; many pottery shreds of grit-tempered material including many pieces of necks and rims, decorated with patterns made in incised wholly straight lines in great variety.

Quite a few bone awls and bone implements for making the incised lines on pottery, as also a few that appear to have been used for rubbing or smoothing pottery, were found, in addition to which were some odd or unique pieces, as tips for ends of bows, a lens-shaped object, a large celt and others.

The pottery ranged in size from small nearly globular vessels less than four inches in diameter of fine clay with a scarcely discernable tempering of very fine sand, baked very hard, and the surface usually black and highly polished, up to those that, judging from size and shape of shreds, must have been eighteen inches in diameter. The bodies, necks and rims of these larger vessels were of an endless variety of shapes, the bodies usually being without decoration.

The lower part of the larger undecorated bodies appears to have usually approached the hemispherical in shape with a shoulder, bending quite abruptly inward to connect with the neck. Neck and rims of these were of an almost endless variety of patterns, usually decorated.

One type of decoration of which we found a number of samples, consisted of parallel incised lines 1/16 to 1/8 inch apart running entirely around the neck on which had been superimposed two to four diagonal incised straight parallel lines running diagonally from the rim down to the base of the neck and then up again, forming a sig-sag pattern entirely around it.

Another type of vessel of which we found a sufficient number of shreds to establish definitely the shape, had a globular body with a low turned-out neck surrounding a rather small orifice as compared with the other type of vessel. Except for a small part of the bottom, this type was completely decorated with closely parallel bottom incised lines running entirely around body and neck.

Still another type of vessel, without decoration was shaped like a wash basin with a flattened bottom. Of this type we secured one whole vessel except for a small triangular piece broken out of one side, and about one-fourth of another.

The wholly decorated type of pottery is also characteristic of the Mill Creek culture, and other types of form and decoration
appear to be duplicated at both localities. Small conventionalized heads of animals and birds, broken off or attached to the rims of pots for ornament or for handles are found at both localities.

Then the highly polished, lens-shaped, objects of diorite, the prevalence of bone implements and the almost entire absence of chipped flint - except a few small triangular notched arrowheads, seem to indicate that the people that occupied the camp sites on the Little Sioux and its tributaries between Lynn Grove and a point some ten miles southwest of Cherokee, were one and the same as those that built the Broken Kettle Mound.
Red Rock Mound Group.

Group of five good mounds, somewhat mutilated but can be restored.

The best reason for acquiring this group and surrounding area, is its historical value. After the Blackhawk war, the Sacs and Foxes were forced to give up a large tract of land in East central Iowa, extending from the Mississippi River west to "The Red Rock of the White Breast" on the Des Moines River. In 1843, George Harrison, for the government, met the Indians at this rock, and after selecting a point "near the summit of the bluff and within some fifty feet of the brink of the cliff", "established the starting point of the 'Boundary Line' by erecting a piece of timber 12 inches square and 14 feet long - around the base of this timber raised a mound of earth and soil 10 feet square at the base and 8 feet high - on this timber placed a cross-piece - the arms of which point north and south". Two bearing (witness) trees were also marked. From this initial point he ran a meridian north and south for the west boundary line of the tract.

From the old quarry at the SW angle of the bluff was taken the Iowa Stone in the Washington monument.

The whole bluff top, surrounded, except at the northeast corner, by deep ravines and the valley of the Des Moines river, is an open park on which are still standing some of the "primeval forest".

The scenic outlook, the historical background together with the fine park-like area, and accessability from a State road, make it very desirable that the State should acquire at least a twenty acre area and right of way from public road.

An old trail which afterwards became a much traveled stage road and over which supplies were hauled and dragoons marched to Fort Des Moines - still plainly to be traced - would cross this twenty acre area.

It should be possible to buy this for from $800.00 to $1000.00.

Dimensions of Mounds of Red Rock Group.

<table>
<thead>
<tr>
<th>Number of Mound</th>
<th>Diameter</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60 ft.</td>
<td>36 inches</td>
</tr>
<tr>
<td>2</td>
<td>50 &quot;</td>
<td>24 &quot;</td>
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<tr>
<td>3</td>
<td>60 &quot;</td>
<td>24 &quot;</td>
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<tr>
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<td>50 &quot;</td>
<td>24 &quot;</td>
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<tr>
<td>5</td>
<td>60 &quot;</td>
<td>36 &quot;</td>
</tr>
</tbody>
</table>
The Malchow Mound Group.

Situated on the level top of a promontory in the long line of bluffs running north and south to the limit of visibility, bounding the corn fields of the wide and rich bottom lands of the Mississippi, is the outstanding group of burial tumuli in Iowa, - the Malchow Mound Group.

The owner of the farm on which they lie, Mr. Lewis H. Malchow, has cherished and protected these burial places of an ancient people to whom the rugged hills with the prairies and groves stretching far to the west, and across the wide valley to the misty outline of the land toward the rising sun, was home, and now they stand, complete and undisturbed, an ever enduring monument to those that built them.

Lying in a compact group - often overlapping each other - along the flattened crest of a narrow divide between the valley of the big river and a deep lateral ravine, that runs to a point at its south end, and occupying around nine acres in area, the symmetrically rounded gravey heaps, some higher than a tall man, there among the scattering shade trees with wooded valleys to east and west, present a sight well worth going far to see.

The wood thrush sings down on the forested bluff side, a tanager flashes through the trees, a blue jay screams or a crow winging his way far overhead calls down. A downy woodpecker is at work on a dead limb, we glimpse a squirrel hunting for acorns, or the curious cattle come up to look over the strangers. It is quiet and peaceful here where rest these unknown people. Then we look far over the beautiful land that, teeming with game and all else that they could desire, was once theirs, and try to envision them as they lived and went about their daily occupations. Perhaps the same desires, the same passions, the same strivings in a measure motivated them as they do us. But we can not know, they left us no record, even no tradition, only the silent heaps around us are left.

Truly this is a historical spot. It should be acquired and protected by the State for the use and benefit of the people for all time. Twenty acres would include, besides the mound area, the wooded bluff side down to the public highway at its foot, and up which a hill side road could be made to its top.

Its transfer would detract nothing from the value of the farm as a farm, - only a few less acres - and the owner is desirous of having the group become the property of the State. That he can afford to donate it is doubtful, but we believe that he would part with it for a very reasonable price.

