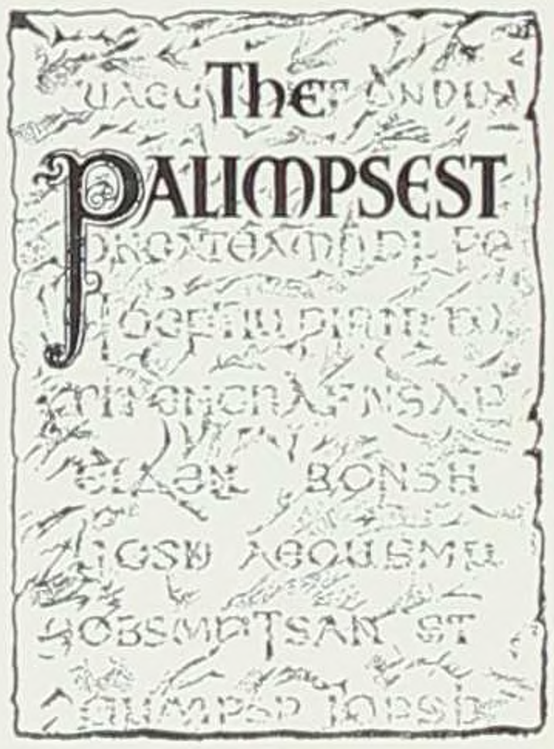
The PALIMPSEST

PREHISTORIC INDIANS OF IOWA

Published Monthly by
The State Historical Society of Iowa
Iowa City Iowa

AUGUST 1951



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 records 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.

Contents

PREHISTORIC INDIANS OF IOWA

Cover

Front — Glenwood Excavation of a House of Upper Mississippi Phase.

Back — A small part of the Ellison Orr collection on display in the office of the Superintendent of the State Historical Society of Iowa at Iowa City shortly after it was acquired for the Society in 1933.

ENTERED AS SECOND CLASS MATTER JULY 28 1920 AT THE POST OFFICE AT IOWA CITY IOWA UNDER THE ACT OF AUGUST 24 1912

PRICE — 15 cents per copy; $1.50 per year; free to Members

MEMBERSHIP — By application. Annual Dues $3.00

ADDRESS — The State Historical Society, Iowa City, Iowa

THE PALIMPSEST

EDITED BY WILLIAM J. PETERSEN

VOL. XXXII ISSUED IN AUGUST 1951 No. 8

Charles Reuben Keyes

On July 23, 1951, Dr. Charles Reuben Keyes died at his home on the edge of the Cornell College campus after a long illness. Born at Mount Vernon on May 5, 1871, Dr. Keyes was one of the ablest and most versatile men ever to enter the field of education in Iowa. He received his early training in the Mount Vernon public schools, attended Cornell Academy, and graduated from Cornell College in 1894 with a bachelor of philosophy degree. During his college days he took a year off to teach at Norway, Iowa, and immediately following his graduation he served as principal of the Blairstown schools.

The formal education of Charles Reuben Keyes was not limited to the Iowa scene. He received an M.A. degree from Harvard in 1898 and a Ph.D. from the same institution a quarter of a century later. During the summer of 1900 he studied German literature, fine arts, and the archaeology of Western Europe at Munich and Berlin. Returning to the United States, he taught German for

three years at the University of California. He married Sarah Naumann — on August 5, 1902 — while teaching at California.

In 1903, Dr. Keyes was invited to return to Cornell as a teacher. For the next thirty-eight years he was a professor of German language and literature, and during that period he endeared himself to students, faculty, and townsfolk alike. Gentle and kind by nature, deeply interested in young people, possessed of a quiet optimism, a deep spiritual sense, and a keen scientific mind, Dr. Keyes played a leading role as a teacher at Cornell. Interested in nature, he was well acquainted with the plant and animal life of Iowa, and became especially expert on bird migrations. In his younger years he had contributed many reports to the United States Biological Survey. But it was for his thorough study of prehistoric man in Iowa that Dr. Keyes achieved signal distinction. At the time of his death he was recognized as one of the foremost men in the country in the field of archaeology.

Charles Reuben Keyes began his study of archaeology at the age of fourteen when he started searching for Indian relics. After his brief study of bird life he returned to the field of archaeology in earnest. By 1921 he had gathered together all the available information known at that time about Iowa archaeology. In 1920 his first article on prehistoric man in Iowa was published in the *Iowa Journal of History and Politics*.

Dr. Benj. F. Shambaugh, for many years Superintendent of the State Historical Society of Iowa, was quick to recognize the unique qualities possessed by Dr. Keyes. In 1922 he appointed him a Research Associate of the State Historical Society and Director of the Iowa Archaeological Survey. In thus representing the state of Iowa through the State Historical Society, Dr. Keyes was in a position to carry on his personal field work each summer and in addition make official contacts with amateur and serious collectors of Indian artifacts throughout the state. These contacts, it was hoped, would ultimately bring the scattered collections under one roof for scientific study.

Dr. Keyes was unusually successful in his work. He knew and understood Iowans; he admired and loved them. Perhaps it was this deep understanding of his fellow citizens as well as his own personality and integrity which made him so successful in building up the justly famous Keyes Collection. One of the largest individual collections, that of Ellison Orr (a small portion of which is shown on the back cover of this magazine), illustrates how rich and valuable these collections are and how fortunate the state of Iowa through its appropriate agency has been in commanding the service of Dr. Keyes in this important work. During his busy life Dr. Keyes was one of the prime movers in developing the Iowa Park System. It was largely through his efforts, also, that the justly famous

Effigy Mound Region finally became a National Monument in 1949.

The present issue is a revision of an article published in THE PALIMPSEST in June, 1927, and represents the latest findings based on a quarter century of work by Dr. Keyes. Immediately after submitting this article to the present editor, Dr. Keyes set to work on a county inventory of his collection which he was able to complete some months before his death and which will be published as a separate by the Society a little later on. Meanwhile, a start was made on a volume for the Society which was to represent the latest findings of Dr. Keyes in the field of Iowa archaeology. Unhappily this work was never completed, but the Society fortunately owns all the notes and materials which Dr. Keyes carefully catalogued and identified, so that this final volume can ultimately be produced. When this is done it is hoped that a representative part of the collection can be placed on public display on the University campus in Iowa City. The bulk of the collection must of necessity remain catalogued and available to scientific archaeologists for future research.

In publishing the findings of Charles Reuben Keyes the State Historical Society is discharging one of its primary functions and at the same time is allowing Iowans to share in his productive research.

