

The PALIMPSEST



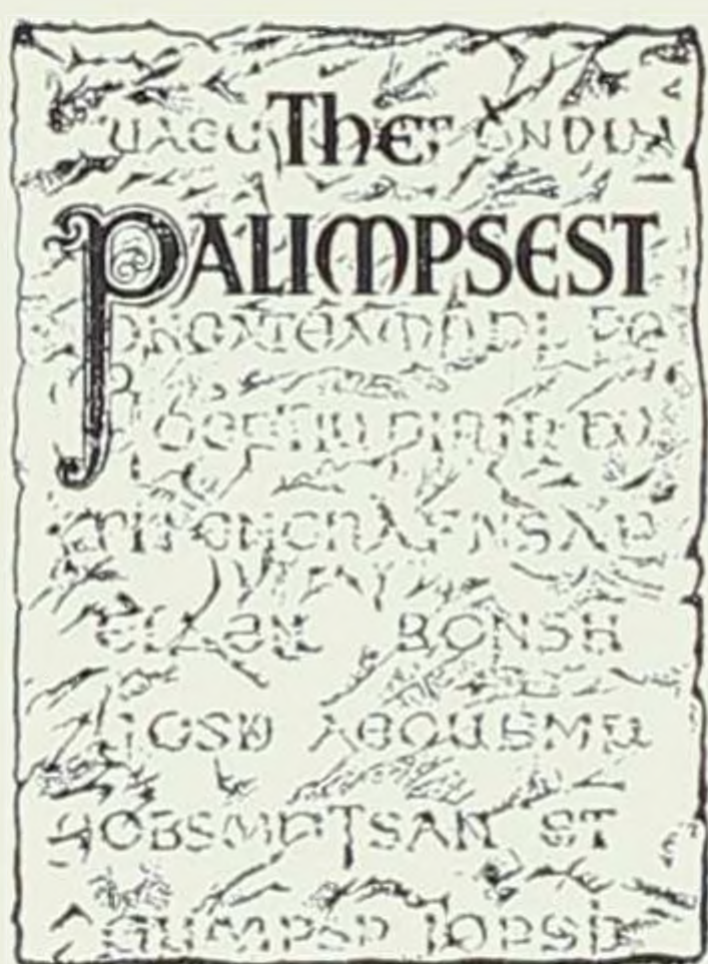
Indian Villages on the Upper Iowa River

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The Meaning of Palimpsest

In early times a palimpsest was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the record of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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MILDRED MOTT WEDEL

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Illustrations

All illustrations, unless otherwise noted, were selected by Mildred Mott Wedel, photographed from the Keyes Collection in the State Historical Society, and appear in her "Oneota Sites on the Upper Iowa River" in *The Missouri Archaeologist*. The back cover is from George Catlin's *North American Indians*. The front cover is an oil painting by Ed Bruns reproduced in *Sutherland Dows' Seven Ages of a City* (Cedar Rapids).

Author

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THE PALIMPSEST

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Corn Horticulture

It was not yet the "land where the *tall* corn grows," but already, before any white men had glimpsed the handsome limestone-capped bluffs of the Upper Iowa River Valley, Indian women were clearing the low river terraces in the early spring in order to plant corn. Their mat or bark-covered houses were in village groups back on higher flood-free terraces. These were probably villages of the Ioways, the very Indians whose name was perpetuated in the name of the State of Iowa.

Then, as now, fresh corn was prized for its deliciousness, even more so (if that could be possible) because of the variety it brought to a predominantly meat diet. Indian Agent Thomas Forsyth declared the Sauk and Fox felt "always at a loss without corn, even in the midst of meat." This seems to have applied to the Ioways as well as to other semi-horticultural tribes. Besides being tasty, nutritious, and "filling," corn could be dried or parched and thus kept for use when hunting was difficult or unrewarding.

Much has been learned about the aboriginal way of life in these once animated Indian villages along the Upper Iowa River as a result of archeological investigations in Allamakee County. These were conducted by Dr. Charles R. Keyes and Ellison Orr in the 1930's when Dr. Keyes was director of the State Archaeological Survey, a position established by the State Historical Society of Iowa. By that time, of course, only those stone tools, pottery fragments, and other cultural remains were left that had been able to survive the destructive forces of weather and soil, and the white man's agricultural and construction activities. There they have remained to give mute evidence of the long-vanished Indian hunters and gardeners.

In the course of this digging, bone hoes, charred corn and cobs, utensils for grinding corn into meal, pit "ovens" for roasting corn, and food storage pits were found. Obviously, these Indians had raised corn as one of their crops, raised enough in fact to store a quantity for winter use. Following the archeological leads, further knowledge of the gardening practices of these Indians and their ways of using corn can be gained by consulting a variety of written sources, especially since it is known from historical research that these villages were probably inhabited by the Ioways. There are many travelers' journals, ethnographic studies, and reports by Indian Agents and army personnel

that describe the Ioways and tribes closely related to them, like the Winnebago and Oto, as well as tribes with a similar hunting-horticultural economy who lived nearby, such as the Omaha, the Sauks and the Fox.

It becomes apparent at once that the precious corn crop at these Upper Iowa River villages was the result of strenuous effort. Nonetheless, gardening was a pleasure to many of the women in spite of the hard work it entailed. The family patches were not large. There was undoubtedly much variation in their extent, depending upon the size of the family, and particularly upon the number and industry of the women folk. It has been suggested that those Indians who lived as the Ioways did, supplementing constant hunting with some horticulture, cultivated one-third of an acre for each person in the tribe. Even one acre must have seemed at times never-ending when there were no metal tools at hand with which to prepare the field for planting.

Soon after sunrise, in the cool freshness of the morning, the women and girls would follow the paths to the lower terrace gardens. This was essentially women's work, whereas hunting was for men. Feelings regarding what was properly women's work and what men's was stronger among the aboriginal Indians than it is in our present-day society. Hunting, with its needs for endurance, strength, and cunning, was considered much more

difficult than cultivating a garden which was near village protection with accessible shelter from bad weather. In fact, this idea that gardening was the work of women was one of the fundamental reasons for the early resistance of many Indians in the middlewest area to government agricultural help. The Americans expected the Indian men to become full-time farmers. This many Indians scorned to do. A Pawnee chief on a visit to Washington in 1821 told President James Monroe that he would never "bruise his hands digging in the ground" while he could find a buffalo to hunt or a horse to steal.

The garden patches were usually burned off in the spring. Then the women and girls cleared the ground and loosened the soil for planting in hills. To do this they may have used pointed sticks of wood or bone, the ends of which had been greased and then hardened in fire, but none were found in the excavations. Present were hoes made by fastening wooden handles to the broad shoulder bones of elk or buffalo. No wonder many of the hoe blades retrieved from the villages have badly battered and split edges.

When the ground was in shape, the kernels of seed corn saved from the previous year were carefully placed in each hill, probably with certain ritualistic procedures intended to ensure a good crop. Sometimes beans were planted later in the same hills and grew to entwine and climb the corn

stalks. Charred beans were found in the excavations also.

The seed corn kernels may well have been blue in color, although charred kernels and cobs dug out of the Indian storage pits tell only that this was an 8-rowed corn. A favorite variety of many of the Indian tribes of the Lower Missouri and Upper Mississippi rivers was a dark blue flour corn, sometimes called "Omaha flour corn" or "blue squaw corn." Joseph Springer, an Ioway Indian, is quoted by George F. Will and George Hyde as saying that this was the "favorite common-purpose corn" among the Ioways. It was early and hardy, yet easier to grind (though less nutritious) than the harder flint corns planted by the Mandan and Arikara Indians in the Dakotas. Growing in Oto and Omaha gardens at a much later time, it was observed to reach a height of from seven to ten feet, and to have a somewhat bushy appearance due to a number of suckers coming from the roots. Two to three ears, about eight inches long, were borne rather low on the plants. According to Alanson Skinner, the Ioways may also have had other corns — white and yellow in color.

Evidently the Indians were quite aware of the dangers of mixing varieties of corn. Will and Hyde noted that the ears of native corn they collected gave evidence of pure strains in the early days. To avoid mixing, the plots of "sacred corn" were planted separately from the food gardens.

They were tended by certain men for whom this was an inherited duty as well as a privilege. Among the Ioways a kind of red flour corn, which had a reddish cob and kernels ranging in color from a dark to a salmon-red, was considered to have special attributes. One certain group of relatives (the Buffalo gens) raised it and performed prescribed ceremonies using it. It was never eaten by them.

More is known about the sacred corn of the Omaha Indians. Alice Fletcher and Joseph La Flesche were told by the Omaha in the last century that this corn was thought to have special properties of fertility. Consequently, four red kernels were given to each family to mix with their carefully selected seed corn, with the idea that propinquity would vivify the seed and help to secure an abundant harvest. It was a kind of sympathetic magic. The Ioways were also said to have a sacred brown flour corn.

Usually the corn patches were thoroughly hoed twice, aside from hand weeding, and then hilled up so they could be left untended while the tribe went on a buffalo hunt. Early settlers in Iowa and Wisconsin noted with interest cornhill rows still persisting in undisturbed areas near long deserted Indian villages.

When the silks were dry and the tassels dark, and the ears were in the green corn stage, but before any might be eaten, it was customary among

a number of tribes of this area to hold a ceremonial feast. This was a solemn ritual statement of gratitude for a successful harvest akin to the "first fruits" thank offerings that occur in many agricultural communities over the world. An Oto Indian told William Whitman: "If anyone broke the rules [that is, ate the corn before the ceremony] something bad would happen to him."

Many early 19th century visitors to Indian villages in the Upper Mississippi-Middle Missouri area wrote of enjoying the corn dishes set before them. They were more palatable to many than the dog stews and some of the other characteristically Indian dishes to which whites were unaccustomed. The Indians used corn in its fresh or green state as well as when hard and fully ripened. Both kinds were boiled, sometimes with meat — deer, buffalo, or bear; sometimes with just fat added — as bear grease or buffalo marrow; sometimes with sweetness in the form of honey or pounded-up tangy chokecherries. All these combinations were greatly relished. Succotash — corn boiled with beans — was also a favorite and frequent dish. Boiling of foods by the Ioways on the Upper Iowa River was still done in clay pottery vessels, and the smoke-blackened bottoms of many of these simple globular pots give evidence of their habitual use.

Sweet corn was also roasted in ashes, or in little "ovens" or "firepits" that were dug into the ground a foot or so. The pit bottom would be cov-

ered with stones, and a fire built on them. When, after an hour or more, the stones were red hot, the fire would be allowed to burn down and the ashes and some of the stones raked out. The unhusked corn would be laid in on the hot earth and remaining stones, the hot ashes and stones quickly replaced over the corn, and finally earth heaped on top of the filled pit. Such pits still remain in the Upper Iowa River villages, displaying now stratified layers of charcoal and ashes, some quite thick and hard packed. One pit, on Flatiron Terrace, had a number of charred ears of corn still in it when it was opened by Dale Henning and Dr. Henry Field of Decorah. What had happened to make an Indian housewife forget to open her oven in time?

To prepare corn for drying and storage, either the green or the ripe corn was boiled or roasted, after which the kernels were scraped off with mussel shells and spread on deer or buffalo skins to dry. If the corn was dried without cooking, that is, by braiding the husks together and hanging the chains of corn on frames to dry in the air, it was necessary to use stones or big sticks to knock off the hardened kernels.

Corn was stored as dried kernels, or frequently it was ground into cornmeal. In the Upper Iowa River villages were found large flat grinding slabs and smaller slightly hollowed mortars over which the women once bent as they ground the corn with

"bunshaped" grinding-stones. Probably the stone slabs were placed on large hides or on mats in order to catch the flying kernels that scattered in the process. The meal was cooked as mush; or might be boiled with beans, allowed to cool and harden over night, and on the next day be cut into slices for eating. Sometimes the slices were browned in the fire.

The Omahas and others also parched corn in the fire, and a number of tribes made hominy by boiling the corn with ashes. Parched corn was often carried in small bags at the waists of Indian hunters thereby making quick nourishment available.

It was customary to store dried corn for winter use in pits dug into the ground. Many of these on the Upper Iowa River were bowl-shaped; others were cylindrical. The pits, 30-60 inches deep, would be lined — perhaps with grasses, bark or mats — before the skin, birchbark, or woven fiber bags containing the corn were laid in. Sod, carefully placed over the top, would hide the pits from marauders and protect the cache from the vicissitudes of the weather. Although records of Indian corn storage pits are many, mention of spoilage is rare. Often this hoard of nourishing food seems to have made the difference between a winter of sufficient food and one of intense hunger.

Archeological Investigations

Prairie sod concealed from the first settlers the villages, gardens, and cemeteries of the former Indian inhabitants of the Upper Iowa River terraces in Allamakee County. But sharp-eyed farmers in the course of cultivation and building activities spied arrowheads, pottery fragments, and other Indian-made objects (called *artifacts* by archeologists). Even an inquisitive boy investigating a groundhog hole was unexpectedly rewarded with an Indian pot.

Such chance reminders spurred those who had sufficient curiosity to search for old Indian village sites and for other evidences of this earlier occupation of the area. In time, the finding and trading of Indian-made objects took on the aspect of a business for some people. Unfortunately, in the determined search for "things," pertinent information of a non-material character was often completely overlooked. At the same time, evidence that could have supplied the information was destroyed. Usually no adequate record was kept of exactly where an artifact occurred, with what it was associated, its exact relation to pits or burials, its depth in the ground, and so forth. As a result, most such finds although of some interest for them-

selves, are only of limited value for the archeologist who wants to interpret the history and way of life of the people who made the artifacts.