If either the Rotary, the Kiwanis or Lyon Clubs, or the Burlington Chamber of Commerce, would take up the matter of raising by contribution the necessary amount to buy, we believe it could be done easily. $5.00 each from two hundred business men of the city, we believe would buy this acreage which we have named - all that is necessary or even desirable.

Attached is a plat made from a detailed survey of the mounds and a reconnaissance survey of the surrounding area, and also a list giving the diameters.
Malchow Mound Group
Burge Mound Group.

A typical group of mounds of the area - no other group recommended in the valley of the Cedar River; well preserved condition; good size of group; proximity to State Park - The Palisades, 5-1/2 miles; nearness to large city, Cedar Rapids, about twelve miles NW. and to State highway, 1/2 mile; nearness to College - 3 miles; easy accessibility; good scenic outlook.

The land is now in pasture with scattering shade trees - has never been in cultivation.

The entire hill, the area of which is approximately 10 A., as shown on plat in crayon lines, should be the least acreage acquired to which should be added right of way for access S to public road, approximately 1/4 mile.

Owner will not permit excavation.

Unable to get any information as to value or possibility of acquiring or securing long time option. Unable to give an appraised value.

If left as above, will require practically no maintenance to preserve mounds and land.

Dimensions of Mounds of the Burge Group.

<table>
<thead>
<tr>
<th>Mound No.</th>
<th>Diameter</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
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<td>40&quot;</td>
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<td>2</td>
<td>35&quot;</td>
<td>24 &quot;</td>
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<tr>
<td>3</td>
<td>40&quot;</td>
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<td>7</td>
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<td>36 &quot;</td>
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<td>15</td>
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<td>18</td>
<td>30&quot;</td>
<td>20 &quot;</td>
</tr>
<tr>
<td>19</td>
<td>30&quot;</td>
<td>24 &quot;</td>
</tr>
</tbody>
</table>
PLAT
OF
MOUND GROUP
Chen隔离点
On Sec. 1, T. 52 N
North Side Cedar River
S NW of Mt. Vernon, 2 NNE of alfalfa
Linn County. Surveyed by Wilson Dec Nov 1924
Note: Half of Terraces of Cedar River

10 Acres

10 Acres
The Caldwell Mound Group

These mounds located on the level bluff top south of the Iowa river about twelve miles southeast of Iowa Falls, on NE. Sec. 6, elevon T. 85, R. 19, in Hardin County, form a compact group of nineteen unusually good, well preserved linears. The average height is over 20 in. Flat is attached.

North is the 200 ft. deep valley of the Iowa river, while on the east and west are deep tributary ravines.

All of the SW. NE. Sec. 6, south of the Iowa river approximately 25 acres together with a right of way to the public road one-fourth mile south, should be purchased.

Because this is the only good group in North central Iowa, and near to two large towns, from which it can be reached by a public road now graveled to within one mile, and because of scenic beauty of surrounding country and easy accessibility, this is a very desirable group to acquire. At present the area is in closely cropped pasture with some brush and scattering small trees.

Except to grade a right of way - about one day's work with a tractor and grader outfit, fence the area and post signs, no other immediate expenses would be necessary. The only maintenance expense would be to make provision to keep the lot closely pastured.

We have been unable to get a reply from the owner to our request for information as to possibility of purchasing or price.

It is entirely possible that local interest in the matter of acquiring this group could be worked up in Iowa Falls or Eldora, or both.
### Caldwell Group of Linear Mounds

<table>
<thead>
<tr>
<th>No.</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
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</thead>
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<td>18 in.</td>
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<tr>
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<td>91 &quot;</td>
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</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Toolesboro Mound Group.

Originally twelve mounds - eight above Toolesboro, four below. Seven of them, including the four below the town, excavated and not restored, by members of Davenport Academy of Sciences and other parties and in which curved base pipes and copper celts were found, establishing their erection by people of the Hopewell culture, the center of which was Ohio.

Because of this historical association; size; excellent state of preservation; smallness of area to be maintained; situation alongside a public road which 400 ft. away connects with primary road along Mississippi river valley from Burlington to Wapello; and because of fine scenic outlook, and because of its historical association, the two remaining practically undisturbed mounds, No. 1 and 2, should be preserved. Not to exceed two acres along the bluffs edge and adjoining the highway need be acquired, this might include No. 3 if desired.

A part of this Mound group will very probably be presented to the State in the near future by the owners. Now in open commons.

If acquired should be fenced and some one found in village to keep mowed and see that mounds are not dug into by relic hunters. No other maintenance required.
PLAT OF
TOOLSBORO MOUND GROUP
North of NW Corner of Town of Toolsboro
Louisa County, Iowa.
Shallowoped Pits in Mounds 1 and 2 have
done more damage to the center of Mound
3 than any other and a fill covers in area.
Excavations made years ago cut all but de-
stroyed the remaining terra.
Scale 1 inch = 100 ft.
Surveyed by Elizabeth Orr
Dec 22, 1930.
Elevation of Mound No. 1: 6.0 ft.
Elevation of Mound No. 2: 5.4 ft.
Elevation of Mound No. 3: 6.0 ft.
Hook Mound Group
The Wittrock Camp Site.

In the southeast corner of O'Brien, the northwest corner of Buena Vista and north and south through the center of Cherokee counties, along and in the valleys of the Little Sioux, and its tributary streams, Waterman and Hill Creeks, are a number of rather unusual camp sites. These consist of an accumulation of camp refuse mixed with earth from the surrounding nearby, but sometimes distant, natural surface. These sites are roughly circular and have diameters of up to four hundred feet. It is quite likely that they were originally started on "high points" on the bottom lands and terraces, on which during long occupancy, sometimes as much as five feet - and in the Broken Kettle Mound twelve miles north of Sioux City, eight feet of "mound earth" and refuse has been built up.

Shetrone in his book, "The Mound Builders", on page 184, offers what is probably the correct explanation of how this great accumulation of earth is made. He says:

"Instead of collecting and removing the garbage, they prefer the much more laborious method, when the accumulation becomes so great as to be unbearably obnoxious, of carrying earth and burying the debris where it lies scattered about. As a result of this practice it is apparent that the level of the village is raised at some points as much as several feet above the original surface of the ground".

Because of this custom mound sites of this type are rich in material showing the culture of the people that made them.