WILLIAM J. PETERSEN

Who and Whence

Myths concerning "vanished races" die very hard. When the pioneers of the white race discovered the great mounds and earthworks of prehistoric man in the Mississippi Valley, they formed the apparently spontaneous judgment that the country had once upon a time been occupied by a race of "mound builders," superior to the painted redskin. In the middle forties of the last century, excavations in the mounds of Ohio which produced finely wrought implements of stone and copper seemed to be conclusive evidence that predecessors of the Indians had reached a high level of civilization and then vanished before the onslaughts of their savage inferiors.

Surely, thought the pioneer, no wild Indian could ever have constructed works of such colossal proportions or wrought art objects of such delicacy and beauty. In part this judgment was justified by the fact that the Indian of the nineteenth century was no longer the Indian of primitive times and customs; in part the judgment was falsified by prejudice and superficial observation. At best it is difficult for one race to understand another. When, after the first friendly greetings, the contest for land engenders hatred and then warfare,

mutual understanding becomes all but impossible.

But, as the evidence now stands, neither North nor South America has any vanished race to record. The American Indian, by every test that it has been possible to apply, is the same man who built the great earthworks of the Mississippi Valley, the cliff dwellings and the pueblos of the Southwest, the pyramids of Mexico, towering less high than those of Egypt but surpassing them in beauty, and the ruined cities of Central America and Peru. The native peoples from Alaska to Patagonia were of one race. Inasmuch as a number of the Indian tribes are known to have built mounds since the coming of the white man, it is quite unnecessary to look farther for a race of mound builders. When Julien Dubuque died in 1810, he was buried in Iowa soil by his friends, the Fox Indians, who built a mound over him.

Not only is a lost race of mound builders a fanciful myth, but up to this time there is no proof that the New World ever had a race of men who, in the physical sense, were really primitive. The oldest known remains show a high type of physical development, indicating that man had no such independent origin and long history on our side of the ocean as he is known to have had in the Old World. In short, he must be looked upon as an immigrant from Asia, not a Mongol, but very similar to some of the Mongolian peoples — a foreigner whose migrations by way of Bering Strait, or per-

haps rather at the same place by land before the two continents became separated, were accomplished sometime during a late, probably the latest, stage of the paleolithic, or Old Stone Age. The longer preceding eras of the paleolithic are not represented in the Americas at all. As compared with the antiquity of man in Europe and Asia, the American Indian migrated in a comparatively late period, whether he arrived as long as twenty-five thousand years ago, as some students think, or as recently as ten thousand years ago, as others believe. But in any event, it was a long, long time ago as measured by human progress.

The Indian came as a savage, apparently with the spear and the stone ax as his only weapons and the faithful dog at his side as his first-found and only friend from the animal world —- a hunter and not a tiller of the soil. The home folks had evidently not yet tamed the familiar domestic animals of a later period of husbandry; nor had they developed those grains that were later to become the staples of Old World agriculture. If they had done these things, then surely these easy means of a livelihood would have migrated with their hosts. As it was, the American Indians were destined to develop arts and crafts and methods of agriculture that were almost entirely their own.

No even approximate time can be assigned to the discovery by early man of the upper Mississippi region. From Alaska a few hardy souls may

have taken the inhospitable Pacific Coast route southward. Some probably took the Fraser River valley into the Great Basin; as now believed, a majority followed the Yukon and Mackenzie valleys and the eastern slope of the Rockies, until the Great Plains were reached; two routes, so the geologists tell us, that were comparatively ice free, even when the glaciers of the closing Ice Age still lay heavy on the upper Mississippi country. Certain it is that human beings were living on the High Plains and hunting successfully the great beasts, largely now extinct, belonging to the cool, moist climate of the time when the glaciers were on the wane.

In 1926 a bed of bison bones was found near the town of Folsom in northeastern New Mexico, the bones of an extinct species larger than the bison the white man knew some thousands of years later. With these bones were javelin points of flint, of a unique type, very skillfully made by the hands of men. In the following years not only the bison kill of Folsom men, as they are now called, but also their home sites have been found along the High Plains from eastern New Mexico nearly to Canada. The bones of the great bison, beaver, sloth, and bear; of the mammoth, largest of the elephants; of two species of camel, and a small, chunky horse, all contained in his camp refuse, help tell the story. When conditions permitted, eastward migrations took place. Early habitation

sites of people belonging to the so-called Archaic have been found in recent years, all the way from the Plains to the Atlantic, where people little, if at all, in advance of Folsom men culturally, established their villages and adapted themselves to environments ever new and ever strange. And of course migrations went southward too, into Mexico, and into Central America and South America. But these are beyond our present view.

CHARLES REUBEN KEYES

Tribes, Stocks, and Cultures

It took the white man a long time to find out that there were various kinds of Indians. To the pioneer an Indian was an Indian, and one looked and talked, if he talked at all, just like every other. The nineteenth century was far spent before it became generally known that the different Indian tribes were often very distinctly separated by their ways of life and thought, and especially by language barriers. The church missionaries and a few early students, who dealt with the Indians more intimately and sympathetically, understood, of course, that the cultures of the various tribes differed much from one another, but even they had but a limited conception of the whole truth.

It will be well to look at this word "culture" for a moment. It means broadly the sum of the material attainments and the mental traits of a particular social group. The culture of a people may be identified by the weapons, household utensils, and ornaments they use, as well as by their traditions, folklore, and ceremonies. As it is often desirable to discuss the material apart from the mental or spiritual, the terms "material culture" and "spiritual culture" have naturally come into general use. The group whose culture is the subject of consid-

eration may be either a small social unit, such as a single Indian tribe, or it may be a large social group, such as a whole linguistic stock.

Here again is a term of importance if a person is to think clearly about that most complex of all racial entities, the American Indian. A "linguistic stock" is composed of all those people who speak a common language. In a few cases a stock, as known within historical times, contains but a single tribe; generally, however, a number of tribes compose the stock, each speaking a dialect of the parent language and each, as a rule, more or less similar to the others in cultural traits. This similarity of cultural traits is not, however, the essential criterion of a common origin and relationship; the test is rather possession of a dialect of the common language. Tribes speaking variants of the same language, whether mutually intelligible or not, are blood relatives, be their cultural traits what they may. Tribes isolated from others of the same stock not infrequently acquire much of the material, and sometimes even to a great extent the spiritual, culture of their neighbors, while their language continues to show clearly how their blood runs. Thus the Ioway and the Winnebago, both belonging to the Siouan stock, show many of the traits of the Algonkian peoples with whom they had long lived in contact. Since the language test is most important in establishing true relationship, the term "linguistic stock" has come into gen-

eral and clearly defined use to distinguish the divergent branches of the Indian race. "Linguistic family" is a synonym sometimes used to avoid too frequent repetition of the much-needed term "linguistic stock."