It was lucky, therefore, that one of the early residents in this region who was interested in Indian remains was Ellison Orr of Waukon. Orr was born in a log cabin at McGregor in 1857 and, during the 94 years he spent in that scenic corner of Iowa, he learned much more about it than the average resident knew. He had the lively curiosity, the sound commonsense, and the breadth of interest that characterized other Iowa pioneer scientists. Therefore, he not only sought Indian artifacts, but he also kept neat notebooks filled with relevant information, including exact provenience of specimens and other descriptive data that might explain specimen function or significance. It was he who had much to do with arousing the interest of Dr. Keyes in the archeological remains along the Upper Iowa River.

Dr. Charles Reuben Keyes was another alert-minded Iowan who was curious about all he saw. Even in his boyhood Keyes was interested in evidences of the early Indian occupation of Iowa. After graduation from Cornell College, and postgraduate work at Harvard University (where he received his doctorate), as well as at the Universities of Berlin and Munich, he ultimately returned to Cornell. There he taught German language and literature for thirty-eight years. There also he

took up again his earlier avocation — archeology. In the summers, and on school year weekends, he traveled over all of Iowa studying collections of Indian artifacts and making walking surveys of village and burial sites. Into orderly notebooks went the information he gleaned. Happily the State Historical Society of Iowa recognized the value of Charles Reuben Keyes' meticulous study and saw the need for facilitating such investigations before old villages, mounds, and rock shelters were destroyed. In 1922 it appointed Dr. Keyes a Research Associate of the Society, with the title Director of the Iowa Archaeological Survey. This position he held until his death in 1951.

In the decade following his appointment, Keyes gathered a tremendous amount of data on the prehistory of Iowa, much of which could not possibly be duplicated now. Paved highways run where burial mounds once stood; gravel pits scar terraces where Indian villages lay; pictographs and petroglyphs have been weathered away or vandalized. Aside from the specimen collection, the carefully organized information, compiled by Keyes and arranged by counties, is now a valuable manuscript holding of the State Historical Society.

By 1934 Dr. Keyes had sorted out the main archeological groupings or "complexes" to be found in Iowa. He had recognized their chronological sequence and had discerned in the larger groupings, smaller bodies of significantly similar

materials. Thus, Keyes and Orr were aware that in northeastern Iowa there were sites that yielded artifacts attributable to a widespread archeological culture usually called Woodland. They also noted that quite different cultural materials occurring at other sites (or sometimes at the same site with the Woodland) were similar to those found in neighboring states to the east and south. Accordingly, Dr. Keyes realized that they were part of another large archeological culture-grouping customarily designated by archeologists the "Upper Mississippi Phase." He called this characteristic Iowa material the "Oneota Aspect" of the Upper Mississippi Phase, combining an old name for the Upper Iowa River (Oneota) with an archeological classification term (Aspect). Later, when like material in Wisconsin and elsewhere was also classified in the Oneota Aspect, Keyes designated the specific and somewhat distinctive Iowa culture as "Orr focus Oneota," using again a classification term (focus), and honoring Ellison Orr's contribution to Iowa archeology.

Careful test digging had suggested that the Oneota people were more recent than those who left behind the Woodland materials. Either the evidences of Oneota culture lay on top of the Woodland, or else pits containing Oneota artifacts appeared to have been intruded into mounds built earlier to cover Woodland burials. This is what the archeologist calls *relative chronology*.

Moreover, at some of the Oneota sites, Dr. Keyes and Mr. Orr were intensely interested to find a few glass beads and brass fragments. These indicated that some direct or indirect contact had been made with white traders — either there had been trade with Indian tribes who were in touch with the European traders, or these Indians themselves had gone to some fort or trading post, or a trader had come to their village. Moreover, since there seemed to be only a few European-made trade goods, and since the Indians had obviously not yet substituted brass or copper kettles for clay pots, nor metal knives and arrow points for stone chipped tools, these glass and brass objects were certainly evidence of the earliest contacts between the Indian and European peoples in that area.

It was exciting to realize that the sites spanned in time the transition from the undocumented past to the period when European explorers, traders, and government officials furnished source materials for written histories. If the sites could be identified as the early homeland of a certain group of Indian people whose modern tribal name is known, then they would become a “bridge” between written history and archeological history, indicating the direct line of cultural development from the Known (or Historic times) back into the Unknown (the Proto- and Pre-historic times).

Dr. Keyes set himself to this problem with enthusiasm. After consulting many records, histo-

ries, and maps, he suggested in *THE PALIMPSEST* of June, 1927, that the inhabitants of these villages must have been the Ioways. Later, more concentrated study of the problem bolstered this identification in both the Society's quarterly and monthly publications, and it has been generally accepted by other anthropologists. Recent re-examination of available data suggests that the Otos may possibly have been living with or near the Ioways at this time and that their cultural remains were not dissimilar from those of their close relatives — the Ioways.

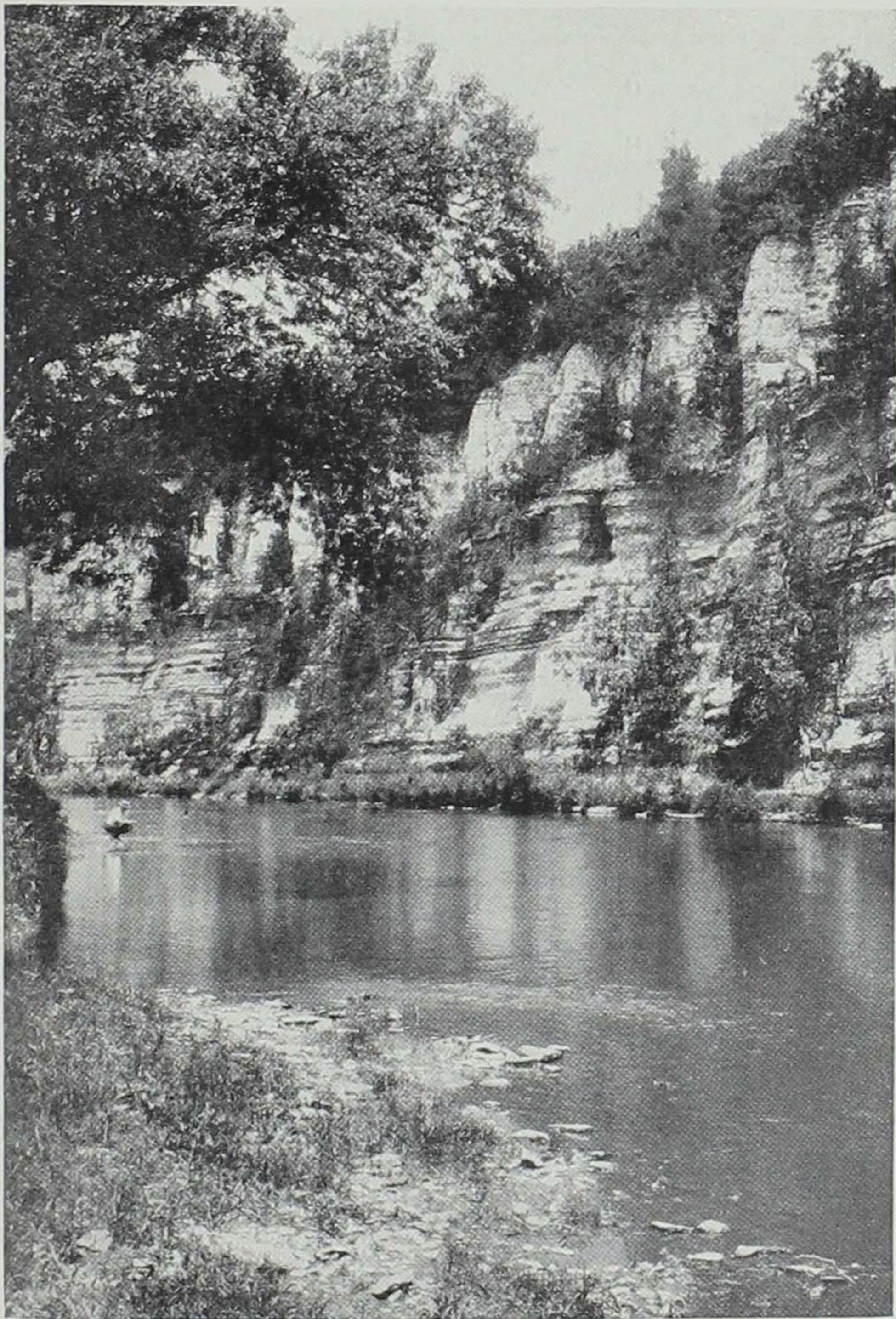
In 1934 the opportunity presented itself for Dr. Keyes to carry his Iowa Archaeological Survey beyond the limits of surface observation and test digging. Federal Emergency Relief Administration funds were made available to him for excavation of "ancient village sites and Indian mounds threatened with destruction." This offered a welcome chance to pursue more intensively some of the many problems that had presented themselves in all parts of Iowa, but which ones should be examined first?

It seemed to both Dr. Keyes and Ellison Orr that concentrated, systematic excavation in Allamakee County might be likely to disclose a great deal of significant additional information about both the Woodland and Oneota cultures — more than any amount of sporadic digging and objects found by chance could tell. Moreover, the pos-

sible historic tie-up between the Orr focus Oneota materials and the Ioway Indians added to the acceptability of this decision.

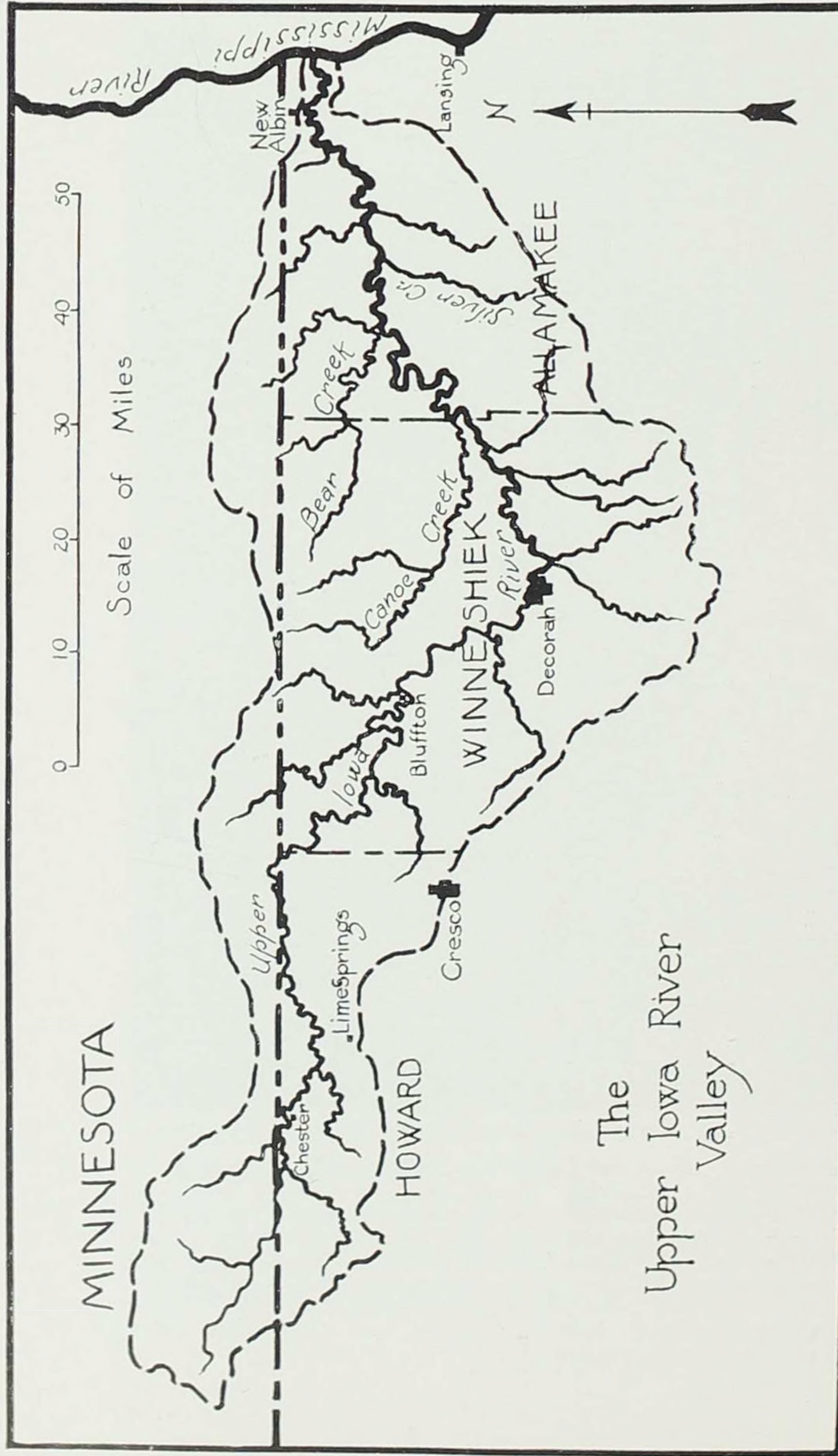
During the summer of 1934 an excavation crew dug at four different sites in the Upper Iowa River Valley. In the fall of 1936, the program was continued at the same and other sites, this time under the auspices of the Work Planning Administration and the Iowa State Planning Board. Ellison Orr was named field director under the supervision of Dr. Keyes. In the October, 1934, issue of *THE PALIMPSEST*, Dr. Keyes described the excavations in broad terms and wrote entertainingly of his and Mr. Orr's difficulties with an untrained and sometimes physically handicapped crew.