It is surmised that the sites in the area named were possibly surrounded by an embankment supporting a palisade. But as all these with the exception of one, are now in cultivated fields, all traces of an embankment, if there was one, have been destroyed, and no remnants of palisade posts have been encountered in making excavations.

The one exception is the Wittrock site on the northwest quarter of Section 11, T. 94, R. 59, O'Brien County. This is a roughly rectangular area surrounded by an embankment with a shallow ditch on the outside from which the earth used to build it was evidently obtained. The top of the embankment has now an elevation of from two to three feet above the bottom of the ditch.

This site alongside the W. line of Sec. 11 and its SW corner cut off from Waterman Creek, at the time of our visit, Oct, 19, 1934, was covered with a dense growth of grass, prairie flowers and weeds. Courses and distances around the top of the embankment were run and levels taken at the corners, but it was impossible to make a survey of the interior which is said to be covered with hut pits.

We had hopes to go back later in the fall and burn over the area but because of continued wet weather, were not able to do it.

Mr. Wittrock, the owner, is asking $1500.00 for five acres and a right of way along the west line of Sec. 11, to the northwest corner from which a right of way, 12.22 ch. North to the highway would have to be purchased from another party. This price we consider prohibitive.
The Belick Mound Group.

This group lies on two terraces of the glacial drift into which the Des Moines River has cut its valley, and on the south side of that stream. At the point where they are found the surface of the bluff-side rises from the river bottom lands with a gentle slope with three intervening terraces up to the level of the general upland plateau.

The lowest terrace is a well defined river valley terrace 1/4 mile long and about the same average width. On it Mr. Walter Belick has picked up some pottery sherds but nothing else. He says that all the eighteen axes in his collection have been found on the plateau or on the slopes of the bluffs leading down to the river - field finds.

On the second terrace - glacial - are two round mounds just east of the 1/8 Sec. corner on the W. side of the SW. of Sec. 15, T. 67, R. 27.

On the third terrace are three round mounds, all of which have been badly mutilated - one forty years ago, and the others in recent years. Mr. Belick says, that only skeletons were found in one - nothing in the others.

To the west of these are twelve unusually good, undisturbed linear mounds, averaging 157 ft. in length, 16 ft. in width and 1 ft. in height.

The entire group lies in the SW corner of the SW. SW. Sec. 15, and NW. NE., Sec. 22, T. 67, R. 27.

On the plateau above and to the southwest, on the NE. NE., Sec. 22, are three low linear mounds. Access to this group would be from the highway around 1/4 mile Southeast.
Survey of Witrock Earthwork NW NW Sec. 11, T. 94, R. 39 W.

Stake #1 at cen. of SE cor - top of embankment
E to cen. of ditch .25 ch
S " " " " .35 "
N 11'-50' W 2.78 ch. (var 5'E) to Stake #2
at cen. of top of embankment
at NE cor.
N to cen. of ditch .20 ch
E " " " " .24 ch
S 78 W 1.65 ch. to Stake #3 in cen. of top of embankment
at angle
N to cen. of ditch .25 ch.
S 62-1/2 W .65 ch. to Stake #4 in cen. of top of embankment at NW cor.
S 60 W to cen. of ditch .32 ch.
" " natural level .45 "
" " edge of terrace 1.00 ch.
N to cen. of ditch .28
S 3-1/2 E 1.02 ch. to Stake #5 in cen. of top of embankment
W to cen of ditch .38 ch.
(From here no ditch - natural slope from top of embankment to edge of terrace and down to its foot.)
S 21 E .76 ch. to Stake #6 in cen. of top of embankment
at angle
SW to edge of terrace .30 ch.
S 48 E 1.24 chs. to Stake #7 at SW cor in cen. of top of embankment
W to foot of embankment and edge of terrace .26 ch
S to cen. of ditch .48 "
N 72 E 1.61 to Stake #1

From Witrock's W. line at NW cor. of Enclosed Area, W. along Sec. line 17.47 ch. to NW cor. of his farm at cor. to Secs. 2, 3, 10 and 11, T. 94, R. 39, and continuing W. along Sec. line 25.23 ch. to public road.

Levels of Wittrock Earthwork.

<table>
<thead>
<tr>
<th>Rod reading</th>
<th>Elev.</th>
</tr>
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<tbody>
<tr>
<td>At Stake 1 SE cor.</td>
<td></td>
</tr>
<tr>
<td>bottom of ditch E</td>
<td>58</td>
</tr>
<tr>
<td>&quot; &quot; &quot;</td>
<td>69</td>
</tr>
<tr>
<td>&quot; nat. level E</td>
<td>58</td>
</tr>
<tr>
<td>&quot; 20 ft. NW. inside embankment</td>
<td>35</td>
</tr>
</tbody>
</table>

At Stake 2 NE. cor.
<p>| bottom ditch E | 69 | - 22&quot; |
| &quot; &quot; &quot; | 65 | - 23&quot; |
| &quot; 30 ft. SW. inside embankment | 55 | - 16&quot; |</p>
<table>
<thead>
<tr>
<th>Stake</th>
<th>Description</th>
<th>Rod reading</th>
<th>Elev.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>angle in embank.</td>
<td>48&quot;</td>
<td>- 37&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; bottom of ditch W</td>
<td>65-</td>
<td></td>
</tr>
<tr>
<td>Stake 4</td>
<td>NW cor.</td>
<td>37&quot;</td>
<td>- 32&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; bottom of ditch W</td>
<td>69</td>
<td>- 29&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; &quot; &quot; W.</td>
<td>66</td>
<td>- 20&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; natural surface W</td>
<td>57</td>
<td>- 2&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; 25 ft. SE inside embankment</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Stake 5</td>
<td>angle in embank.</td>
<td>39&quot;</td>
<td>- 24&quot;</td>
</tr>
<tr>
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<td>&quot; bottom of ditch W</td>
<td>64</td>
<td></td>
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<td>Stake 6</td>
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<td>- 25&quot;</td>
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<td>&quot; bottom of ditch W</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Stake 7</td>
<td>SW cor.</td>
<td>36&quot;</td>
<td>- 38&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot; bottom of ditch S</td>
<td>74</td>
<td></td>
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</tbody>
</table>

From cor. to Secs. 2, 3, 10 and 11, T. 94, R. 39 W:

- Along Sec. line to intersect creek: 1.00 ch.
- " " same: 9.14 "
- " point from which stake #4 at NW cor. of Enclosed Area bears East .94: 17.49
The Brushy Creek Mound Group

This Group is located on the irregular terrace - bluff top - area lying between the Brushy Creek at its confluence with the Des Moines River at 20 miles SE of Fort Dodge. The plateau as well as the bluff sides are heavily timbered, making the area desirable for a forest reservation as well as a Mound Group preserve.