It should not be forgotten that language differences made communication between the different stocks through the spoken word quite impossible. The lisping Algonkian tongue of a Meskwaki Indian simply could not be understood by the Wahpeton, who spoke a dialect of the guttural Siouan. This fact of the language barrier explains a good many things in both culture and history. Cultural differences are developed and magnified by isolation, and lack of understanding invariably begets suspicions the world over that often end in feudal strife and even war.

Both the historic and prehistoric Indian cultures have been receiving something like intensive study for a period of about seventy years, and one of the surprising revelations concerning the native Americans is the remarkable number of their linguistic groups. About eighty-five stocks existed in North America and nearly, perhaps quite, as many in South America at the time of the first white contact. The exact number cannot be given with certainty for the reason that sufficient knowledge of all the different languages does not exist. So far as known, some of these stocks have always been small; a few have become extinct; others were

large and powerful, played conspicuous roles in history, and still count in their existing tribes some thousands of members.

Further consideration of terms will be useful in order to avoid confusion in the names for the numerous stocks and their still more numerous subdivisions, the tribes. A stock usually receives the name of one of its well-known tribes or tribal groups, to which is added the ending "an." Thus the great Algonkian stock of more than fifty tribes is named after the Algonkin tribe of the province of Quebec; the Siouan stock of nearly fifty tribes receives its name from one of the tribal groups, the Sioux, within this great family; the Iroquoian stock of eighteen tribes is named from the Iroquois, a tribal subdivision, or group, of six tribes in central New York.

The names of stocks are used either as adjectives or nouns. Thus the members of the Algonkian stock are all Algonkians, whether they belong to the Powhatan tribe of Virginia, the Algonkin of Quebec, the Sauk and Fox of Wisconsin and Iowa, the Cheyenne and Arapaho of Wyoming and Montana, or any of the fifty other tribes. Similarly, the Winnebago of Wisconsin, the Mandan of North Dakota, the Osage of Missouri, the Ioway of Iowa, even the Catawba of the Carolinas and the Biloxi of Mississippi are all Siouans, though not one of them is Sioux. Sioux is a name applied by the early French to the Dakota branch

of the Siouan stock, which includes the Wahpeton, Yankton, Teton, Oglala, and several other tribes.

The Algonkian, Siouan, and Iroquoian stocks are used here as examples for the reason that history connects these three with a beautiful country now known as Iowa. To understand fully the wide application of these terms it would be necessary to look at a map showing the distribution of the different Indian stocks in America when the whites first established definite relations with them.

CHARLES REUBEN KEYES

In Quest of Facts

What about prehistoric man in Iowa? Were there tribes of the great Indian stocks in the Iowa country during times prehistoric? And, if there were, how and where did they live? How long had they been here? How numerous were they? What were they like, physically and mentally? Were any stocks represented in prehistoric times, concerning which history has nothing to say? Many persons are now helping to collect information concerning the prehistoric population of Iowa, and many others are asking questions about Iowa's ancient men, but many of these questions cannot, at the present time, be fully answered, and some will have to be passed by altogether.

The term "prehistoric" covers all the past of Iowa up to June 17, 1673, the day on which Marquette and Joliet, with their sturdy oarsmen, paddled out of the Wisconsin River and began their exploration of the eastern border of Iowa. The first historical record of the red men of Iowa is Marquette's account of his visit to some Indian villages. The Indian kept but few written accounts of his doings and these not very consistently.

In the field of man's prehistoric past, the strongest sort of temptation exists to use imagination as

the principal source of knowledge. Fancy gives quick returns, and the exercise of it is, moreover, a rather pleasant occupation. There are, however, three main avenues leading to reliable knowledge of prehistoric man. These three avenues should be carefully noted: (1) some facts can be drawn, and others sometimes safely inferred, from early historical records; (2) much can be learned of the material culture, and even more of the spiritual, from a study of the myths, traditions, folklore, and rituals of the living Indians; and (3) much remains to be uncovered only by archaeological methods.

Early Iowa history contains little definite information concerning the tribes resident in the Iowa country at the coming, and consequently before the coming, of the whites. As already noted, Marquette tells in some detail of three Peoria villages found by him near the mouth of the Iowa River in 1673. Thus we know from early history that the Peoria, a tribe of the Illinois branch of the Algonkian stock, were resident on the Iowa River in times antedating the coming of the first white men, for of course those villages had not sprung up in a day. Another precious item is the account by Nicholas Perrot of his visit in 1685 to the Ioway Indians living in their village "nine leagues beyond" (at Trempealeau, Wisconsin). The archaeology of the Upper Iowa Valley offers very satisfactory corroboration of that item — and, incidentally, shows us where Iowa got its name.

For the most part, however, the early explorers of the upper Mississippi did not penetrate into Iowa very far, but only reported vaguely what they heard about the Indian inhabitants. The simple fact seems to be that the great rivers of her borders carried white travel past the Iowa country, as a rule, and not through their tributaries into it. The many vague statements in the early literature are generally of little value in locating the dwelling places of prehistoric man. In some other states, explorers and early students of the native tribes described primitive Indian settlements reaching back into prehistoric times. For example, the Arikara, Mandan, and Hidatsa villages of the Dakotas were visited by Lewis and Clark, Prince Maximilian, Catlin, and others, none of whom had seen much of the Iowa Indians on their journey up the turbulent Missouri. When records begin to grow definite in Iowa, in the eastern part especially, about the beginning of the nineteenth century, it is too late to gain much information from them concerning prehistoric conditions. Most of the tribes were on the move; all had lost their primitive mode of living to some extent (even Marquette found firearms in the hands of the Peoria in 1673); and some of them, as the Potawatomi, Sauk, and Meskwaki of the Algonkian stock (the last two being the Sauk and Fox of early Iowa history), had come from the east since 1673.

Thus far the myths and traditions of the living

tribes and their carefully memorized stories and rituals have not made a large contribution to our knowledge of prehistoric man in Iowa. The reason is that, although a considerable number emanating from tribes that once occupied the state have been collected, comparatively few of these have been published. The late Alanson Skinner, while employed by the Milwaukee Public Museum, made collections of Ioway, Sauk, and Wahpeton tales and rituals; likewise the late Dr. Truman Michelson of the United States Bureau of American Ethnology had been engaged in collecting a large amount of material from the Meskwaki, or Fox, Indians now residents of Tama County, Iowa.

How rich these materials often are in their revelation of the past life of the people who impart them, for doubtless many of the stories and other forms of composition have been handed down for long periods of time, may be illustrated here by a little tale collected by Alanson Skinner among the Ioway of Oklahoma in 1922 and printed here by courtesy of the Milwaukee Public Museum. It is the story of Turtle's war-party, ending, as Indian stories often do, in a conventional phrase that has no connection with the plot — for of course the listening children must be assured that the story is now done.