It is unfortunate that various complications combined before his death to prevent Dr. Keyes from producing a formal and well-illustrated report in which field data and specimen study were coordinated and these results synthesized with studies of similar materials, particularly those in Wisconsin. The only reports on the excavations by the investigators are the ones — general in nature — that appeared in *THE PALIMPSEST* and the more detailed but uninterpretative FERA and WPA reports. There is also a typed manuscript written by Ellison Orr entitled "The Iowa (Oneota) People of the Upper Iowa River Valley" which contains a wealth of information. It may be found at the State Historical Society of Iowa and at Effigy



From Petersen's *Iowa — The Rivers of Her Valleys*

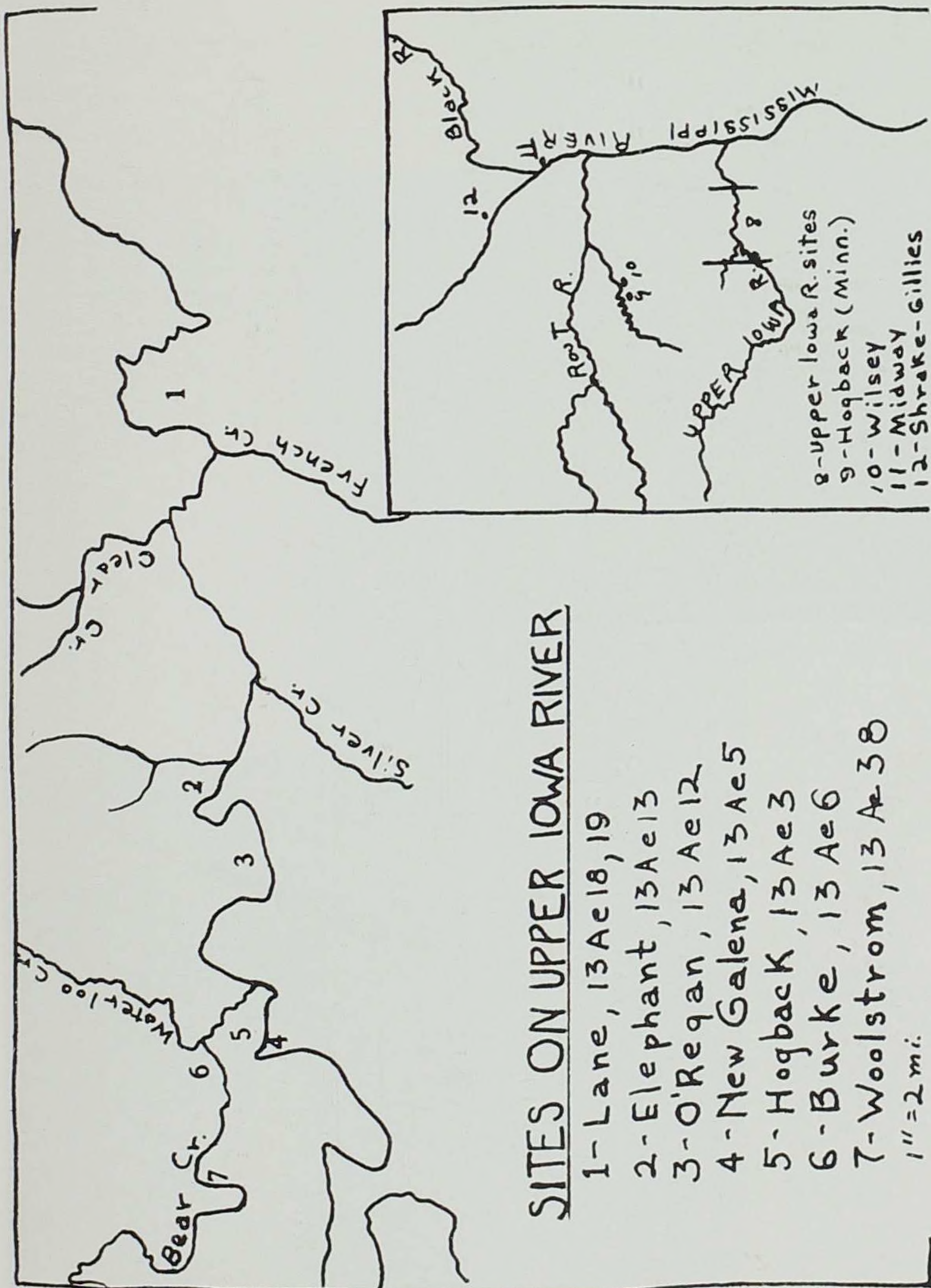
"Just below Decorah the Upper Iowa turns abruptly toward the northeast, twisting its way through deep-cut Galena limestone. Around Freeport the valley widens and the slopes become less precipitous because of the friable character of the St. Peter sandstone. A few miles farther the river flows between bold cliffs of Shakopee and Oneota dolomite. Throughout its course the bluffs are richly festooned with moss and ferns and heavily studded with timber — oak, hickory, elm, basswood, butternut, walnut, and canoe birch being among the more common native trees."



The Upper Iowa River Valley

From Petersen's Iowa — The Rivers of Her Valleys

"The Upper Iowa River rises just beyond the northern boundary of the Hawkeye State in the drift plains of Mower County, Minnesota, and flows through the 'Switzerland of Iowa.' The river falls over 700 feet during the course of its 135-mile journey, debouching into the Mississippi just below the Minnesota line in Allamakee County at an altitude of 613.5 feet above sea level. The Upper Iowa drains an area of 1057 square miles, 80 per cent of which lies in Iowa, chiefly in Winneshek, Allamakee, and Howard counties. Although exactly the same length as the Turkey River, its narrow basin gives the Upper Iowa only two-thirds of the drainage of its neighbor to the south."

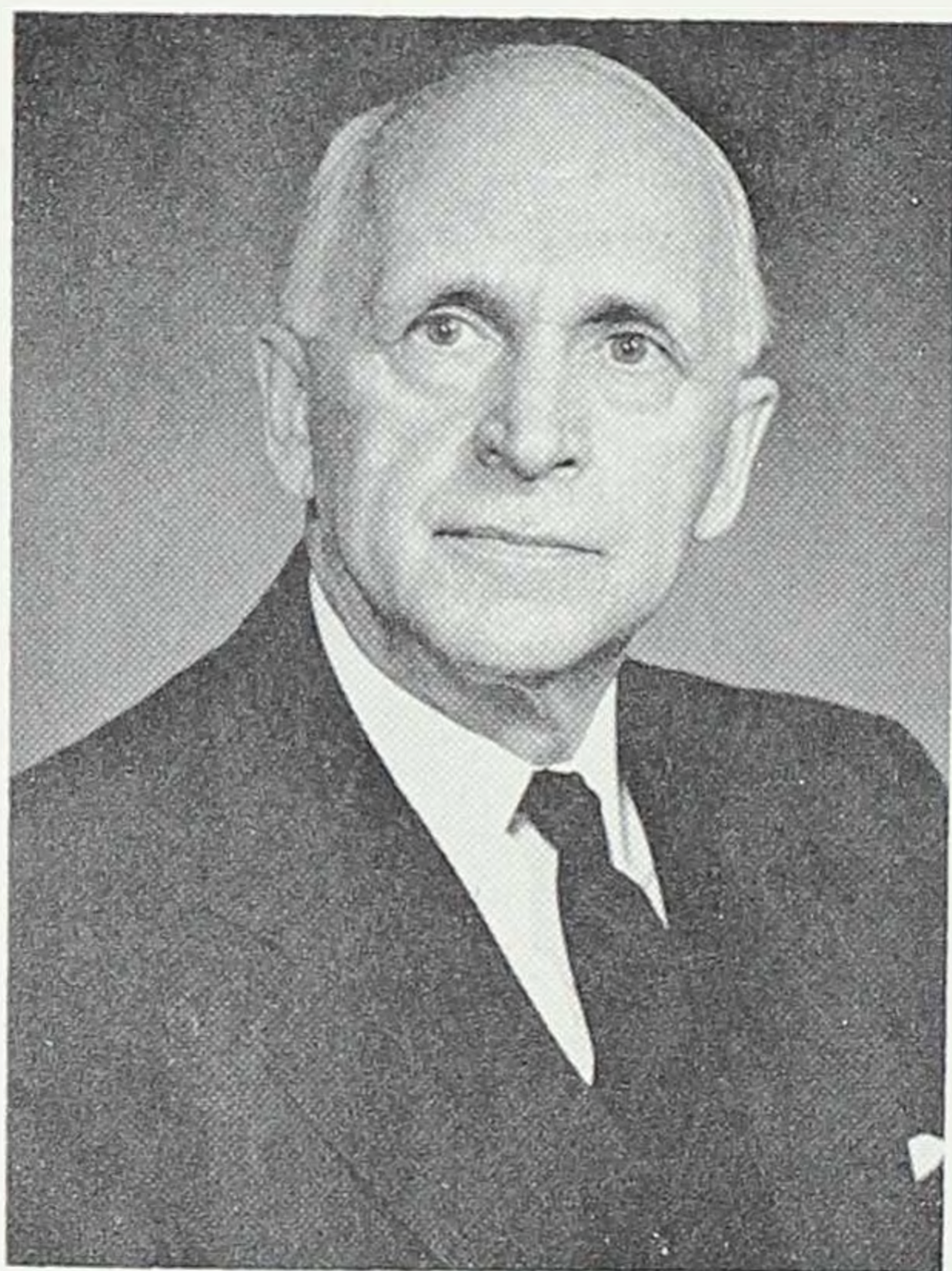


SITES ON UPPER IOWA RIVER

- 1-Lane, 13Ae18, 19
- 2- Elephant, 13Ae13
- 3-O'Regan, 13Ae12
- 4-New Galena, 13Ae5
- 5-Hogback, 13Ae3
- 6-Burke, 13Ae6
- 7-Woolstrom, 13Ae38

From Petersen's Iowa — The Rivers of Her Valleys

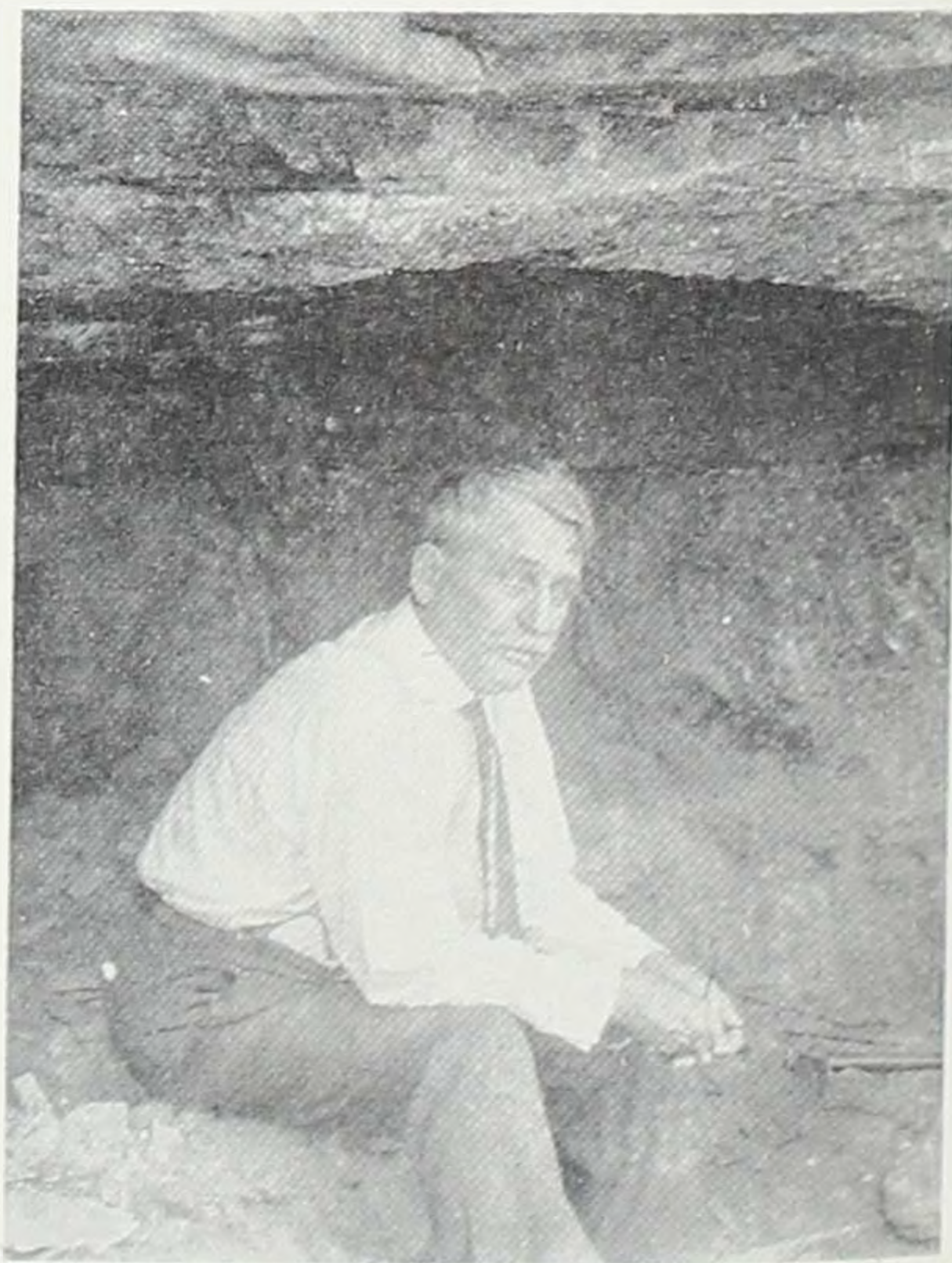
"The Upper Iowa enters Allamakee County through a broad, flat-bottomed valley flanked by steep bluffs, many of them 400 feet high. Almost all of these heights are crowned with bold 'mural escarpments.' Perhaps the most astonishing feature of the valley in western Allamakee County is the series of great loops or oxbows along which the river winds its serpentine course. This water-carved relief is characteristic not only of the main valley but of each little tributary — Waterloo Creek, Bear Creek, Canoe Creek."