This is the largest and best - only two or three of the mounds have been dug into - of this type of mound group, one of the two characteristic of this part of the Des Moines valley. A plat is attached.

The land on which this group is located belongs to the Des Moines Land Improvement Company, and doubtless could be purchased at a fair price.

Because this might be considered a type group; because of its large area and rough, broken and wooded surroundings, suitable for a natural forest preserve, a very considerable area, 80 to 160 acres, should be acquired. It is now an unpastrured wildwood.

There is considerable local interest in the numerous mounds along the river, but we doubt if it amounts to more than a general desire to see them preserved.
The Leheigh Mound Group.

There appears to be on the plateau-bluff tops—on either side of the Des Moines River, between Ft. Dodge and Boone, two types of mound groups. One consisting of a few large—5 to 8 ft. high—mounds in close proximity and without accompanying linear. The other of somewhat scattered round mounds around 2—3 ft. in height, with which are associated many very low—4-8 inches—linear, usually arranged in strings.

The Brushy Creek mounds are an outstanding illustration of the latter. The Biberg; the lone mound on Sec. 20, T. 87, R. 27; the Armstrong mound on SE. Sec. 21, T. 87, R. 27, and the Leheigh Group about one mile north of Leheigh on Sec. 6, T. 88, R. 27, of the former.

This Leheigh Group of three mounds, 5, 6, and 7 ft. in height, nearly touching each other, is located on a bare pasture spur of the bluff on the East side of the Des Moines river, about one-fourth mile over perfectly level ground from a public road.

Excavation has been done in all of this group and some restoration would be necessary. The land is now in closely cropped clear pasture.

One or two acres and 1/4 mile right of way for access would be the land required for a preserve. We were unable to get a price.

Except for restoration and fencing, no other immediate expense needed.

Only maintenance would be close pasturing.
PLAT OF
PATTERSON FARM
MOUND GROUPS No. 14-2
On Plateau Between Waterman
Creek and Little Stone River
On NESE Sec. 23 T 34 R 39
C. Brier County
Scale 1 in. 194 ft.
Survey by Edison Orr
Sept. 13 1942
PLAT of Four Nearly Obliterated Mounds on E. End of Hill Terrace on the SW of Sec 24, T. 44, R. 39 and SE of R.P. Gravel Pit. This 60 ft. high Terrace a Gravel Train of the Wisconsin Glacier Survey by Ellison Orr Sept. 4, 1904.
plat of
lewis martin
 mound group
 sw ne sec 14 t. 94, r. 30
 on plateau, e side waterman creek, obrien county
 survey by ellison orr, oct 4, 1934
 scale, 1 in = 80 ft
PAULINA MOUND GROUP
on West Bank of Mill Creek, One Mile N. of Paulina, O'Brien County.
Survey by Ellison Orr, Sept. 4, 1920.
Scale in Feet.
These Mounds proposed Siouan.
GROUP
of
SMALL LOW MOUNDS
ON HIGH BLUFF
S. of Confluence of Rock
Creek and Little Sioux River
On SW SW Sec. 3 T 30 R 40
2.4 mi. W. of Quay, Cherokee
County.
The finest looking point in the
Valley of the Little Sioux
Section by Ellison Orr Oct 14, 1904.
This survey was made by measuring all bluff tops, especially the salient points, and all terraces.

The two field workers would park their car in places along the nearest highway in condition to permit travel over it, and walk out across the fields to the edge of the bluff, and then on foot work up and down the river. Due to bad roads and the icy sides of the river, the work was laborious and slow. When too, caution and circumspection was necessary to avoid running into the oil the surveyor Illinois stills in operation in the out of the way places where they had to go. At least one very unpleasant encounter was made with a bunch of four "tough guys".

REPORT

Of Reconnaissance Surveys
along Bluffs of Mississippi River
from Pike's Peak to Green Island,
by Fred Orr and Harrison Toney,
from Feb. 1st, to Feb. 25, 1926.
This survey was made by inspecting all bluff tops, especially the salient points, and all terraces.

The two field workers would park their car in places along the nearest highway in condition to permit travel over it, and walk out across the fields to the edge of the bluff, and then on foot work up and down the river. Due to bad roads and the icy sides of the two to three hundred feet deep ravines, the work was laborious and slow.

Then too, caution and circumspection was necessary to avoid running into the all too common illicit stills in operation in the out of the way places where they had to go. At least one very unpleasant contact was made with a bunch of four "tough guys".

Ellison Orr
Asst. Supervisor.
Feb. 1 - 41 mi. Waukon to McGregor, thence South of McGregor to Pike's Peak Park, on reconnaissance survey for Indian mound groups.
Feb. 2 - 51 mi. Complete reconnaissance survey, McGregor to Say Magill, located 2 mounds on backbone of bluff north of Say Magill Creek.
Feb. 3 - Survey and notes of Say Magill bluff. Group of 2 mounds.
Feb. 4 - 50 mi. McGregor to Clayton. Reconnaissance survey; Say Magill creek to Clayton bluff tops but no finds.
From Pike's Peak to Clayton, we found plowed fields running out to brow of bluff, leaving no traces of mounds should there have been any originally.
Feb. 5 - 60 mi. McGregor to Guttenberg. Reconnaissance survey from Big Spring, North. Located 3 groups, one of 7 round and 1 linear; one of two round, (surveyed 2-23)
Feb. 6 - 26 mi. Guttenberg to Eckard's Siding. Reconnaissance survey. Located group of 9 mounds on backbone of high bench. One large mound and one linear(large) mound on high bluff top.
From this point to Clayton, bluffs, are covered with dense timber.
Feb. 7 - 50 mi. Guttenberg to Clayton. Reconnaissance survey. Walked from Clayton south on bluff tops, as no roads near - heavy timber.
Feb. 8 - 26 mi. Guttenberg to Eckard's Siding. Made survey and notes of mound groups north of Eckard's creek.
Feb. 10- Sunday - Waukon.
Feb. 11- 60 mi. Waukon to Yellow River, to check up on some surface finds - to McGregor (on Park assignment) and to Postville.
Feb. 12- 42 mi. Waukon to Reinhardt-O'Regan resurvey, and to Harpers Ferry checking up on surface finds.
Feb. 13- 59 mi. Waukon to Guttenberg. (Rain)
Feb. 15- 21 mi. Bellevue - North along Makoqueta River. Reconnaissance survey. Gravel terrace of two different elevations with brow of high bluff back of river .5 to 1 mile.
Surface finds of clam shells and arrow-points, indicating village sites - made survey and notes of Pleasant Creek group of 5 mounds.
Surface finds of Pleasant Creek, by mail to Waukon.
Feb. 16- 33 mi. Bellevue.
Feb. 16- 33 mi. Bellevue to Green Island. Reconnaissance survey.
Survey and notes of group of 3 round mounds in Bellevue St. Park (Bluffs south of Bellevue close to river)
Feb. 19- 44 mi. Bellevue to Makoqueta River. Reconnaissance survey. Located one group of 5 linear and 4 round; one group of 5 round; another group of 3 round mounds.
Feb. 21- 39 mi. Bellevue north to Creek terrace - all creeks have 60 to 70 ft. high terraces about 10 to 20 rods wide; thence to Dubuque, P.M.
Feb. 25- 90 mi. A.M. Survey and notes of 2 mound groups - one of 7 round and 1 linear - one of two round mounds, north of Buck Cr. P.M. - to Waukon for Sunday.