Box Turtle decided to go to war, so he called his trusty friends Inapa, the Stone Corn-crusher, and Bone Awl to help him. They journeyed until they came to the village of

the enemy. Corn-crusher struck the first blow; for, when he was captured and they tried to crack corn with him, he crushed one of the fingers of his captor. The man threw him away, so that he escaped; but the enemy died of blood poisoning later on. Thus Inapa counted a coup. In like manner Bone Awl was taken prisoner and succeeded in pricking his captor's hand severely, so that he too was thrown away and escaped. The captor, however, contracted blood poisoning from the wound, so Bone Awl also counted a coup. When it came Turtle's turn to enter the village, he too was captured. But he did not have any opportunity to count any coups; for the Indians boiled and ate him — and then I came home.

Thus one short tale furnishes evidence of both material and spiritual phases of the old Indian life. Stone corn-crushers and bone awls must have been used by the Ioway. If one is not inclined to believe it, he can dig up actual specimens from the debris of an old Ioway village site and thus have one kind of evidence to corroborate the other. The story also explains something of the Indians' free-and-easy manner of warmaking, doubtless true for many a generation before the white man knew him. There was no forced military service, but only a system of "follow the leader." Finally, the story is a revelation of the Indian's attitude of mind toward animals and even inanimate objects. When the same physical environment and the same mental traits are encountered again and again in such literature, perfectly safe conclusions may be drawn.

After other sources of information have been exhausted, it will be found that a vast amount of

detailed fact can be recovered only by the precise methods of archaeological research. Archaeology begins where history begins, but it proceeds in the opposite direction as it delves into human evolution. Everything that ancient man left behind him, his creations in the form of great earthworks or tiny arrowheads, his places of abode or of burial, his deep-worn trails or his sacred shrines, all these are the objects of the quest.

As the story to be read is generally buried, it is necessary to uncover the tablet with care and according to tested methods, or the blurred and shattered characters will be rendered altogether illegible. But if, at the right moment, the spade is laid aside and the last covering of dust and earth is carefully removed with a small hand trowel and whisk broom the story will often lie revealed in astonishing clearness and completeness. History, as in the case of Marquette's account, speaks of calumet pipes owned by the Peoria Indians; archaeology seeks to recover these pipes and show us their actual size, shape, and material. Folklore, as in the case of the Ioway tale, tells us about a stone corn-crusher and a bone awl; archaeology puts the specimens into our hands and invites us to study every detail. Tradition is insistent that in a certain region lived a race of giants; archaeology takes the exact measure of the "giants" and bids us be less credulous.

CHARLES REUBEN KEYES

Ancient Sites

A "site," in the language of archaeology, is a place where prehistoric man is known to have lived, where he left his works, or where, as in the case of a trail or workshop, he unconsciously left his mark. Nearly all the Iowa counties have ancient sites of one kind or another; even the few counties in which definite archaeological sites have not thus far been found produce scattered stone relics which prove the existence of prehistoric man as a hunter, at least, if not as a settled resident. The number of known Iowa sites now runs well into five figures, and little more than a beginning has been made in the search. Indeed, as it is already clear that Iowa, on account of its central location, is peripheral to a number of different prehistoric cultures in its archaeology, as it is in its botany and its zoology, the state may possess some special interests as an archaeological field. A brief annotated catalog may have value, perhaps, in serving as a guide to the many varieties of our ancient sites.

Village and camp sites. The difference between the two is only in size and what appears to be permanency. The camp site shows enough evidence of occupation to make certain at least a temporary

home: some fireplace stones, some kitchen refuse, and probably some chips of flint. The village site shows rich evidence of occupation through a considerable period of time: generally a well-defined area covering from one to one hundred acres, more or less sharply outlined in some cases by a moat-like ditch; plenty of refuse in the form of flint chips and other stone fragments indicating that stone implements were made there; a few flint arrowheads, spearheads, and knives, or ground-stone mortars, hand mullers, and axes, all lost during the day's work or abandoned at the desertion of the village; pottery fragments, clam shells, and broken bird and animal bones, the refuse of food preparation; sometimes circles or ellipses of small boulders used to hold down the edges of skin tepees; in other instances numbers of circular depressions a foot or two deep and from twenty-five to fifty feet in diameter, showing where large earth lodges once stood. Continuous cultivation of the site will have obliterated some of the criteria, but the large amount of refuse over a considerable space will ordinarily tell the story.

Favorite locations of the villages were the second terraces of streams or, less commonly, the broad summits of bluffs overlooking streams. At least one good spring was a requirement, and nearly always there was surrounding forest to protect the inhabitants, and near-by timber to afford shelter for game. In northwestern Iowa a number

of the old villages were situated in oak groves on the lake margins. Permanent, or semipermanent, villages were apparently located on the smaller streams more frequently than on the larger rivers, a number of the most prolific old sites having been found on small, but perennial, creeks some miles removed from the rivers. In all Iowa more than five hundred habitation sites are known, and so many of these are still above the plow line that it is not difficult to collect the evidence of the old community life. Strange to say, fewer than ten of the known village sites in Iowa are proven positively to have been occupied both before and down to historical times. No trace of the Peoria villages visited by Marquette has been discovered.

Caves and rock shelters. Over a large part of northeastern Iowa, where the country has been little ironed out by glaciers, and where, therefore, the river gorges and creek ravines are margined to a considerable extent by abrupt and massive limestone cliffs, primitive man is found to have made extensive use of the shelters afforded. The shelters used as homes were generally wide-mouthed and well-lighted caverns, usually just above a talus slope, or the space under a cliff overhang, also at the top of a talus slope, or otherwise protected from possible high water. These rock shelters, as students call them, face in all the cardinal directions, and in all the directions in between. The shelter of the ravines and the cliff walls was always rein-

forced by the original forests that towered above both. These natural refuges could be made warm and comfortable, even when winter winds whistled across the valley rim. The writer knows an eastern Iowa scout master who regularly takes his scouts for a night's outing in one of these ancient shelters facing the Maquoketa, when December or January is offering its worst.

Up to this time over seventy of these rock shelters have been recorded; but, as diligent search has been made in only a part of the likely territory, and as only a few have been thoroughly examined, it is probable that the study of Iowa's cave men is only in its early stages. As the cliff overhangs are rarely over a hundred feet in length and the caverns from fifty to as small as eight feet in diameter, the evidences of occupation are naturally found in greater concentration than on most of the village sites. In one case the excavation had to be carried down to a depth of six feet. The material recovered from the shelters is not greatly different, however, from that found on the village sites in the same general region and is probably but a part, therefore, of the culture of a wider area. THE PALIMPSEST for January, 1943, contains the story of a small rock shelter on the Palisades-Kepler State Park, near Mount Vernon.