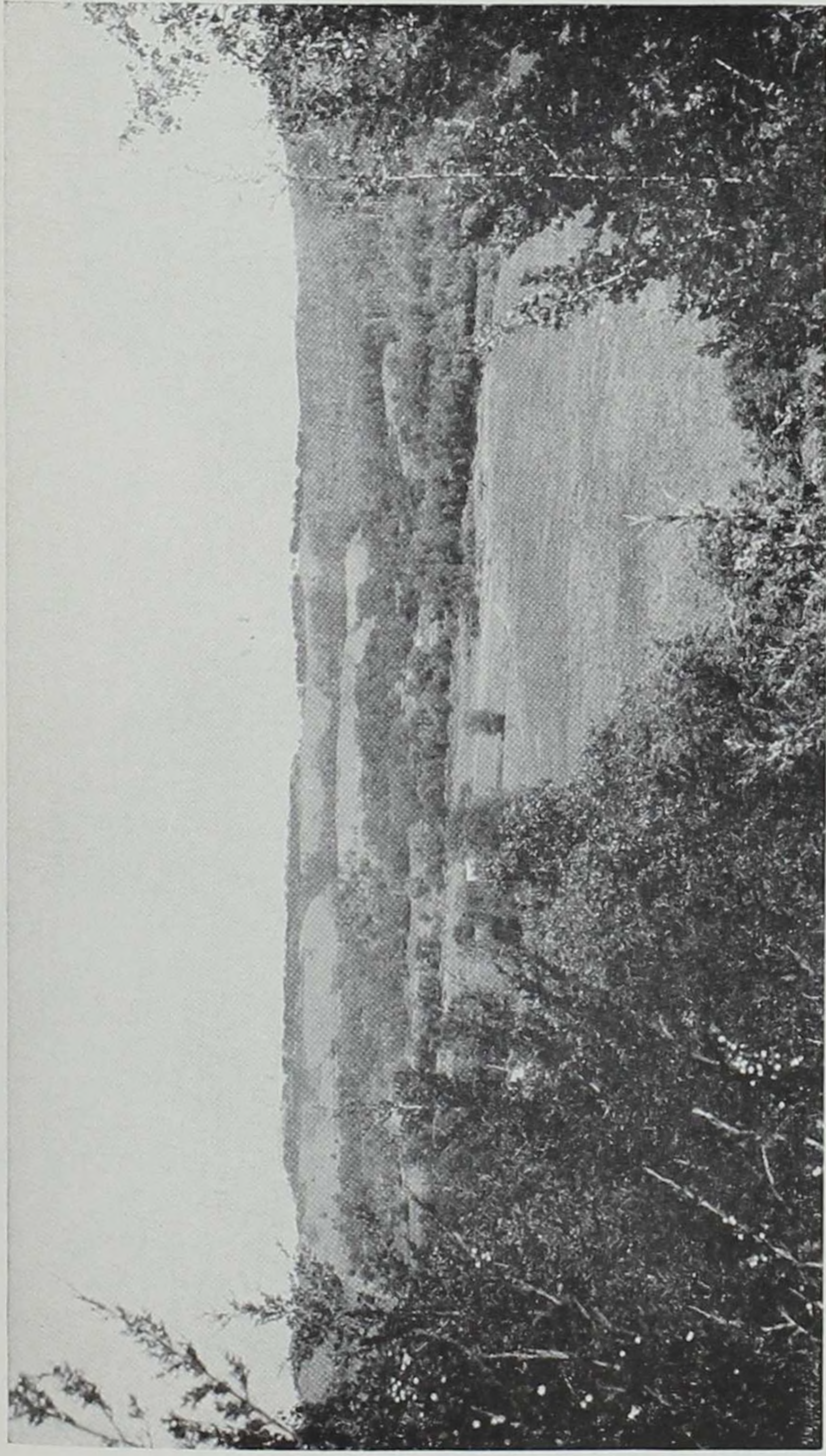
DR. CHARLES REUBEN KEYES

Research Associate of the State Historical Society and Director of its Iowa Archaeological Survey.

An amateur archeologist with a scientific approach to his hobby. He served as assistant director to Dr. Keyes during much of the period covered by the Iowa Archaeological Survey.

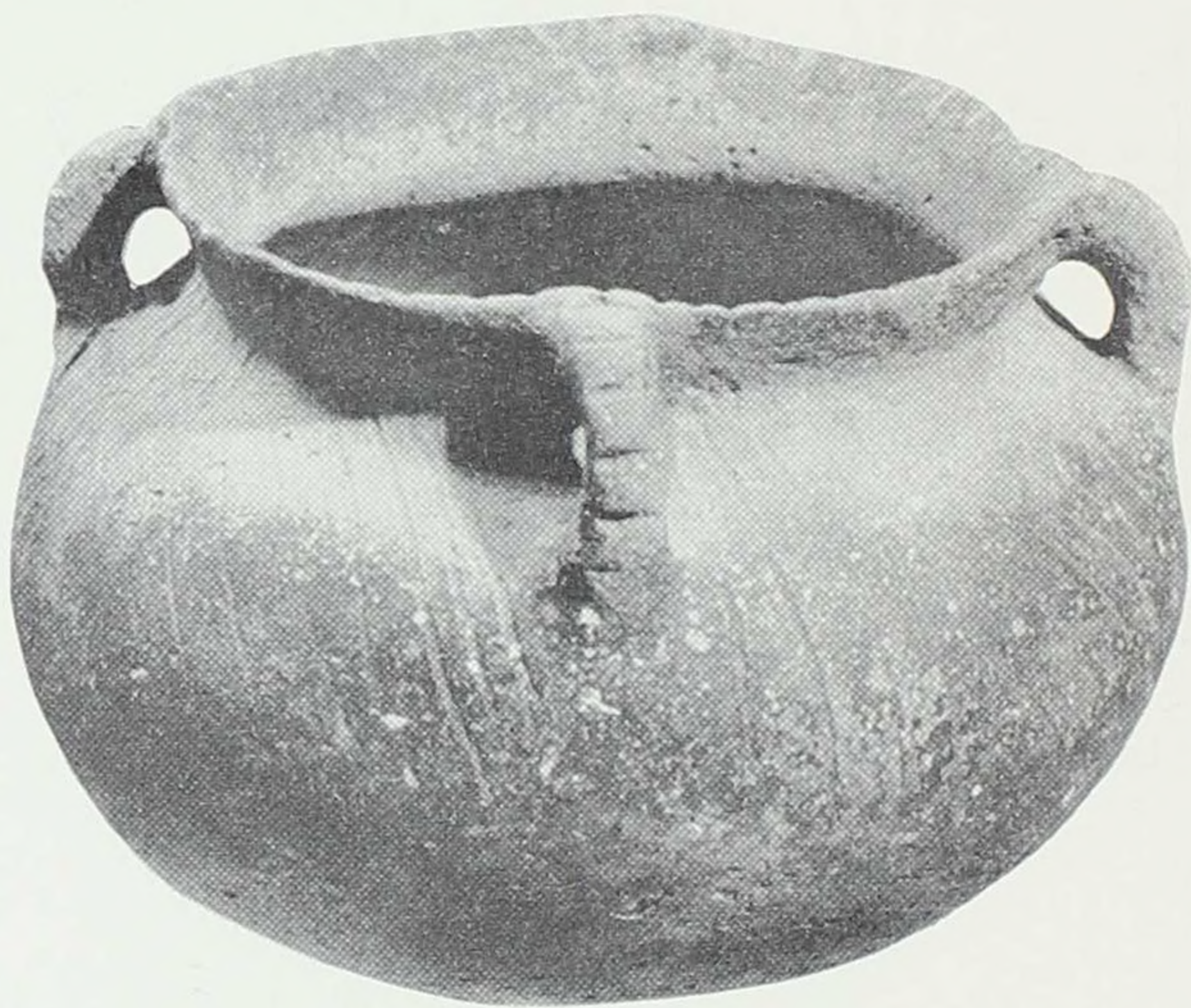


ELLISON ORR



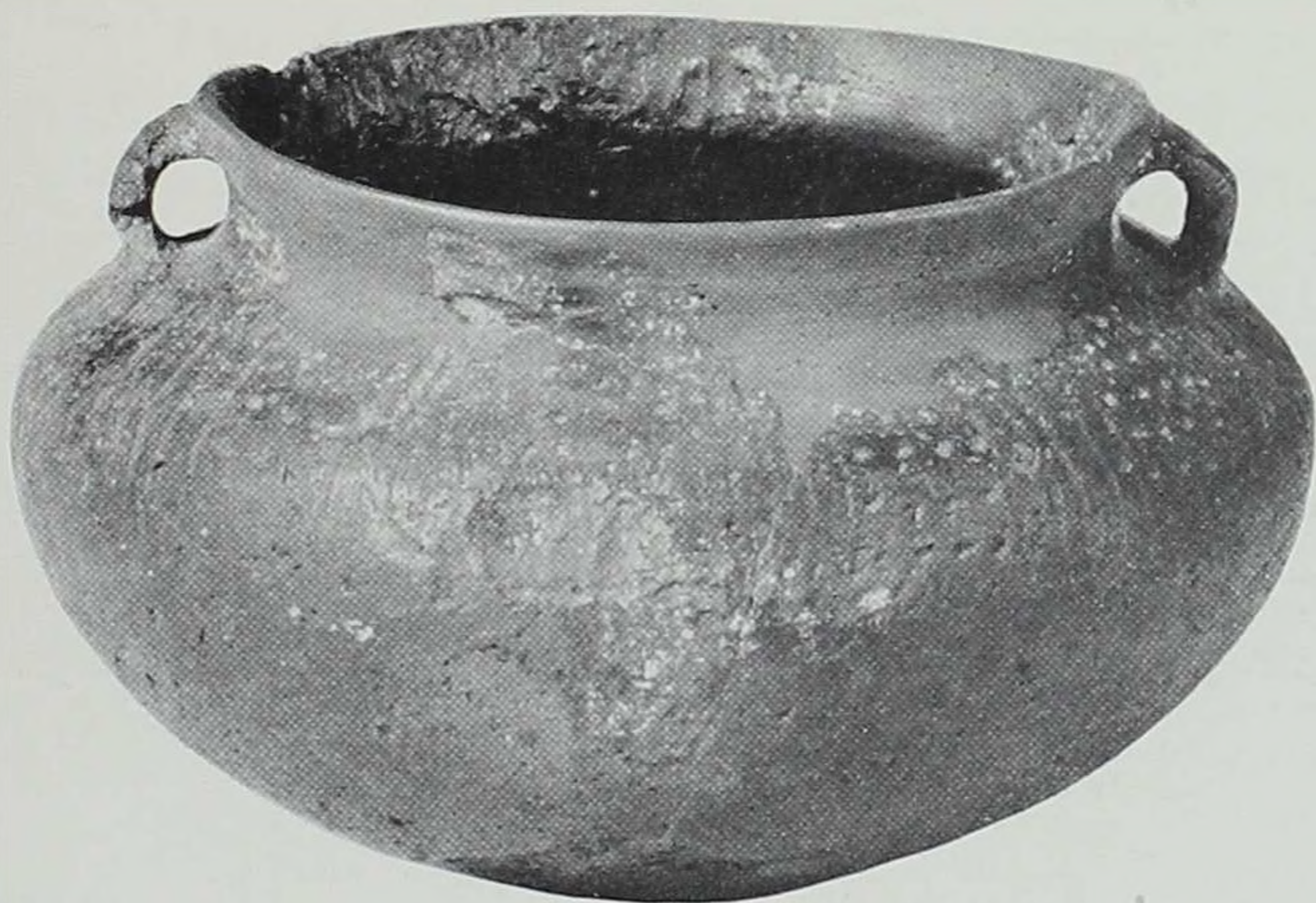
From Petersen's Iowa — The Rivers of Her Valleys

"Since about 1889 geologists, following the suggestion of Samuel Calvin, have substituted the name Oneota for Upper Iowa. . . . historically the Upper Iowa has a better claim to its common name than any other Iowa stream. It was none other than the redoubtable Nicolas Perrot who asserted that the river was 'named for the Ayoos savages' [Iowa Indians] when he became French Commandant of the West in 1685. No other river in Iowa can trace its present-day name back as far as the picturesque Upper Iowa."