(Transportation to Waukon and return to Guttenberg, about the same as hotel expense over Sunday at Guttenberg)

Respectfully submitted,

Fred Orr
REPORT

Of Reconnaissance Survey along Bluffs of Mississippi River in Jackson, Clinton and Scott Counties, Iowa, by Fred Orr and Harrison Toney, from Feb. 24th, to March 7th, 1935.
Daily Report of Survey Work

Dr. Charles R. Hayes, Supervisor.

Dear Sir:

Feb. 26 –made a driving survey to Clinton - road blotted.

Feb. 26 – 27– made reconnaissance survey by field workers, Fred Orr and Harrison Toney, Feb. 26th to Mar. 7th, 1935; detailed report of location and kind of mounds found and platted, Feb. 1st to Mar. 7th; and summary, Project 1047, Iowa Planning Board.

Feb. 28 – Clinton to Kalona.

Mar. 1 – Clinton to Julesburg and between Mississippi River and East Creek.

Mar. 2 – Clinton to Julesburg and between Mississippi River and East Creek.

Mar. 3 – Clinton to Jonesville and between Mississippi River and East Creek.

Respectfully submitted,

Ellison Orr

Survey Work Completed

Mar. 4 – Clinton to Jonesville and between Mississippi River and East Creek.

Mar. 5 – Clinton to Jonesville and between Mississippi River and East Creek.

Mar. 6 – Clinton to Jonesville and between Mississippi River and East Creek.

Mar. 7 – Clinton to Jonesville and between Mississippi River and East Creek.
Daily Report of Work Done.


Feb. 25 - Waukon to Dubuque enroute to Clinton - road blocked.
Feb. 26 - Dubuque to Clinton.
Feb. 27 - Clinton to Princeton.
Feb. 28 - Clinton to Princeton.
Mar. 1 - Clinton to Bulger Hollow Road. Reconnaissance survey bluff west of Clancy Lake.
Mar. 2 - Clinton to Bulger Hollow Road. Reconnaissance survey in Sec. 7.
Mar. 3 - Clinton to Goose Lake. Reconnaissance survey. Surface finds indicate terrace used as camp sites.
Mar. 6 - Bellevue to Green Island. Reconnaissance survey - Jackson County.
Mar. 7 - Ordered to return to Waukon - work suspended.

Group of 1 mound corporation of Princeton between 3rd. and 4th St. on terrace. 76 Elevation above river. Surface finds indicate terrace for 1 mi. above Princeton used as camp site and for burials.

Reconnaissance survey of bluff west of Princeton and between Mississippi River and Lost Creek.

Mar. 1 - Princeton to Bulger Hollow Road.
Mar. 2 - Princeton to Bulger Hollow Road.
Mar. 3 - Princeton to Goose Lake.
Mar. 4 - Princeton to Bellevue.
Mar. 5 - Princeton to Bellevue.
Mar. 6 - Bellevue to Green Island.
Mar. 7 - Ordered to return to Waukon - work suspended.

Group of 9 conical and 4 linear mounds Sec. 28, T. 65, R. 6. E. Surveyed.

Because of lack of time, no survey or notes on these four groups.

Completed from Pike's Peak to Turkey River, Clayton Co., 25 mi.

Sny Magill - Group 2 conical mounds on point of bluff
   Sec. 22, T. 94, R. 3.

Eckard's Siding - Group on bluff top.
   Group 1 conical mound.
   Group 1 linear mound.
   Sec. 7, T. 93, R. 2 W.

Buck Creek - On bluff Group 1 conical, 1 linear mounds.
   Terrace Group 2 conical mounds.
   Sec. 29, T. 93, R. 2.

Clayton County, total of 5 mound groups surveyed - 12 conical, 2 linear.
Jackson County

Reconnaissance Survey.

Completed from 6 miles North of Bellevue to 4 miles South of Green Island, 23 miles.

Bellevue - Group 1 linear mound.
   " 1 round
   Sec. 18, T. 86, R. 5 E.

Bellevue St. Park - Group 5 round mounds.
   Sec. 19, T. 86, R. 5 E.

   " 2 "
   " 2 "
   Sec. 14, T. 85, R. 6 E.

Green Island -SE. Twin Springs - Group 9 conical, 5 linear mounds.
   Sec. 28, T. 85, R. 6 E.

Jackson County Mound Groups - 13 conical, 10 linear.
Clinton County.

Reconnaissance survey of Mound Groups.

Princeton - Group 1 conical mound.
Sec. 2, T. 79, R. 5 E. Scott Co.

Clinton - Bluffs west of Clancy Lake.
1st - North backbone Group 12 conical, 10 linear - Sec. 7.
2nd - " " 6 " Sec. 7.
3rd - " " Enclosed area, 1 conical mound - Sec. 7.
4th - " " Group 2 conical mounds Sec. 7.
5th - " 9 conical mounds Sec. 16.
Sec. 7 and 19, T. 82, R. 7 E.