Agricultural plots and garden beds. Any to be seen in our day must be in places where the soil has never been turned, as in timber or pastures near

streams — and of course near an old village site. The Indian corn hills will persist in undisturbed areas for centuries. People now living remember the old Indian garden beds of Muscatine Island, though it is possible that these were not all prehistoric. Some twenty years ago, a series of low, parallel ridges was found, measuring about three feet wide and five or six inches high in the center, leading down a gentle slope from an old Indian village near LaPorte City to Indian Lake, a bayou of the Cedar River. These were surely ancient garden beds. A recent visit to the site showed only some small summer cabins and soil rolled flat by the comings and goings of motor cars. Fortunately, John C. Hartman, owner for many years of the Waterloo *Courier,* had one of his expert photographers visit this old site, very early one morning soon after the discovery, when the first rays of the sun fell across the low ridges of the ancient garden plot. They did nicely their full share to record, while time remained, one of the rarest of our archaeological pictures.

Storage and refuse pits. These were dug in or near the villages for purposes of both food storage and refuse disposal. As things thrown into the pits generally remain below the plow line, they are apt to escape the deterioration suffered by articles left on the surface. It is a fact well known to archaeological collectors that they may expect many of their best fragments of pottery and bone imple-

ments from the refuse pits. Surprisingly often the specimens are not broken at all. Indians, too, sometimes threw out perfectly good knives, spoons, and dishes with the kitchen refuse. Depressions in the ground commonly reveal the locations of pits — unless there has been too much plowing. At other times their contents may come to light through the operation of steam shovels working in gravel pits on river terraces. Such easy excavations have inured to the benefit of collectors in Correctionville.

Shell heaps. On the banks of some of the larger rivers, and usually in or near a village site, are sometimes found deep accumulations of mussel shells removed from the near-by streams. They were apparently opened to obtain food or pearls, probably both. Shell heaps have been reported near Keosauqua and at Cedar Rapids, and considerable remnants of the old accumulations are still to be seen at Bellevue on the Mississippi.

Caches. Nests of stone implements or other materials were often buried in the ground for safe keeping and, for reasons that can only be conjectured, never claimed by the original owner. A number of these buried hoards has come to light in Iowa through the operations of agriculture, the wash of rains, or the cutting of streams. They are perhaps most often found in or near village sites, but there is no definite rule as to their location. A number of the Iowa caches have consisted of a few

score rough-chipped blades, quarry blanks apparently, all of the same variety of flint and seemingly intended for later elaboration — doubtless some ancient flint worker's stock-in-trade. A few others have contained finished specimens, generally, but not always, of a single type. A good example of a mixed cache was recently found on the Mississippi bluffs, three miles west of Guttenberg. It consisted of twenty-four well-finished blades of mottled flint, a single hammerstone of basaltic rock, and two greenstone gouges.

Workshops. In a variety of locations, both in the valleys and on the hilltops, are found large quantities of flint chips, and sometimes other stone refuse which tell the story of implement and weapon making, but which are frequently not connected at all with any village site. In many instances it seems as if the location of the site were determined by the beauty of the place or some such personal consideration. In other cases, workshops are found close to the sources of material used, like those near the old flint quarries at Burlington.

Cemeteries. The cemeteries vary greatly in location, and there is much variation also in the manner of burial. Sometimes the bodies were buried in an extended, sometimes in a flexed, position; again the bones, or more likely only a part of these, were collected from an earlier tree or scaffold burial and either interred in a common mass along with many other skeletal remains, constituting thus an "ossu-

ary," or deposited separately and compactly, often in or beneath a mound, constituting thus a "bundle burial." Generally speaking, cemeteries called for a loose soil, either within the village itself or on some near-by knoll, terrace, or hilltop. The knolls, and especially the highest points and ridges of the Missouri River hills, all the way from the southern boundary of Iowa to South Dakota, contain a great number of burials, generally of the ossuary type.

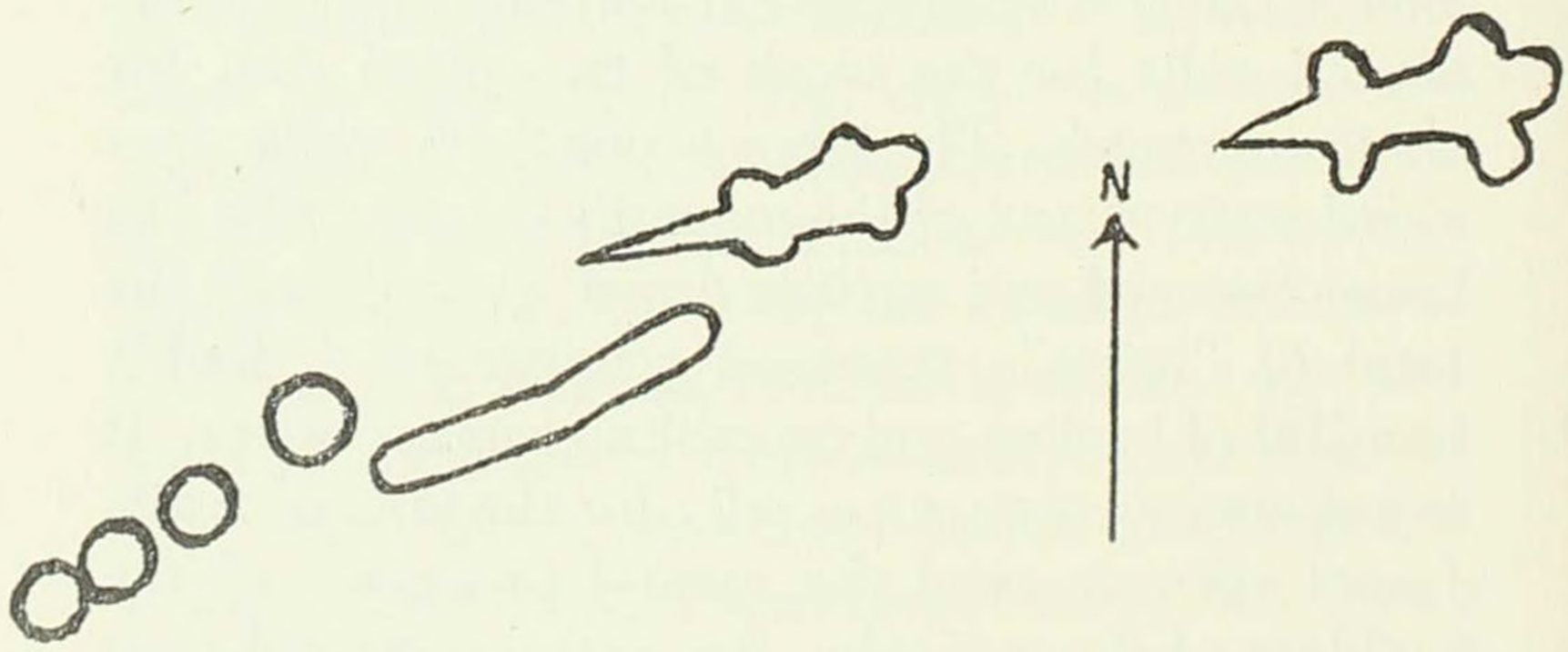
As the loess hills of our western border erode rather rapidly, skeletal remains may frequently be examined without the necessity of digging. During a test excavation conducted at the great Blood Run village site on the Big Sioux, a burial of quite an opposite kind was encountered. This was a primary, extended burial that lay at the bottom of a pit eight feet in diameter and seven feet below the tough sod of a prairie terrace. And the instruments of excavation were the shoulder blades of the bison, ten worn and broken specimens of which were found in the compact humus, clay, and gravel with which the pit was filled. In the cave region of Iowa, a great ossuary was found hidden away in a deep cavern far removed from light, heat, and frost. This was the discovery of some high-school boys at Cascade, inspired, it was said, by the then much publicized fate of Floyd Collins, who lost his life when cave hunting down in Kentucky.