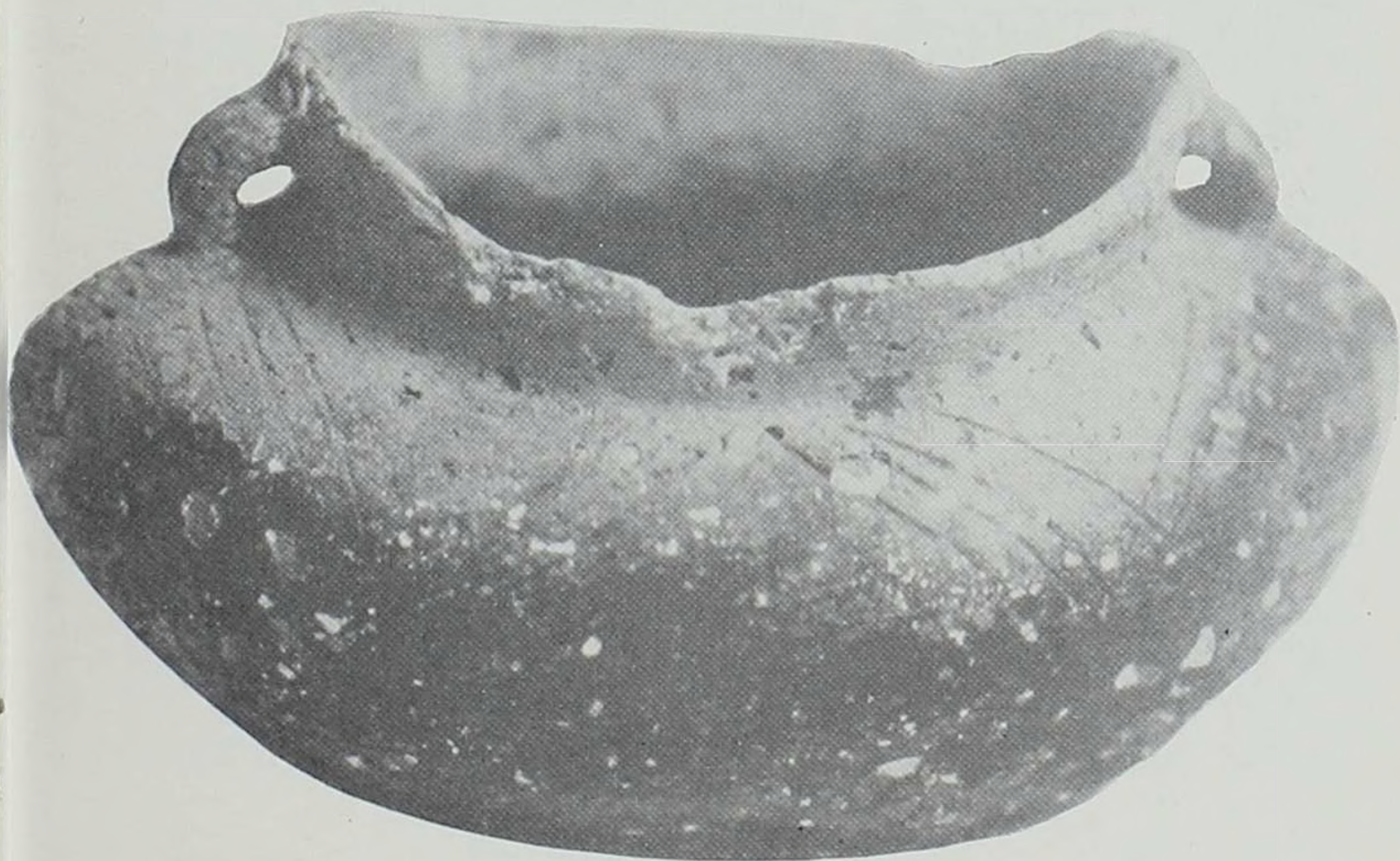


Photos by Ellison Orr

Pottery Vessels from the Hogback Site

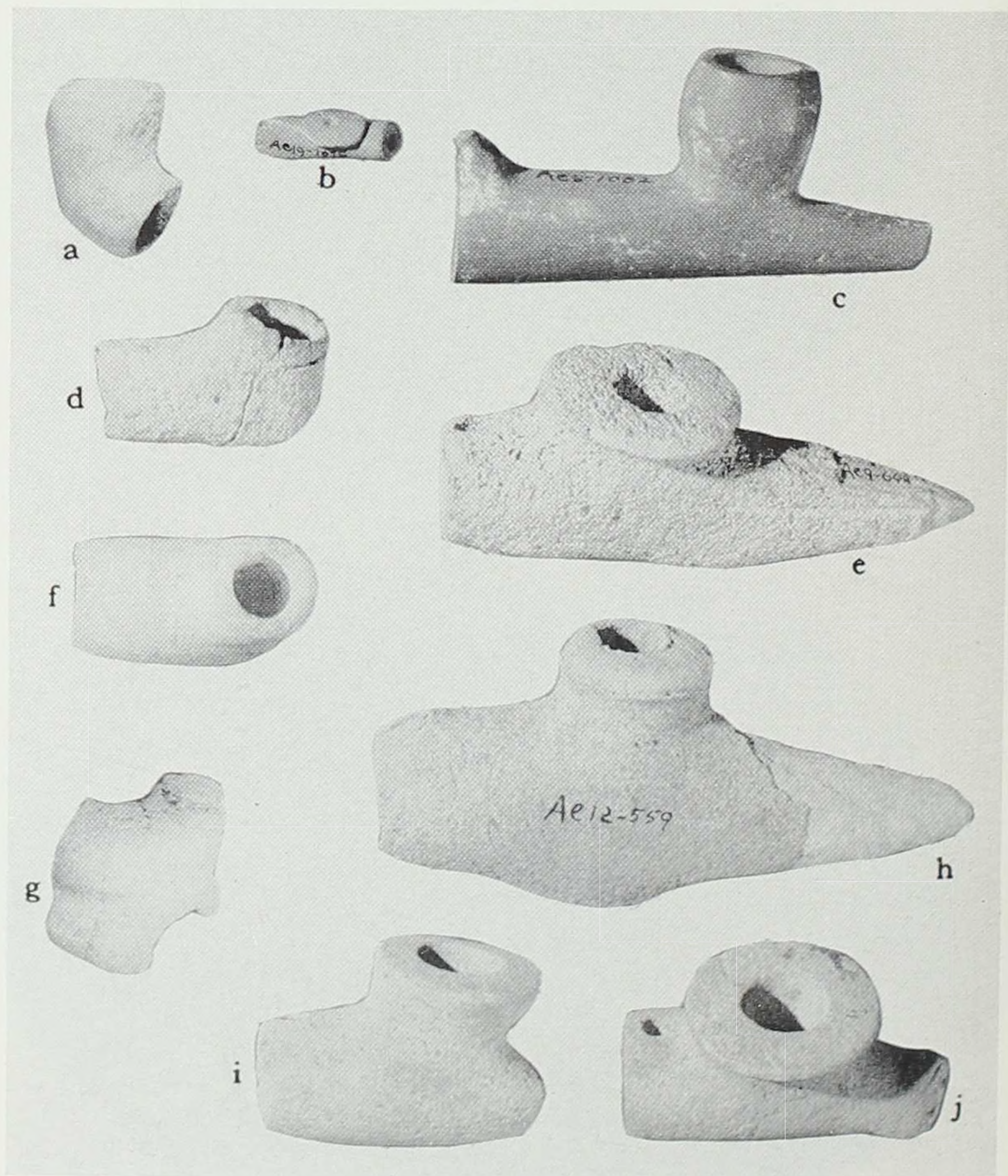


Milwaukee Public Museum Photo

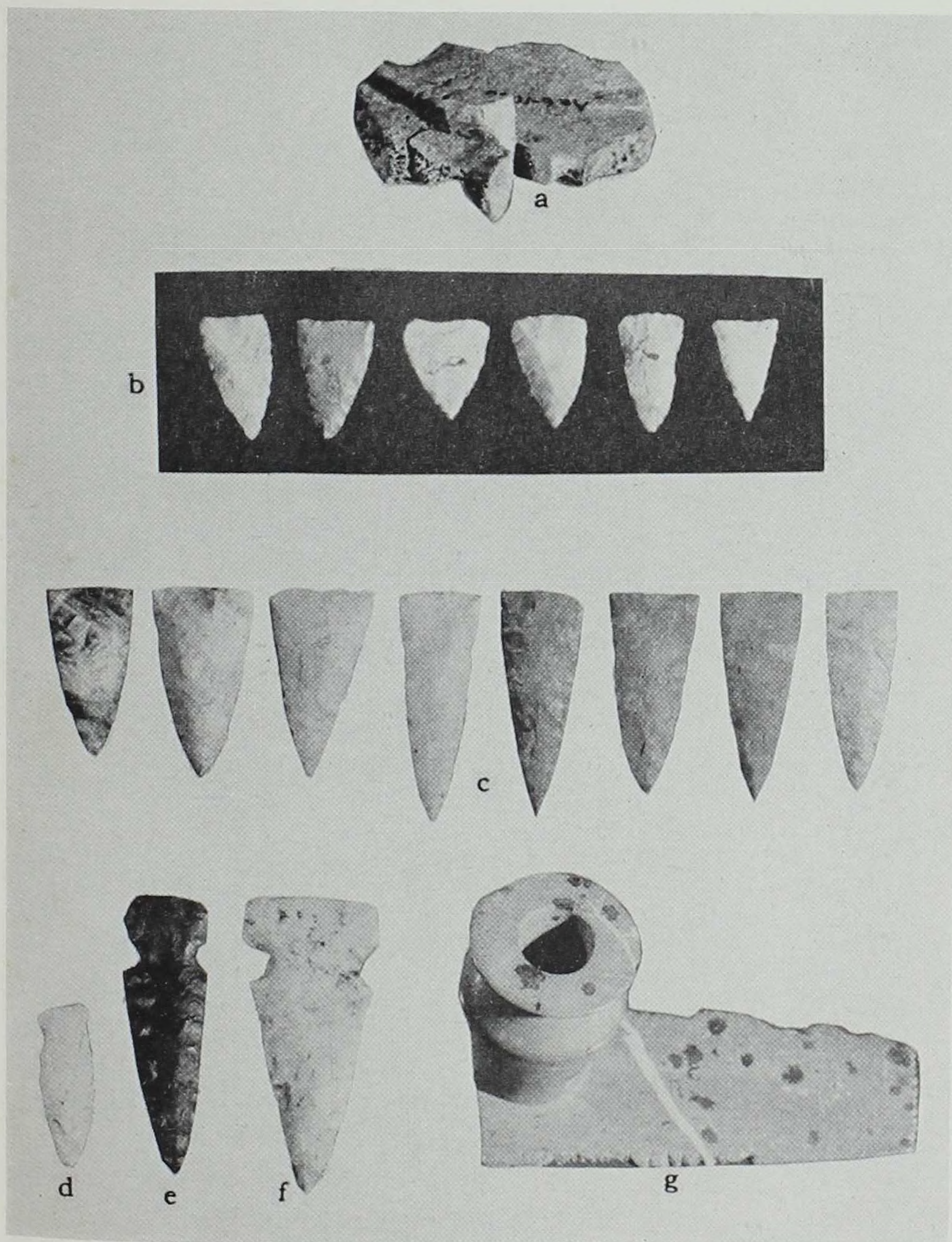


Pottery Vessels, New Galena and Woolstrom Sites

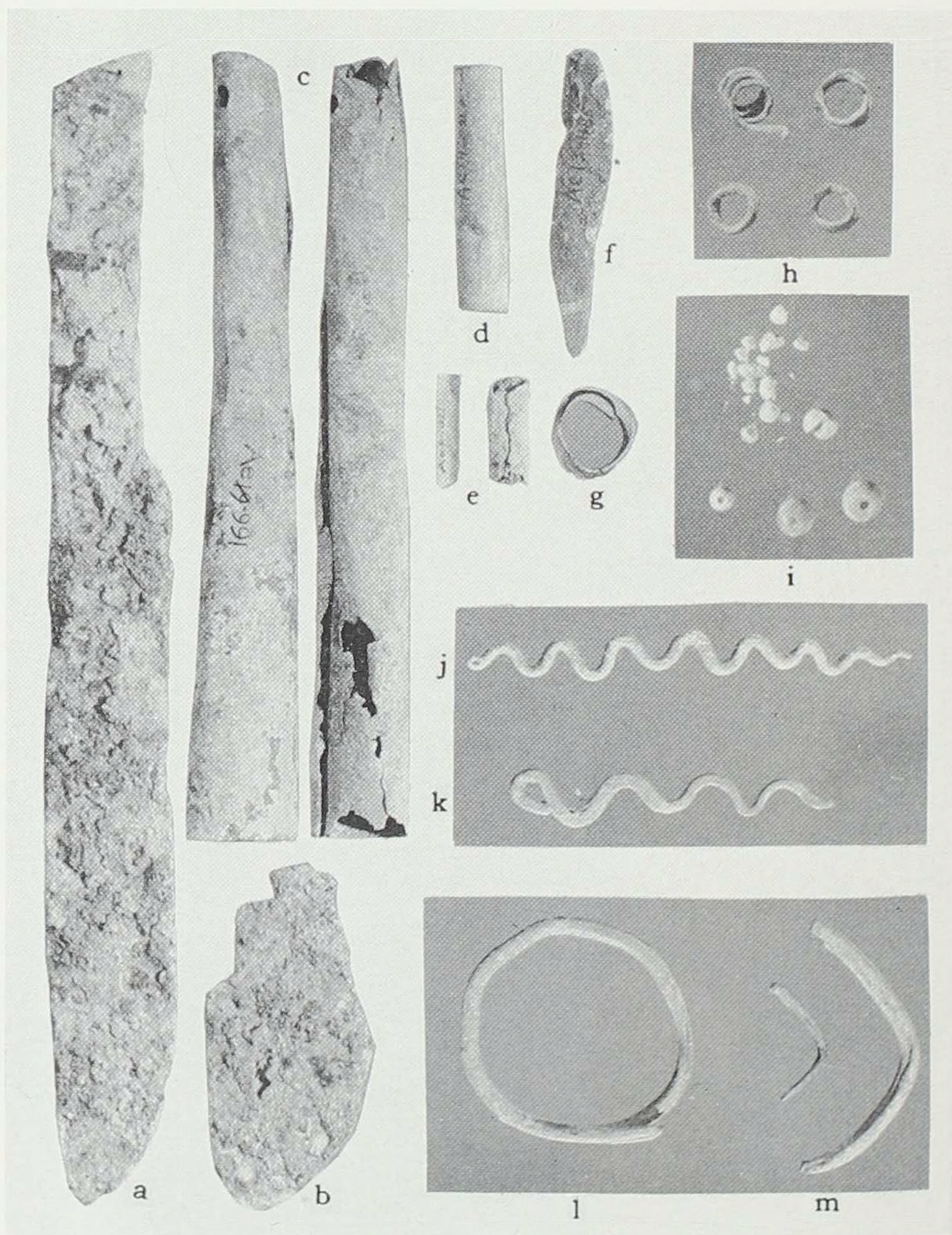
Ellison Orr Photo



Ground Stone Pipes

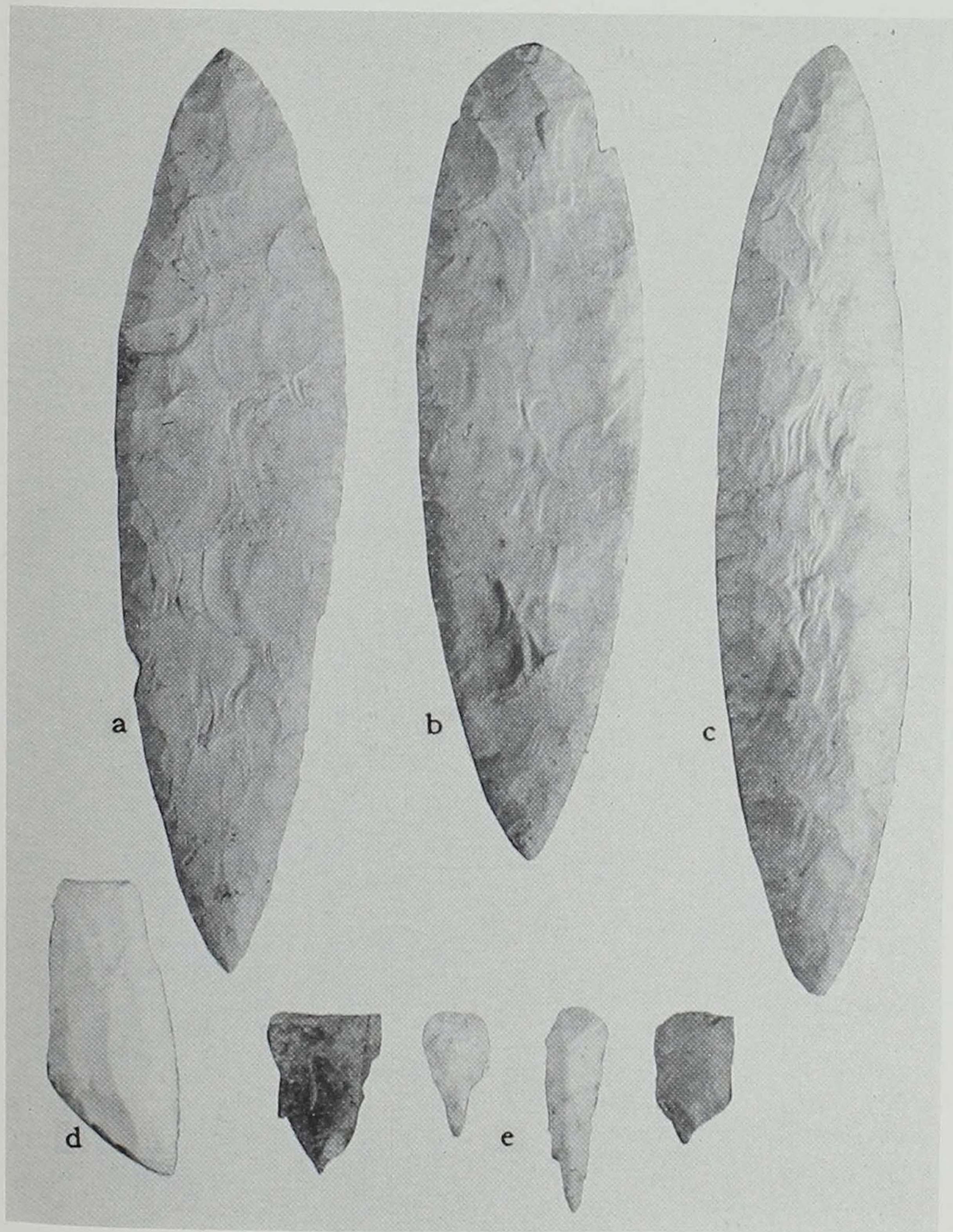


Arrow points and unusual pipe
a. Point in sternum; b. Typical village site projectile points; c. Typical points found with burials; d,e,f. were all found on Upper Iowa in Allamakee County; g. Pipe with burial.