Clinton County - 51 conical, 10 linear, 1 enclosed area in 5 groups.
Summary

Of Reconnaissance Survey on Iowa Bluffs and Terraces along Mississippi River in Clayton, Jackson, and Clinton Counties.

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
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<td>mounds found in Clayton Co.</td>
<td>14</td>
</tr>
<tr>
<td>mound groups found in Jackson Co.</td>
<td>6</td>
</tr>
<tr>
<td>mounds found in Jackson Co.</td>
<td>23</td>
</tr>
<tr>
<td>mound groups found in Clinton Co.</td>
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<tr>
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<td>mound group found in Scott Co.</td>
<td>1</td>
</tr>
<tr>
<td>mounds found in Scott Co.</td>
<td>1</td>
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<td>Miles bluff line surveyed in Clayton Co.</td>
<td>25</td>
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<td>6</td>
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<td>23</td>
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<td>&quot; &quot; &quot; &quot; Clinton Co.</td>
<td>25</td>
</tr>
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<td>Total miles surveyed</td>
<td>79</td>
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</table>

Respectfully submitted,

Fred One

Linear measurements in chains. Heights in inches.

From center of Mound #1 - .40 x 10"
   N 12 E 67 to S. end of long Md. 1.43 x .35 x 10"
   " N. end long Md. N 12 E .76 to Md O - .30 x 10"
   " Md #0 N 12 E - .92 to cor. field
   " " #0 " .25 to point of bluff 300 ft. high.

From Md #1 S 23 W - .78 ch. to Md. # 2 - .35 x 10"
   "  2  " .78 ch. to Md.  3 - .45 x 18"
   "  3  " .77 " "  "  " 4 - .30 x 6"
   "  4  " .75 " "  " 5 - .25 x 6"
   "  5  " .73 " "  " 6 - .25 x 6"
   "  6  " 4.00 high point 75 W
   "  6  " 8.45 to Sec. line bet. NE. and SE. Sec. 30
   thence bet. Sec. 30 and 31 west to 16.31 to angle in road - runs NW.
pump SW .60
Field Notes of Survey of Buck Creek
Bench Mound Group, (2 mounds) on N.
side of Buck Creek 3 mi. N. of
On SW. 1/4 Sec. 29, T. 93, R. 2.

Mound # 1 - 60' x 18'
  W fence of road N 60 E 1.17 ch.
  N to foot of bluff  2.00
From #1 S 25 E 2.50 to #2 - 40x6
  on edge of bench
  E 35 to W fence of road
From # 2 S 4 E 3.60 to cor. fence
  S to E & W 1/4 Sec. line 1.10
  Buck Creek road runs N 48 W terrace 25 ft. high.
Field Notes of Survey of Mounds in Bellevue State Park.
Survey by Fred Orr,
Feb. 1935.

3 round mounds - Bellevue State Park.

From NW. cor. of NE. 1/4 Sec. 19, T. 86, R. 5, 16.24 to SW. cor. of State Park.
Mound # 1 ( .60 x 3') S 60 E - 1.31 to Mound # 2.
Mound # 1 - E .50 to bluff.
Mound # 2 - (.50 x 2.5') S 45 E - 2.00 to Mound # 3
Mound # 2 - E .40 to bluff
Mound # 3 (.50 x 3')

All mounds excavated and restored by custodian.

Washington Twn.  Jackson Co.

Group of 5 mounds.
Mounds 1-2-3-4 in SW. 1/4 of Sec. 4
" 5 in  NW. 1/4 of Sec. 4
T. 85, N R. 5 E.

Course 4 to 5 intersects 1/2 Sec. Line.

Mound # 1 (1.15 x 3.5') N. 21 E - 2.12 to
Mound # 2 (1.00 x 4.0') N 22 W - 2.00 to Md. # 3.
( " # 2 E 2.70 to center hwy.)
" # 3 ( .50 x 1.0') N 30 W - 1.44 to
" # 4 ( .40 x 1.0') N 38 W - 3.00 to Md. # 5
( " # 4 N 38 W 1.34 to 1/2 Sec. line)
" # 5 (.40 x 1.0)
Field Notes of Survey of 4 Mounds on Bluff Top
S. of cor. to Secs. 14, 15, 10 and 11, T. 85,
R. 5, E.

Beg. at cor. to Secs. 14, 15, 10 and 11 - 85-5,
  thence S. bet. 14 & 15  
  to top of Hog back.  
  thence S. 70 E. 10.50 to Md. #10 30 x 12"
  on end of Hog back 250' high,
  where hog back joins bluff.
  From t10 S 87 E 1.76 to #11 50x2-1/2'

From 1/8 cor. bet. NW. 14 and NE. 15-85-5
West 5.00 to back end at hog back
thence N 14 W 3.37 along Hog back to Md. #12 40x10"

From #12 N 4 W 64 to #13, 40x12"
  N 50 to point of spur
Field Notes of Survey of Mound Group on Bluff
N. of Makoqueta River.
Survey by Fred Orr.
Feb. 20, 1935.

From cor. to Secs. 13, 14, 23 and 24 West bet. 14 & 23 to highway
(10.00 ch)
Thence N 65 W 7.10 ch. to Md. #1 on top backbone 250 ft. high
50 1ksx18" exc.
point of spur S 32 E 2.10- W. edge of backbone bears W 55 1ks.
From Md. #1 N 13 W 2.00 to #2
Long Md 52 1ks x 30" x 10" N 7 W
From Md #2 S 85 E 5.00 to end of spur
backbone edge 50 1ks W.
From N. end Md. #2 N 5 W 82 1ks to Md. 3
Long Md. 40x15x10" N 22 W near cen. of backbone 50 1ks. wide.
From Md. #3 N 39 W 1.30 to #4 20x10"  
"  " #4 N 36 W .50 to #5 long Md 45x20x10" N 34 W.
"  " #5 N-W .40 to #6 long Md 50x30x10 N 18 W
"  " #6 N 19 W 3.67 to #7 40x18"
"  " #7 N 28 W .85 to #8 40x10"
"  " #8 N 52 W .93 to #9 long Md 40x20x10"
Spur slopes toward point 100 ft N 28 W
East 5.00 ch.
In SE. Sec. 14, T. 85, R. 5.

At bottom of bluff a terrace on north side of river -
many relics found.
Field Notes of Survey of North Group of
Clancy Lake Mound Group, Feb. 1935, by
Fred Orr. 2-1/2 mi. N. of Clinton, Ia.
SE. Sec. 7, T. 82, R. 7, E.