Mounds. Originally Iowa possessed thousands

of Indian mounds, the great majority built in prehistoric times. They occur in all parts of the state, although somewhat more numerous along the terraces and bluffs of the Mississippi, and in these same locations in the Mississippi drainage of the eastern two-thirds of the state. Many have disappeared through continued cultivation of the soil; others are being slowly reduced; still others occupy positions where they have escaped destruction, except that by relic hunters who, in hundreds of instances, have dug ugly holes in their tops — and nearly always found nothing at all. The reason is that most Iowa mounds contain a few bones only, whole or ceremonially broken, and deposited anywhere on the mound floor, or in a pit below the mound floor. The proper excavation of an average mound calls for the work of two good men for about one week. The labor is worth its while, provided every detail of the mound's construction has been observed and written down, even though the total of "relics" recovered consists of a double handful of broken and crumbling human bones. It is not always easy, especially for the man of a different race, to read the mental processes of the builders of the mounds. An average mound contains about a hundred cubic yards of earth, all of this built into a symmetrical form without the use of any metal tool, any machinery, or any beast of burden. There must have been a compelling motive, one might think, especially as the number

built in Iowa could hardly be fewer than ten thousand — and perhaps as many more.

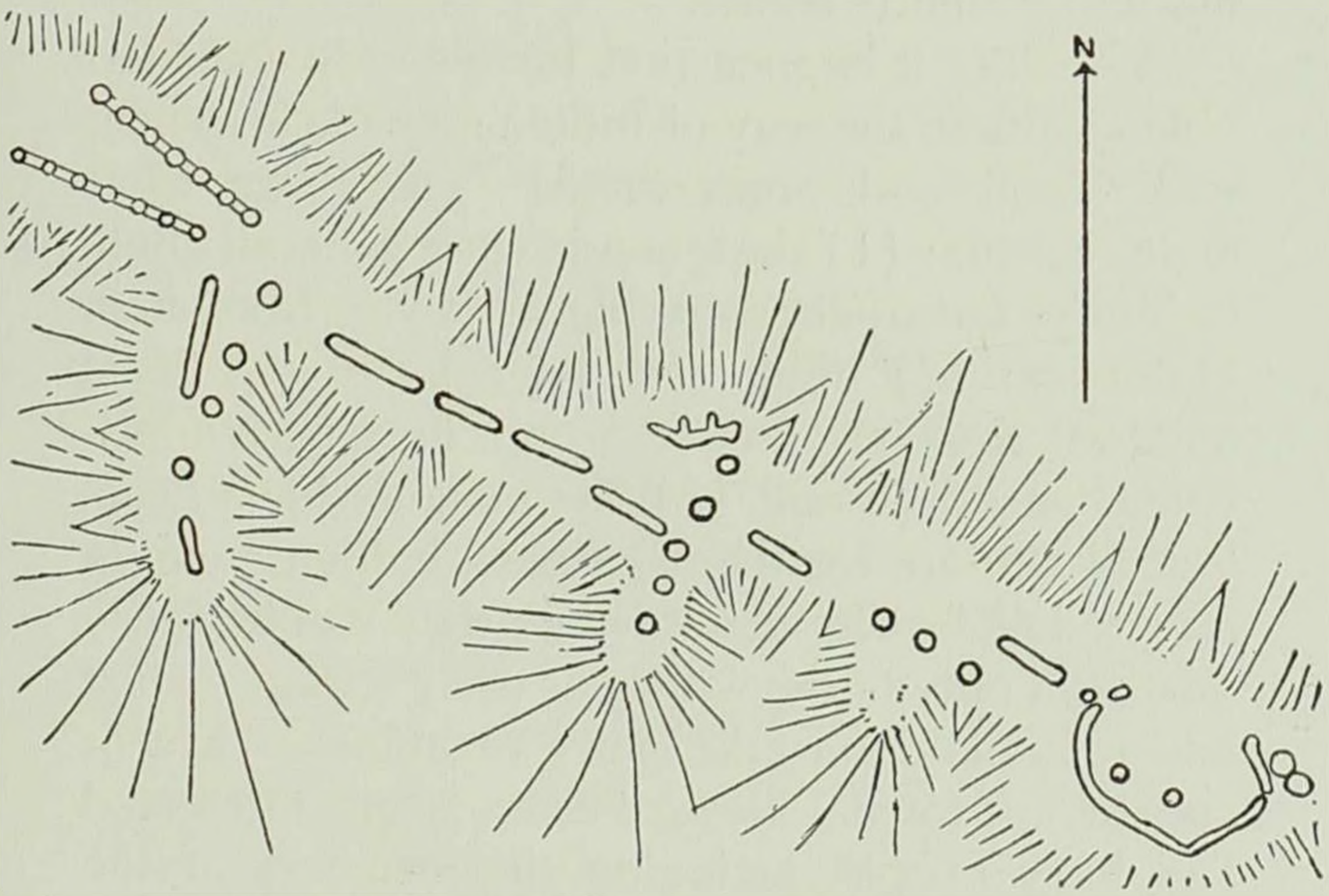
The great majority of mounds have a round base of from twenty-five to seventy feet in diameter and a height of from two to seven feet. These are called "conicals." Some are considerably larger; the great Boone mound on a terrace of the Des Moines River measured 130 by 160 feet in diameter and 14 feet high before its excavation about forty years ago by T. Van Hyning of the Historical Department at Des Moines. Still larger mounds have been reported, but the evidence that these are artificial is thus far lacking. Some have proved to be natural erosional mounds, made along stream courses by the action of flood waters.