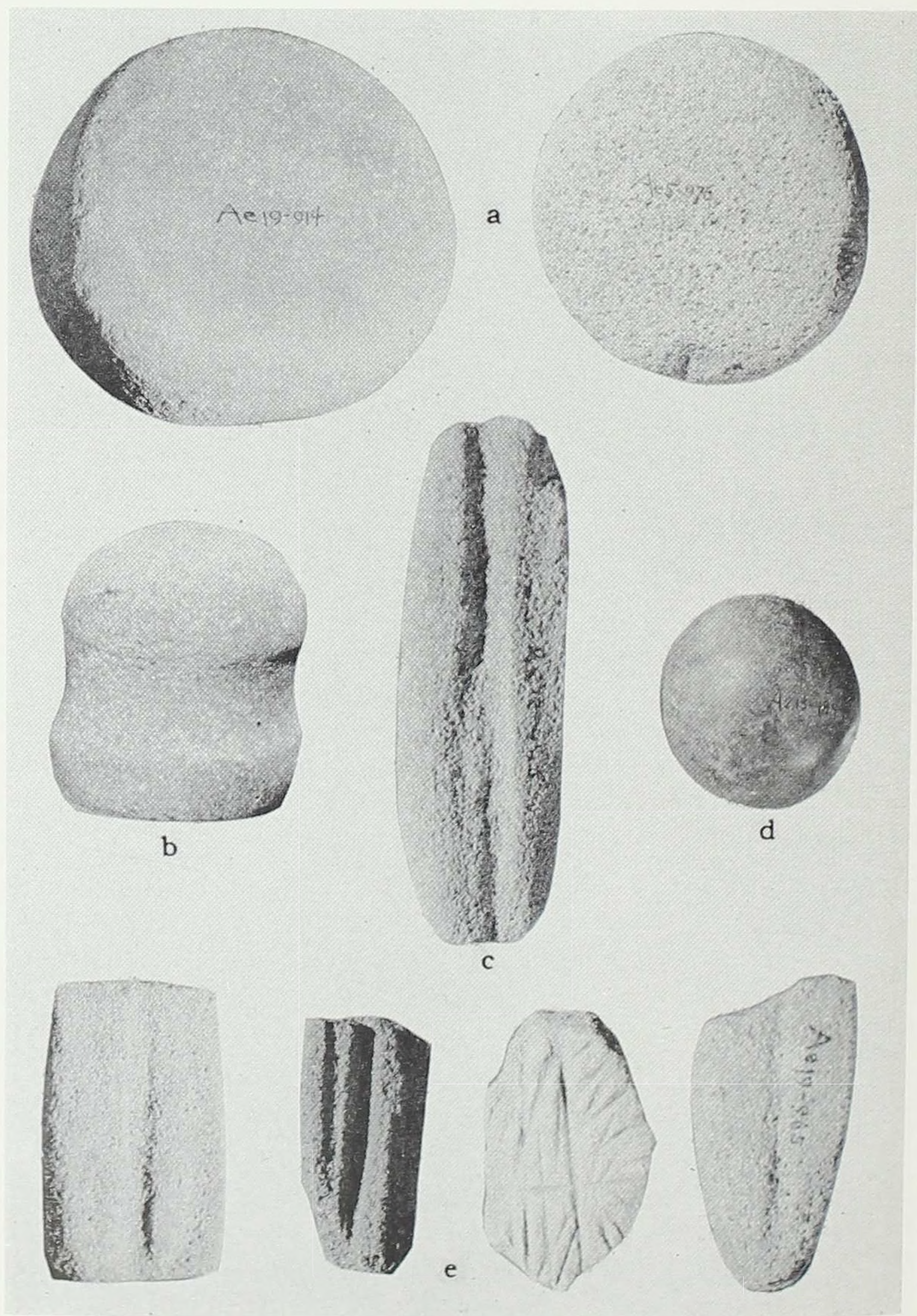


Metal Tools, Ornaments, Glass Beads

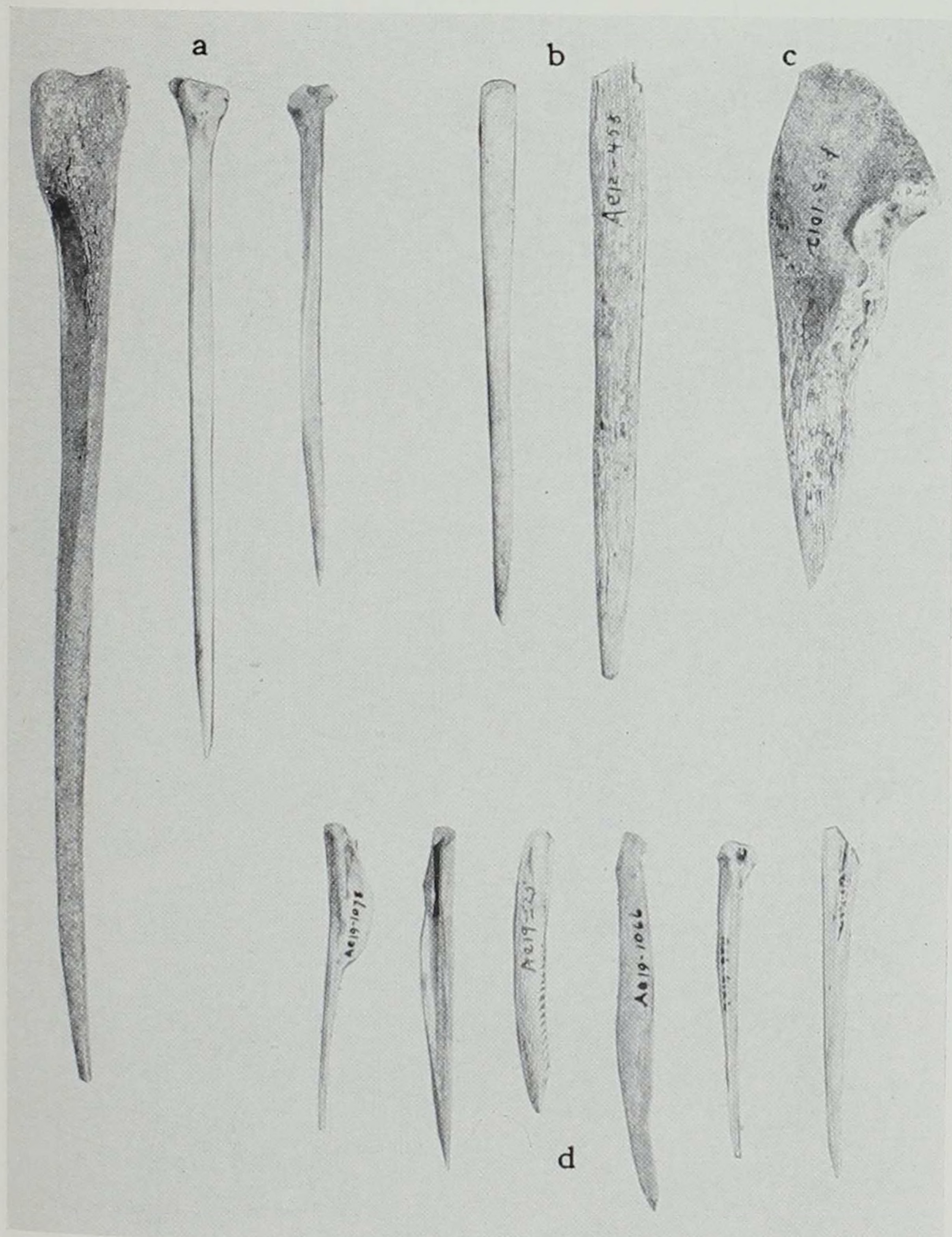
a,b. Iron; c. Ear ornaments; d. Rolled metal tube; e. Rolled metal bead; f. Metal object; g. Metal ring; h. Metal ear coils; i. Glass beads; j,k. Metal serpents; l. Metal bracelet; m. unidentified. Ae 19-1074 (All artifacts in Keyes collection are thus identified, viz.: Ae (Allamakee) 19 (Lane site) 1074 (number of the specimen)).