From intersection West R.R. fence Northwestern R.R. and 1/4 Sec. Line
N 13 W, 7.70 to Spring Branch
10.50 to Base of Bluff
15.31 to Mound #1.
(From Mound #1 E. to point of backbone, .40)

Mound #1 - .35 x 12 in. (exc)
From #1 - S 46 W - .29 to
Mound #2 - Long .94x.25x12 in., S 78 W, (exc.) 2 round mounds .35x18 in.
         built on each end of this mound.
From W. end of #2 - S 58 E - .62 to
Mound #3 - .50x3 ft. (exc.)
From #2 - S 54 W - .44 to
Mound #4 - .25x10 in. (exc.)
From #2 - N 12 E - .55 to
Mound #5 - Long -.50x.30x18 in - N 4 W
From #2 - N 2 W - 1.12 to
Mound #6 - Long .73x.30x10 in. - N 43 W
From #2 - N 73 W - .75 to
Mound #7 - Long 1.10x35x2 ft. S 75 W - (exc.) - bone fragments.
From W. end # 7 - S 62 E -.50 to
Mound #8 - .30x1ft. built on S. side of #7.
From W. end of #7 - S 32 W -.47 to
Mound #9 - S 12 W, .60x25x10 in.- Long mound.
From W. end #7 - N .55 W -.64 to
Mound #10- .40x2.5 ft. (exc.)
From W. end #7 - N 50 W - 1.36 to
Mound #11 - .35 x 2.5 ft. (exc.)
From W. end #7 - N 14 W - .64 to
Mound #12 - .40x3ft (exc.)
From W. end #7 - N 30 E - .73 to
Mound #13 - .20x10 in. (exc.)
From W. end #7 - N 20 E - 1.07 to
Mound #14 - .30x18in. (exc.)
From Mound #12 - N 3 W - 1.10 to
Mound #15 - .30x18in. (exc.)
From Mound #12 - N 42 W - .40 to
Mound #16 - Long N 36 W, .92x.30x10 in.
From W. end #16 - N 30 W -.20 to
Mound #17 - Long - N 42 W, .60x.30x10 in.
From W. end #17 - S 23 W - .45 to
Mound #18 - .40x3 ft. (exc)
From W. end #17 - N 67 E -.61 to
Mound #19 - Long, 3 52 E, .60 x .30 x 10in.
From W. end #17 - N 28 E- .62 to
Mound #20 - Long, N 58 W, .70x.30x10 in.
From W. end #17 - N 47 W - 15. to
Mound #21 - Long, N 47 W, 1.10x40x18 in.
From W. end #21 - N 65 W - .50 to
Mound #22 - .30 x 10 in. - inside plowed field
From W. end # 21 - N 58 W - 22 to fence corner
J. R. Woods, Tampico, Ill. - owner
Chas Peterson, Clinton, Ia. Route #3, tenant

Field Notes of Survey of South Group of
Clancy Lake Mound Group, Feb. 1935, by
Fred Orr. 2-1/2 mi. N. of Clinton, Iowa.
SE. Sec. 7, T. 62, R. 7, E.

From R. R. right of way fence and 1/4 Sec. line
W - 1.00 to base of bluff.
3.07 to Rock ledge.
5.15 to Mound #1 - top of bluff.
(From Mound #1, E .50 to point of backbone)
Mound #1 - .35x12 in. (exc.)
From #1 - S 74 W - .40 to
Mound #2 - .20x12in. (exc.)
From #2 - S 85 W - .50 to
Mound #3 - .25x10in. (exc.)
From #3 - N 80 W - .50 to
Mound #4 - .36x12in. (exc.) trench dug 1934, - bone fragments.
From #4 - N72W - .85 to
Mound #5 - .25x10in.
From #5 - N 85 W - 1.35 to
Mound #6 - 1.00x 2ft. (exc) large round mound
From #6 - S 76 W - 1.60 to
Mound #7 - .25x10in.
From #7 - S 72 W - 48 to
Mound #8 - .25x10in.

Except height of mounds, all measurements in chains and
links.
Mound #23 of the Blood Run Mound Group lies in the northwest corner of Sec. 25 at 526 ft. south and 75 ft. N. of the corner to Secs. 23, 24, 25 and 26, T. 100, R. 49, about 1/2 mile E. of Big Sioux River in Lyon County, Ia. The N. and S. Sec. line (wire) fence (here 50 ft. N. of true line,) runs across the west edge of the Mound.

Looking North. This mound has never been disturbed and is covered with the wild blue-stem prairie grass.

Mound #12 of the Blood Run Mound Group lies in the Northwest corner of Sec. 25 at 125 ft. N. of corner to Secs. 23, 24, 25 and 26, T. 100, R. 49. Its north edge touches the wire fence on E. and W. Sec. line between Secs. 24 and 25. Like Mound #23, it is undisturbed and covered with wild prairie grass.
The "Pitted Stone" is a large granite boulder on the line between Sec. 23 and 28; note fence and 260 ft. down the slope of the terrace, west of the corner to Secs. 25, 24, 23 and 26, T. 100, R. 49. Cut in the surface of this hard rock are hundreds of polished cup shaped pits from the size of a quarter to that of a half dollar, and .2 inch deep. Looking Southwest. See Pages 318, 320 and 322, Vol. II of Moorhead's "The Stone Age in North America.

Iron post making the corner of Minnesota, S. Dakota and Iowa, 7-1/8 mi. 2. of the NW. corner of Iowa. Looking Northwest.
Broken Kettle Mound from the West.
The Broken Kettle Mound lies on the bottom land of the Braken Kettle Creek valley at something over a mile from where it opens into that of the Big Sioux, twelve miles north of Sioux City, and on the NE. 1/4 of Sec. 5, T. 90, R. 46.
This is not a burial mound but a camp site. It may have been surrounded by a palisade though in our excavations we found no trace of one.
Except for the Northwest one-third, it is circular in area, having a diameter of approximately 200 ft. Either the NW.
third was never built up or the creek has eaten it away.
In profile it is rounded like the burial tumuli, with a height
in the center of 8 ft. above the surrounding bottoms. It is
composed of alluvial soil much mixed with deposits of different clays, often more or less lens shaped, with patchy ash strata, often reaching a thickness of 6 in. Scattered through
this at all levels, is much broken pottery; well preserved
fragments of bones, not split but broken; many bone implements especially awls; a very few celts and an occasional chipped
piece. These occur in greatest abundance in connection with
the ash beds.
Stratification of the deposit is very obscure and the culture
from top to bottom does not change.
Deposits of ashes indicate fire and refuse pits but the sides
and consequent depth cannot be made out.
Sherman says these camp site accumulations were made by carrying
in earth to cover up garbage and refuse that had become
unbearable even to an Indian. *
Looking East. Opposite end of cow barn is approximate center
of Mound.