Conical, Linear, and Effigy Mounds in Clayton County

In northeastern Iowa along the Mississippi bluffs are many mounds in the form of bird, reptile, and animal effigies, and also long, straight embankments. These are described simply as "effi-

gies" and "linears." The latter range from sixty to three hundred feet in length and have a diameter of about twenty feet and a height of two or three feet. The effigies are great cameos laid out



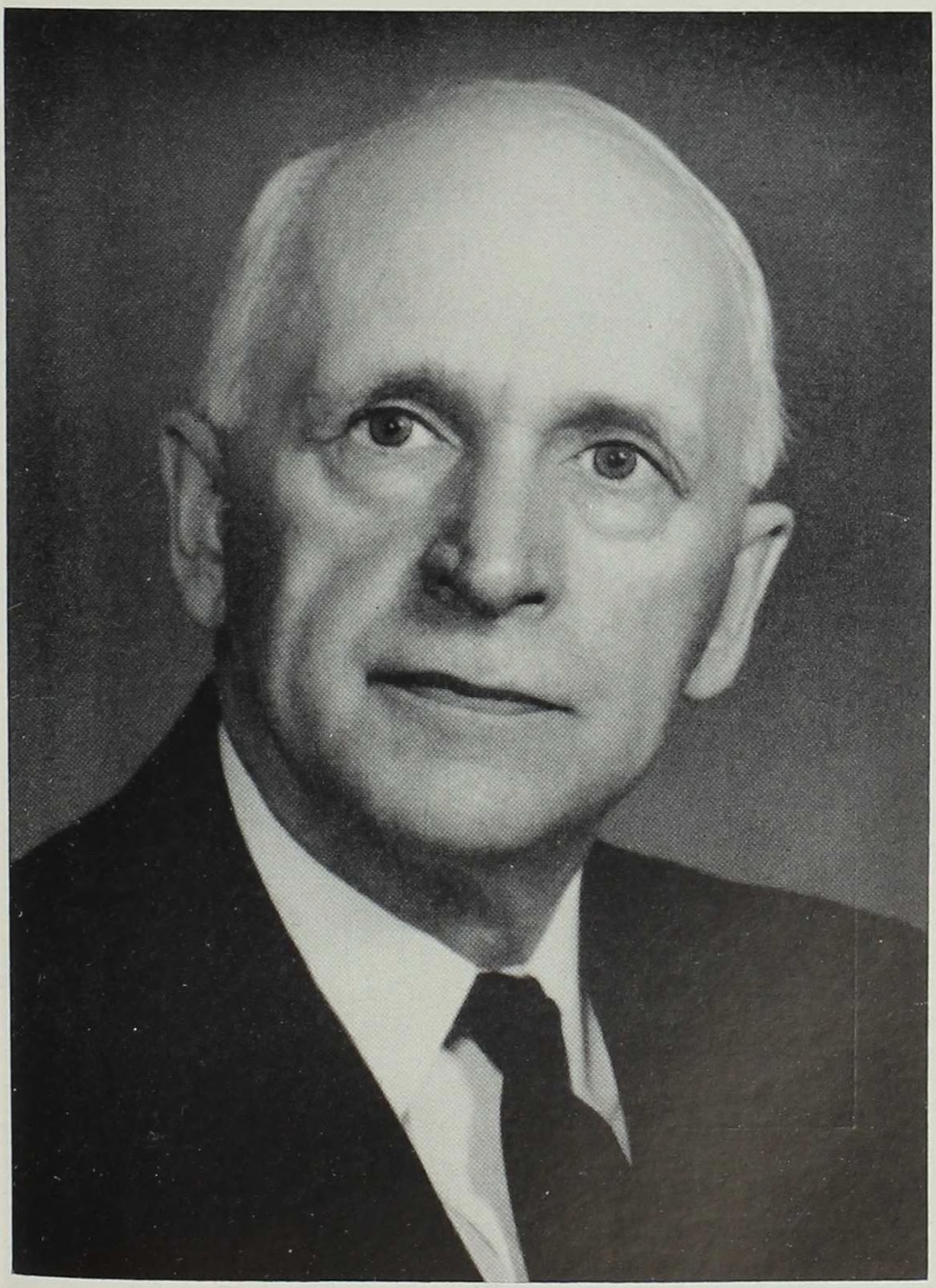
Turkey River Group of Mounds in Clayton County

on the ground, the birds with outstretched wings, the reptiles as seen from above, and the animals, generally representing the bear, though a few other forms occur, recumbent on their right sides and built up sharply to a height of from two to four feet. The birds measure from 70 to 170 feet across the wings, while the animal effigies are from 80 to 140 feet in length from nose to tail. All the undisturbed mounds are so regular in form and so artificial in appearance that they need rarely be mis-

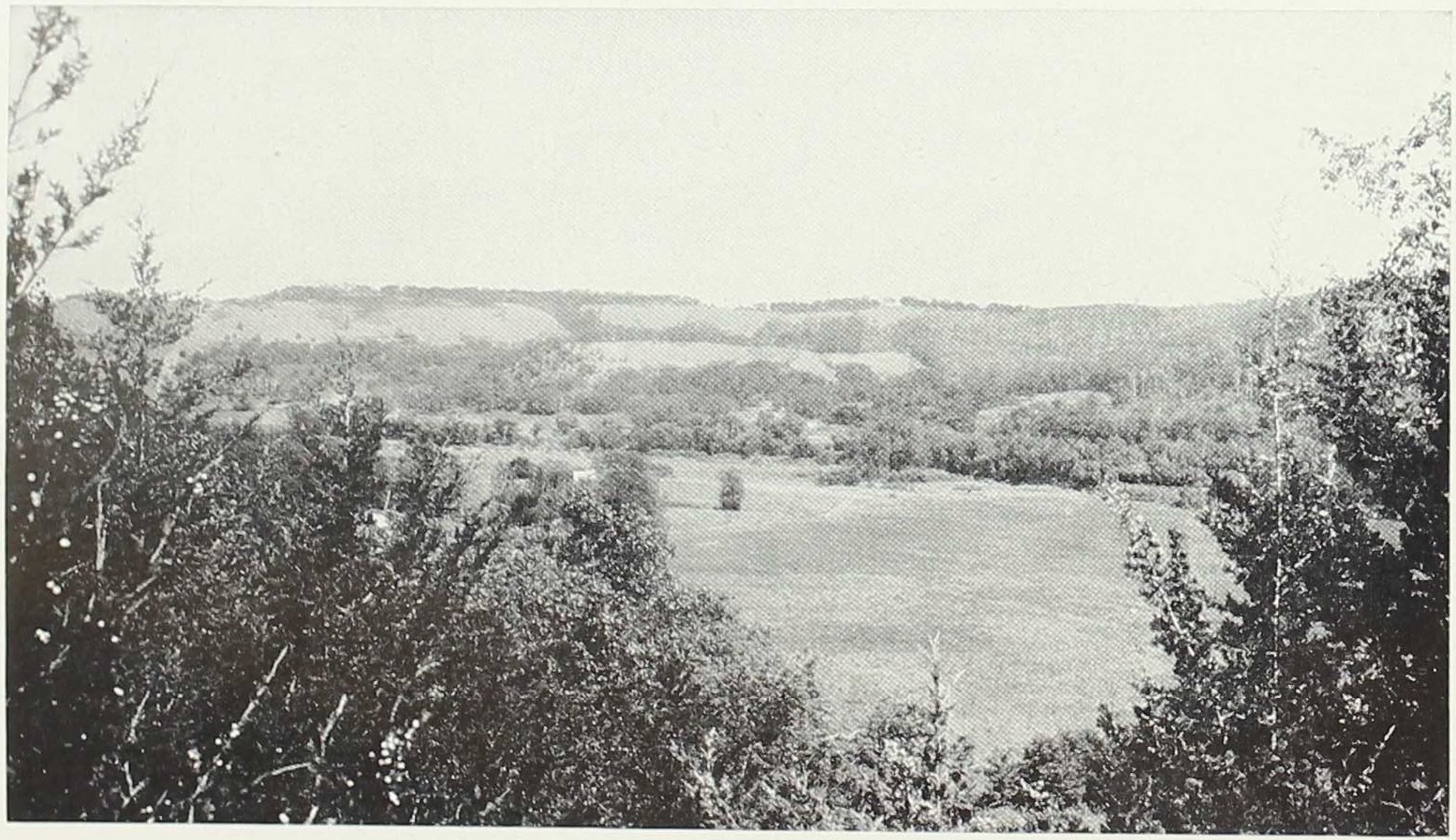
taken for anything else. They sometimes occur singly, but as a rule they stand either in groups on or near the old village sites or in rows along the ridges overlooking the dwelling place and the hunting grounds below.