Chipped Stone Knives and Gravers
a,b,c. Ellipsoid knives; d. Ae 18-553; e. Gravers

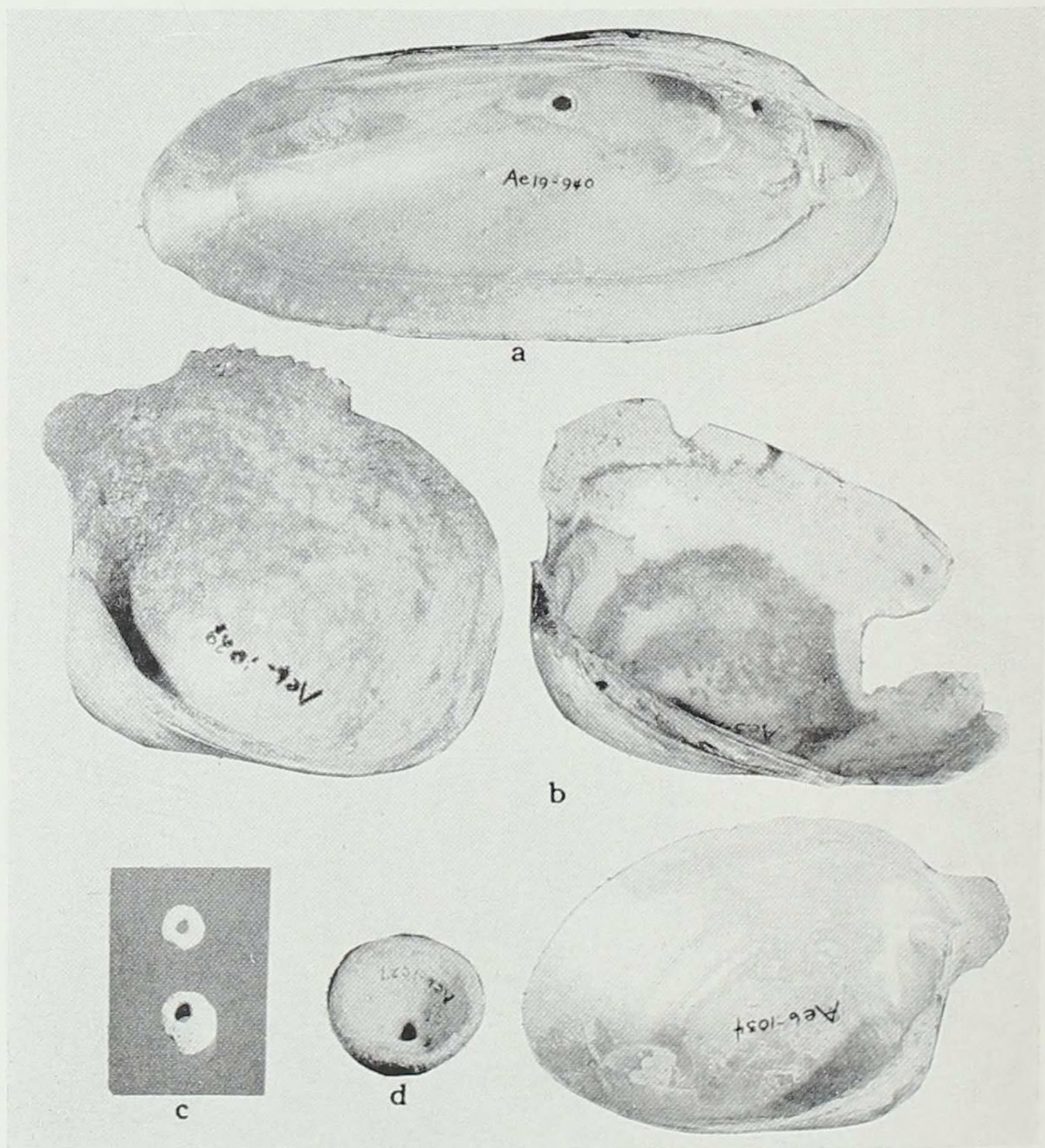


Stone tools for grinding corn, pounding, and abrading. a. Mullers; b. Hammer; c. Arrow smoother; d. Ball; e. Sandstone abraders.



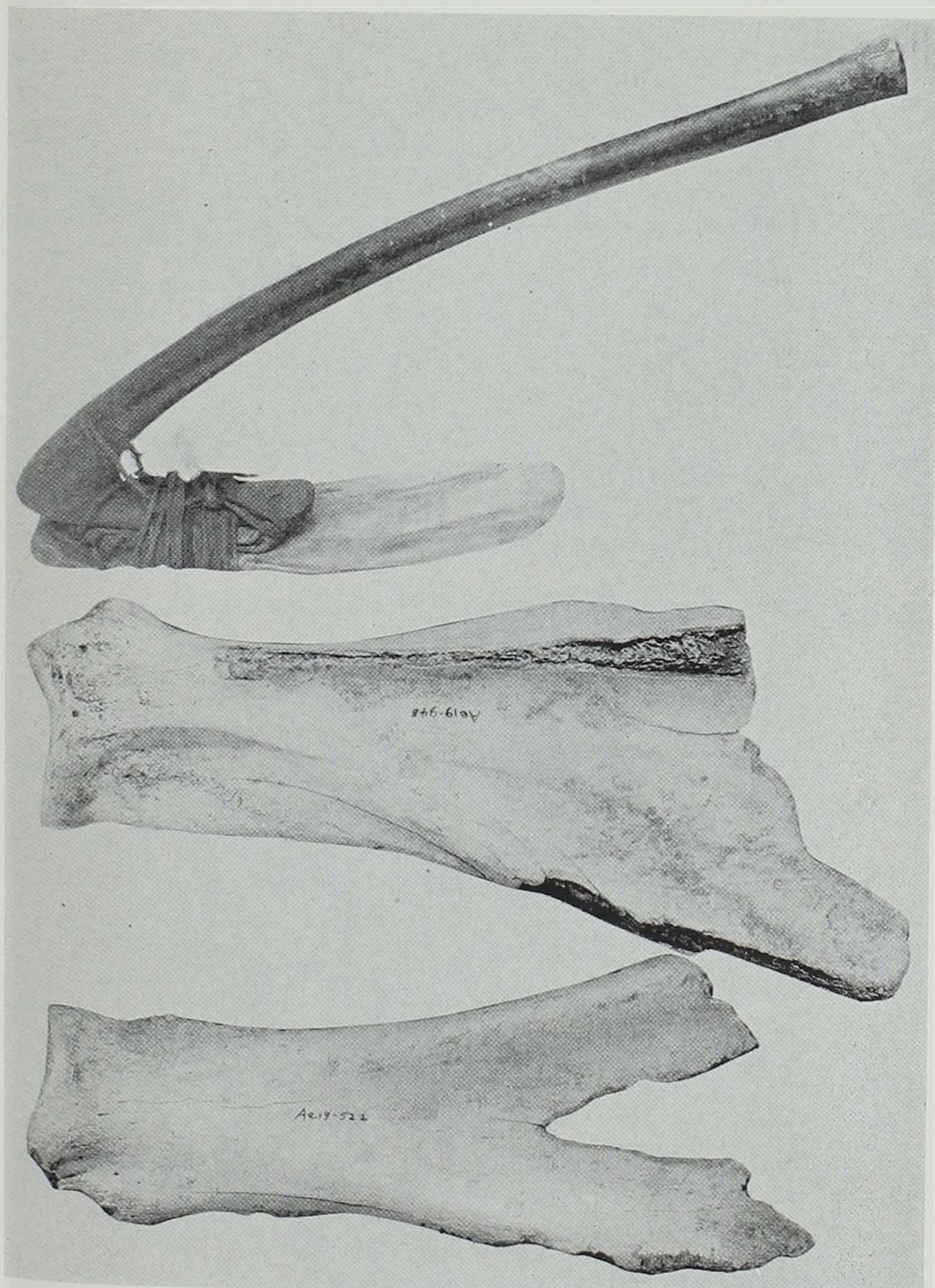
Bone Perforators

a. Awls with one end unmodified; b. Awls with both ends modified; c. Ulna awl;
d. Fish and bird bones.



Courtesy Bureau of American Ethnology

Shell Spoons and Ornaments
a. Pendant; b. Spoons; c. Beads; d. Fossil ornaments.

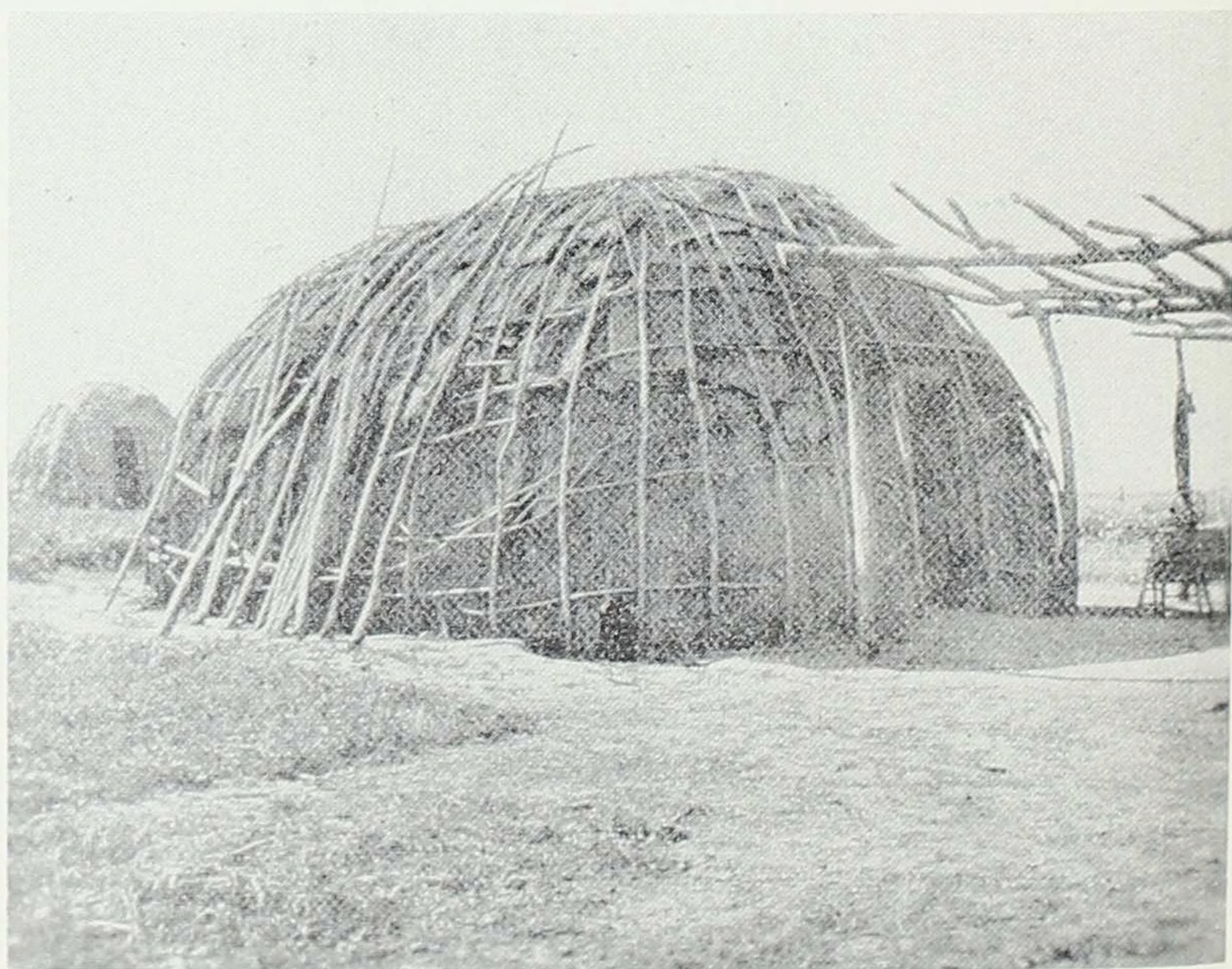


Courtesy Bureau of American Ethnology

(Top) Show how wooden handle is attached to bone hoe blades.

Ellison Orr Photo

(Bottom) Worn and broken bone hoe blades once used in gardening.



Courtesy Bureau of American Ethnology

Ioway dwellings on Kansas reservation; elm bark home and corn drying rack.

Mounds National Monument. Dr. Wilfrid D. Logan, National Park Service, has since written up the Woodland materials in his doctoral thesis at the University of Michigan. The Oneota materials have recently been analyzed by Dale Henning in his master's thesis at the University of Iowa, and by the writer in *The Missouri Archaeologist*.

Evidence of the Orr focus Oneota culture was found at seven of the sites excavated under the FERA-WPA projects. Five of these were on terraces or hills bordering the Upper Iowa River, the first (the Lane site) being about nine miles from the river's mouth and the others ("Elephant," New Galena, O'Regan, and "Hogback") occurring at intervals along an eleven mile stretch upstream. Two of the sites (Burke and Woolstrom) are a short distance up Bear Creek, a small tributary that enters the Upper Iowa from the north in Hanover Township.

This is a rugged and beautiful corner of Iowa that was covered by only one ice sheet in the Pleistocene period. Thus, in contrast to most Iowa rivers which glide through rolling prairie or are bordered by low rounded hills, the Upper Iowa River in Allamakee County takes its meandering course toward the Mississippi through a flat wide valley bottom from which steep bluffs rise to a height of 200-400 feet on either side. Frequent outcroppings of white limestone cap the bluffs and

enhance the river vista. Tributaries enter the Upper Iowa through deep gorges.

In the great oxbows or loops that are formed by the sinuous course of the river, there stand fertile flood-free terraces 60-70 feet high that were once clothed with luxuriant prairie flora. Here the Ioways established their villages. On lower flood plain terraces were alluvial soils of great fertility where good crops of corn, beans, and squash grew easily. Large springs flowed nearby. Back from the bluffs the land continues to rise making divide crests of more than 500 feet above the river floor. Before the white settlers came the bluffs and high land were heavily wooded with a variety of deciduous trees and even some balsam fir, red cedar, and white pine. The Indian villagers were thus provided with wood for fuel and structures, as well as nuts and fruits for food. In the woods were white-tailed deer, black bear, raccoons, woodchucks, rabbits, wild turkeys and other edible animals and birds. In the prairies beyond were elk and, at times, bison. It is no wonder that the river terraces and hills have given evidence of extensive and long occupation by Indian peoples.

On at least two of the terraces investigated — Lane and New Galena — Orr found Oneota peoples had located their villages. More extensive excavation at the O'Regan site might have revealed a village area there too. Cemeteries occurred on three terraces and one hilltop — at the O'Regan,

Woolstrom, "Elephant" and Burke Hill sites. Burials were also intruded into Woodland mounds at the Lane, "Hogback," and New Galena sites.

As Dr. Keyes and Mr. Orr had hoped, this concentration of effort in Allamakee County did reveal much more about the archeological cultures than was known before, more than the specimens alone could ever tell. Now it is possible to understand more completely the way of life of the Indian communities which left behind the Orr focus Oneota cultural remains.

Their Way of Life

Archeologists cannot write the same kind of history for prehistoric times that professional historians write for historic periods because their sources of information are of such a different kind. Archeologists literally have to "dig" for their data. Then they have to interpret critically the facts they learn from the actual excavated areas and from the specimens found there. Frequently workers in other specialized fields are asked for help in the interpretation: in analyzing geological strata, in identifying animal bones or plant remains, in analyzing metal fragments. Ascertaining the sequence of cultures, that is, working out the *relative chronology*, is another important and sometimes intricate problem that has to be solved in order to reconstruct the past.