* A more probable explanation is given by H.C. Powers in Records of the Past, Vol. IX, Page 309. He says: "The building of this mound
must have required the labor for many years of people who were
settled in a village close to this work. The object of those who built it
could not have been simply to dispose of the (village) refuse, but was
probably to commemorate some important event ... some one or more
of their chiefs may be buried under the mound."
The Jasper Pool in Gitche Manito State Park in the extreme NW corner of the State.
Looking South. The rocks are Sioux Quartzite.

Broken Kettle Mound from the South-edge of Mound at gate in center. Back of white post East of gate, can be seen filled in excavation.
Field Workers, Fred Orr, left, and Harrison Toney, right, with the owner, Mr. Mosher, standing about 15 ft. East of mound center of Broken Kettle Mound. Trees along creek.
Pit silo in the NE. part of Broken Kettle. This is entirely in mound earth, the end at 25 ft. NE of mound center is 8 ft. deep.

Valley of Broken Kettle creek, looking Southeast. Mosher farm buildings in center. Striped appearance of field is due to tenant's share of corn having been cut.
Looking west from ossuary on high point of bluff NE of Broken Kettle Mound. This ossuary was a deposit of bundles of human bones in a pit 14 to 16 in. deep and covering area 6 ft. square to a depth of 4 to 6 inches. Except one skull, all the bones were badly decayed. A broken celt was found there. From this point there is an extensive outlook over the valleys of the Broken Kettle, the Big Sioux and the Missouri bottoms and the very broken bordering bluffs.

Looking North from bluff top ossuary N. of Broken Kettle Mound.
Missouri River bluffs South of Sioux City.  Looking North.
The Paul Braunschweig camp site, looking West. Car in road a little East of center of mound.
In valley of Little Sioux at mouth of Waterman Creek, on SW. Sec. 25, T. 94, R. 39, in O'Brien County.
There are in the valley of Waterman Creek, in O'Brien County, and of the Little Sioux in Buena Vista and Cherokee Counties, 12 known camp sites of the same culture as the Broken Kettle Mound camp site and containing camp refuse of the same culture. They cover larger somewhat irregular areas -- 300 to 400 ft. in approximate diameter -- and have a maximum height of not over 4 ft. One of these, on Hill Creek, is located on a low spur of bluff; three, on 40 to 60 ft. high terraces; the remainder on first low (4-6 ft.) terraces above the flood plain.
The Wittrock site on NW. Sec. 11, T. 94, R. 39, on Waterman Creek has never been cultivated, is roughly quadrangular in outline and surrounded by a low (18 in.) embankment with a very shallow ditch outside. May have been palisaded.
Excavating pit in Paul Braunschweig camp site near its center. Mr. Braunschweig with hat off.

Looking East across valley of Waterman Creek. On top of bluff at right is located Group #8 of Patterson Farm Mound Groups.
Looking NW of valley of Waterman Creek from near Group #8 of Patterson Farm Mound Groups.

Looking north up valley of Little Sioux from bluff top between the valleys of Silver Creek and the Little Sioux and from site of mound from which Mr. E. L. Little took two Mill Creek culture pots. On Sec. 33, T. 91, R. 60.
Fish Dam (trap) on Mill Creek on Sec. 4, T. 92, R. 40. 
Looking West - down stream.

The center of a group of three large (6-7 ft. high) 
Mounds lying in a N. and S. row - their perimeters almost 
touching, - on point of bluff overlooking valley of Des 
Moines River to West. On Sec. 1, T. 67, R. 30, 1/2 mi. N. 
of Lehigh in Webster County. Looking West.
Mound #2 of Wickwire Mound Group on SW. SE. Sec. 9, T. 87, R. 27, in Webster County. Looking East.

Solitary Mound on edge of bluff 100 ft. south of Wickwire house on Sec. 9, T. 87, R. 27, in Webster County. Looking East.
Mound #2 of Toolesboro Mound Group on edge of bluff overlooking valley of Mississippi River. On NE. Sec. 10, T. 73, R. E. Just north of the village of Toolesboro, Louisa County. Looking East.

Pilot Rock, an immense erratic on the bluff top on the East side of the Little Sioux 3 mi. S. of Cherokee on Sec. 15, T. 91, R. 40. This boulder of Sioux quartzite 60x60 ft. rising above the surface 16 ft. was a noted landmark of pioneer days.
"Turkey track" petroglyph cut on top of Pilot Rock. 8 mi. S. of Cherokee, la.
Prehistoric Fish Dam across Mill Creek, on Sec. 4, T. 92, R. 40 W., Cherokee County. Looking West down stream

Beats - the small dots, the larger spots are Russian thistles - in roadside cut in loess, 10 mi. N. of Sioux City.
Monument erected in memory of Sergt. Floyd of the Lewis and Clark Expedition, 1904, who was buried nearby. In S. part of Sioux City. Looking West. 1934.

Keokuk dam, locks and Power House. 1934.
Looking up stream from bridge.
Old Stone House on site near old village site of Iowa tribe of Indians, destroyed by Sauk and Foxes under Chief Blackhawk, who was later, after the almost complete wiping out of Indians under him at Battle Island, Wis., allowed to live here and was buried not far from this stone building.

On Sec. 7, T. 70, R. 11 W. Van Buren County, on N. side of Des Moines River. Looking E.

The Old Hotel - all that is left of Iowaville - 1 mi. down stream from stone building - picture above - once a flourishing town on N. bank of Des Moines River, Sec. 7, T. 70, R. 11 E. Van Buren County. Looking N.
INdIAN BLacKSMITH SHOP

Years of chipping axehoods, by the squaws of the Sioux Indian Tribe, wore the depressions on the sloping side of this red granite boulder, located in the northwest corner of the state. The old settlers know it as the "Indian Blacksmith Shop."—Phot. by George Rawlings.