So it comes about that the kind of history the archeologist ultimately produces is basically a history of past societies as revealed by archeological cultures. He is able to show which culture preceded another, define the geographical extent of certain cultures, reveal which contemporaneous ones were related and which developed from another, and finally, describe the way of life of the various cultural groups. There is no discussion of

personalities, of reigns or administrations. There are very few dates. Absolute dates for the use of the archeologist result from dendrochronology (tree ring studies) or radiocarbon calculations. They are highly valuable, but as yet, for many areas, they are few and far between.

A middlewestern archivist-historian recently characterized the contribution of archeology to the history of the American Indian as only "remote and conjectural." It is true, of course, that archeological interpretation involves setting up working hypotheses to explain facts and their significance. But as the accumulation of factual data has increased by leaps and bounds in the past twenty years, the hypotheses have come to rest upon firmer and firmer foundations, well beyond the bounds of mere conjecture. Particularly is this so when a culture extends into the historic period and can be linked to a known Indian tribe. Such is the situation with the Orr focus Oneota materials described hereafter.

These cultural remains are found in village and cemetery sites from the mouth of the Upper Iowa River upstream for over fifty miles where they dwindle out beyond Decorah, Iowa. However, they seem to be concentrated along the lower river, in the area where Dr. Keyes and Mr. Orr conducted their excavations. They are found also along some of the lower tributaries, as Bear and Waterloo creeks. Almost identical remains have

also been located in southeastern Minnesota, notably along Riceford Creek, a tributary of the Root River in Houston County.

How long did these Indians (the Ioways and possibly the Otos) live here, just west of the Mississippi River in the northeastern Iowa and southeastern Minnesota region? They were here in the 1680's, very likely in the middle of the 17th century when visited by the Ottawas and Hurons, and possibly for many years before that. Absence of white contact material at some of these terrace villages, and its presence at others, suggests a sequence of occupation in the area; whereas several villages with, and several without, trade objects would imply occupation of more than one village at a time.

In the middle 18th century, the Ioways were said to number 200 to 250 warriors. This would mean a total population of 600 to 1000, depending upon the computing ratio used. Such a population figure was probably applicable to the late 17th century also, and could account for several contemporaneous villages. So could the added presence of the related Otos — a smaller group than the Ioways.

Another interesting consideration is that the people may not have lived together as a tightly coherent "tribe" under a powerful tribal "chief" in the familiar modern concept of Indian life. There is pertinent evidence that, instead, these Indians

may have lived in several *extended family* groups. The groups would have consisted of a single clan (a *gens*), with everyone related through the male line of descent, or several such clans may have lived together. Each group would have been self-governed with the head of the clan an important authoritative leader. All together the several units would have formed a loose confederation. Such a pattern of autonomous kin-grouped villages seems to have been the early village plan of the Oto and Winnebago Indians — relatives of the Ioways.

A confederation like this has been called a "small nationality" by the well-known anthropologist, Dr. A. L. Kroeber. Although functioning separately in the routine of daily life, the combined villages would have been recognized as a unit since all the people spoke exactly the same language, had the same customs, and had a strong "likemindedness." Moreover, in certain circumstances, when it was advantageous for the villages to function together as a larger unit, as on the summer buffalo hunt or in connection with certain ceremonies, they would join in concerted action. In historic times, under the pressure of coping with the white man's demands, such confederacies were apparently forced into the more tightly-knit units identified as *tribes* today.

It would seem that existence for these Indian groups on the Upper Iowa River must have been fairly peaceful from an Indian viewpoint. At least

there are no fortifications of any sort, nor remains of any weapons except arrowpoints. Certain circular earthworks have been ascribed to the Oneota culture, but it is likely that they were built at an earlier time by Woodland peoples.

The terrace villages were probably occupied by someone most of the year around, although during the period of the village buffalo hunt in mid-summer months only a few would be there, and during the winter, there may have been some exodus by small family groups to more protected wooded river-bank locations nearby. But they were permanent villages in the sense that here gardens were planted year after year, and to these villages the hunting parties returned. If asked where their villages were, the Ioways would undoubtedly have described this general location. It was home.

No evidence of Indian houses was found by Dr. Keyes and Mr. Orr on the village terraces. This suggests that they were rectangular or elliptical structures built with a pole framework and covered with bark slabs or reed matting, and with a central fireplace, like the dwellings used by Indians living in the woodland areas to the east. Frequent plowing would soon have destroyed the only certain vestiges of their existence — the fireplaces and post-holes.

Many pits dug into the ground to serve as small storage cellars were found; in fact, more than fifty were dug out at the Lane site. Some may have

been within houses, serving as closets do nowadays for stowing away personal possessions and provisions, but most were probably outside and used only for food storage. The ultimate use of many of them for trash containers — where broken tools, pottery and food remains were thrown — often makes them a rich source of information for the archeologist.

The year long pattern of village life undoubtedly accommodated itself to the essential economic pattern. Although gardening was important, as noted earlier, hunting was equally or more so. The excavations yielded large amounts of bones of deer, elk, and smaller mammals, as well as of wild turkey and other birds.

Hunting for small game would have gone on all the time close at hand. Hunting buffalo was a different matter. The animals moved in large herds in seasonal migrations north and south, and for several reasons they were not suitable game for a few hunters on foot to kill, or to carry home. They required an organized village hunt. The reward was great, however, for buffalo furnished an abundance of tasty meat, large hides for clothing, blankets, tipi covers, and other purposes, as well as bones for hoes, perforators, and other tools.

The hunting and corn-growing Indians who lived westward on the edge of the short-grass Plains in early contact times were accustomed to go on summer and winter village hunts that lasted

several months and involved very elaborate ceremonialism. Some of the Indians who lived in the woodlands east of the Upper Iowa River also had summer village hunts, but they were usually shorter, simpler affairs. We do not know which hunting pattern the Orr focus Oneota people followed more closely, but that they did go on a hunt of this nature at least in the summer is most likely. Father André wrote in 1676 from Green Bay "their [the Ioways] greatest Wealth consists of ox-hides [buffalo hides] and Red Calumets [catalinite pipes]."

The hunt would have taken place after the corn was hoed twice and could be left untended to grow to maturity. It was truly a village proposition in that everyone would go who was able, carrying tipis and other necessary equipment. At this period the Ioways probably had no horses — there is no such evidence in the excavations or early documents — so the hunt entailed a march of many miles. A special staff of officers would have been appointed to guide and control the movement. A certain amount of ritualism that attended the whole procedure would have added further discipline.

These Oneota culture people probably searched for the buffalo to the west and southwest of their villages. Even as late as the early 19th century, in mid-July, Lt. Stephen W. Kearny noted a herd of 5000 buffalo on the upper Raccoon River. The

buffalo herds were approached by stealth, surrounded, and the animals killed by bow and arrow.

When each herd kill was made, the women would butcher immediately. A hearty feast, probably spiced by pleasure of success and noisy conviviality, would follow. Then the women would begin to dry and prepare the meat for transportation back to the village and to clean and cure the hides. It would be a heavily loaded caravan that plodded eastward on the return trip even though most of the bones had been left at the butchering sites. But succulent sweet corn would be ready for eating when they got home.

Wild berries and fruits, nuts and roots supplemented the meat, corn and bean diet, and the occurrence of fish bones in the refuse pits reveals that these Indians were also fishermen. The profusion of clam shells suggests that mussels too were eaten.

There must have been much activity in these Indian villages. All their ornaments of dress, their pipes, and the tools they used in preparation of food, or in skin working, pottery making and other activities, had to be made from stone, bone or shell. The men did the stone chipping, using for the most part local cherts, flints, and jasper. In addition, some use was made of catlinite which is found in Pipestone County, Minnesota, and of Knife River chalcedony and Bijou Hills quartzite from the Dakotas. Whether these foreign materials were pro-

cured on special excursions or chiefly through inter-tribal trade is not known.

Although many of the tools were quickly made for utility purposes, some of the arrow points and leaf-shaped blades are beautifully shaped and chipped. Their creators were highly skilled craftsmen. Besides chipped stone projectile points and knives, the excavations revealed scrapers for skin working, drills, gravers, and various unspecialized tools. Stone objects shaped by grinding and abrading rather than chipping included hammerstones, chisels, celts, hand grinding stones and mortars, rubbing stones, abraders and pipes. One of the limestone pipes had a little effigy animal head at the end of the bowl stem.

From bone were made perforators, needles, chisels, and hoes; and from antler — arrowpoints, flakers, and handles for stone tools. Spoons fashioned from mussel shells had notched and scalloped decorative edges, and handles or hafting tangs made by notching.

It was women's work to make the pottery vessels used for cooking. Perhaps some wooden or birchbark dishes were used, but if so there was no evidence of them remaining in the excavations. The buff-colored pots are basically uniform in shape and decoration, generally varying from quart-sized containers to much larger ones that would hold several gallons. They were made from native clay combined with flaked shell for temper

and were fired in open or banked fires, a crude process that resulted in frequent mottled color.

The shape is usually that of a round or elliptical globular jar, somewhat flattened in its vertical dimension, with a rim that inclines outward at the opening, and with two opposing strap-handles. Decoration was simple both in technique and in design motifs. The edges of the rim were scalloped or notched, somewhat as a pie crust edge is crinkled. The trailed or incised lines and punch marks on the jar body, usually forming rectilinear designs, were frequently imprecise as if done quickly or inattentively. Obviously pottery making procedures were strongly traditional, passed from mother to daughter as a routine matter.

Most of the personal ornaments found in the course of digging were bone or shell beads. There was also a shell pendant, and some copper beads, ear coils, and serpent shapes.

Some of the metal objects have offered a puzzling problem in interpretation. Although brass indicates white contact, copper ornaments may be made either from trade copper kettles, or from native Lake Superior copper. It is important to distinguish between the two because of their time implications, especially if no glass beads or other articles of European manufacture are present to verify a post-white contact dating.

The surest way to distinguish is by qualitative and quantitative spectrochemical tests of the metal,

along with metallographic ones. Recent spectrochemical tests on the Upper Iowa River specimens suggest that some of the objects were of native manufacture made from either Lake Superior float copper (chunks carried southward by glacial action) or from copper procured at surface outcroppings near Lake Superior, either directly or in inter-tribal trade. The copper would be pounded cold or hammered when hot into thin sheets. From these sheets, rolled tubes or large cones were made which served for beads, ear dangles, or for other decorative purposes. The interesting serpent shape was made by folding in half lengthwise a strip of the thin metal originally c. $2\frac{1}{2}$ " long and $\frac{1}{4}$ " wide. That was then hammered flat and bent into three arcs with a tiny loop for a head.

Delicate ear coils that would "clip" onto the edge of the ear were made by folding a strip of copper in upon itself from two sides, making a 3-ply strip only $\frac{1}{16}$ " wide. This was then wound around a stick or little finger making a coil $\frac{5}{16}$ " in diameter. There are four or five rounds in each of the preserved coils. Rings were made in a similar way.

The excavations revealed little of the ceremonial life of these Indians who lived on the Upper Iowa River, although that surely was a highly important phase of their existence. Certain traditional burial practices were noted when the cemeteries were investigated. It was customary to

place the body on its back in a grave in full attire. With the body were usually placed objects that may have represented the person's special abilities or rank in the social group. It is a matter of record that among the Ioways there were three classes of society in early times: "chiefs," "braves," and "commoners." Although some burials did not have any objects specially placed with them, and some had definitely more than others, it is unsatisfactory upon present evidence to try to correlate them with any class distinctions.

It is known that in 1676 curious Ioways visited the French at Green Bay. Perhaps it was on this visit that they got some of the blue glass beads, the iron knives, or the brass coils found with burials at several sites. Or perhaps they got some of them through Nicholas Perrot who was in their area in the early 1680's and who actually visited an Ioway village in 1685. Certainly the scantiness of trade materials at the sites excavated — the absence of substitution of metal pots for clay ones and metal tools for stone and bone ones — and the lack of gun parts, all suggest that these were the first trade articles these Indians had received. That they cherished them is illustrated by their placing such objects with the dead. That they wanted more after Perrot's visit is illustrated in La Potherie's comment, "Their eagerness to obtain French merchandise induced them to go away to hunt beaver . . . and for this purpose they penetrated

far inland." In 1688 in Montreal, Perrot engaged a Frenchman, Mousseaux "dit Laviolette," to make an expedition just to the Ioways to trade European-made goods for beaver skins.

But before trade goods in any abundance had reached the Ioways, they had moved westward, perhaps into the region of the Blue Earth River or farther west into what is now Clay County, where Dr. Keyes reported sites with cultural remains similar to those on the Upper Iowa River. Whether the Ioways left in order to live nearer untrapped beaver streams or whether attacks from other tribes were the underlying cause is not known. It is certain beyond question, however, that this move signalled the beginning of the disintegration of their native culture and of their cherished independence.

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Text and pictures in Catlin's *North American Indians*.

Fort Leavenworth, Lower Missouri . . . The Indians that may be said to belong to this vicinity, and who constantly visit this post, are the Ioway — Konzas — Pawnees — Omahas — Ottoes . . . Of the first named, the Ioways may be said to be the farthest departed from primitive modes, as they are depending chiefly on their corn-fields for subsistence . . . The present chief of this tribe is Notch-ee-ning-a (the white cloud, Plate 129) . . . whose portrait I have just named, was tastefully dressed with a buffalo robe, wrapped around him, with a necklace of grizzly bear's claws on his neck; with shield, bow, and quiver on, and a profusion of wampum strings on his neck . . . Wy-ee-yogh (the man of sense) [top right], (Plate 130) . . . Pah-ta-coo-che (the shooting Cedar, Plate 131) [left], and Was-com-mun (the busy man, Plate 132), are also distinguished warriors of the tribe. . . .