How does it happen that Iowa's very considerable wealth in the way of Indian mounds is so little understood and appreciated? There are three main reasons: (1) the mounds were generally built in bluffy, out-of-the-way places, away from main highways; (2) until recently, most of the finest and best preserved mound groups have been in private ownership; and (3) the mounds have been, indeed still are for the most part, hidden away in forested or brushy areas where they can be fairly well seen only in the winter or early spring — just when people don't take many vacations — except outside of Iowa. Nevertheless, some interested and busy people, including the members of the Iowa State Conservation Commission, never lost sight of the mounds and have, as they say, "cashed in" rather well on their unremunerated investment of time.

During the last quarter century the state of Iowa has come into possession, by gift or because of their presence on areas within the State Park system, of a considerable number of Indian mounds. State Parks with small numbers of mounds are these: Bellevue, Dolliver Memorial, Lacey-Keosauqua, Palisades-Kepler, and White

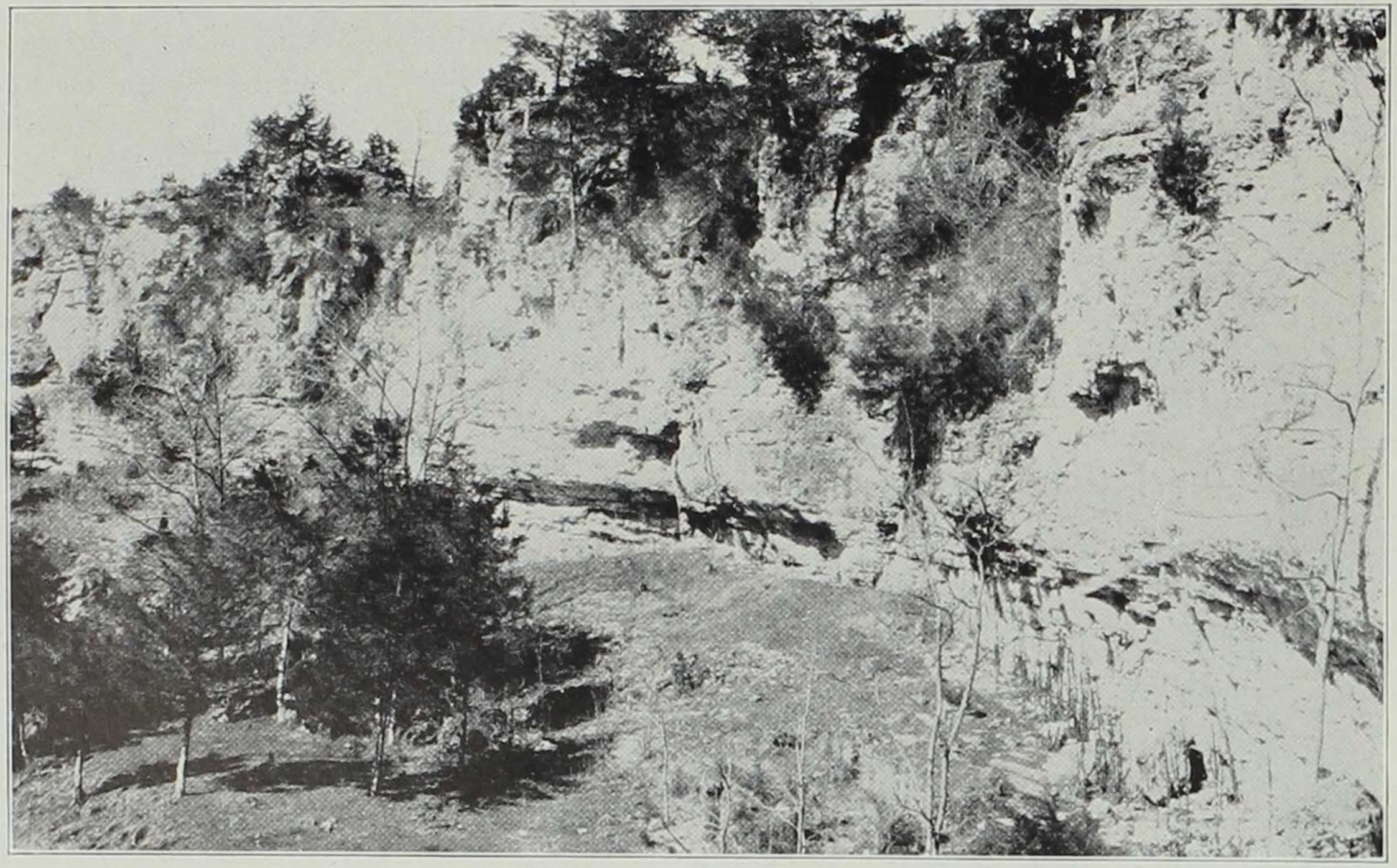


Charles Reuben Keyes
1871–1951

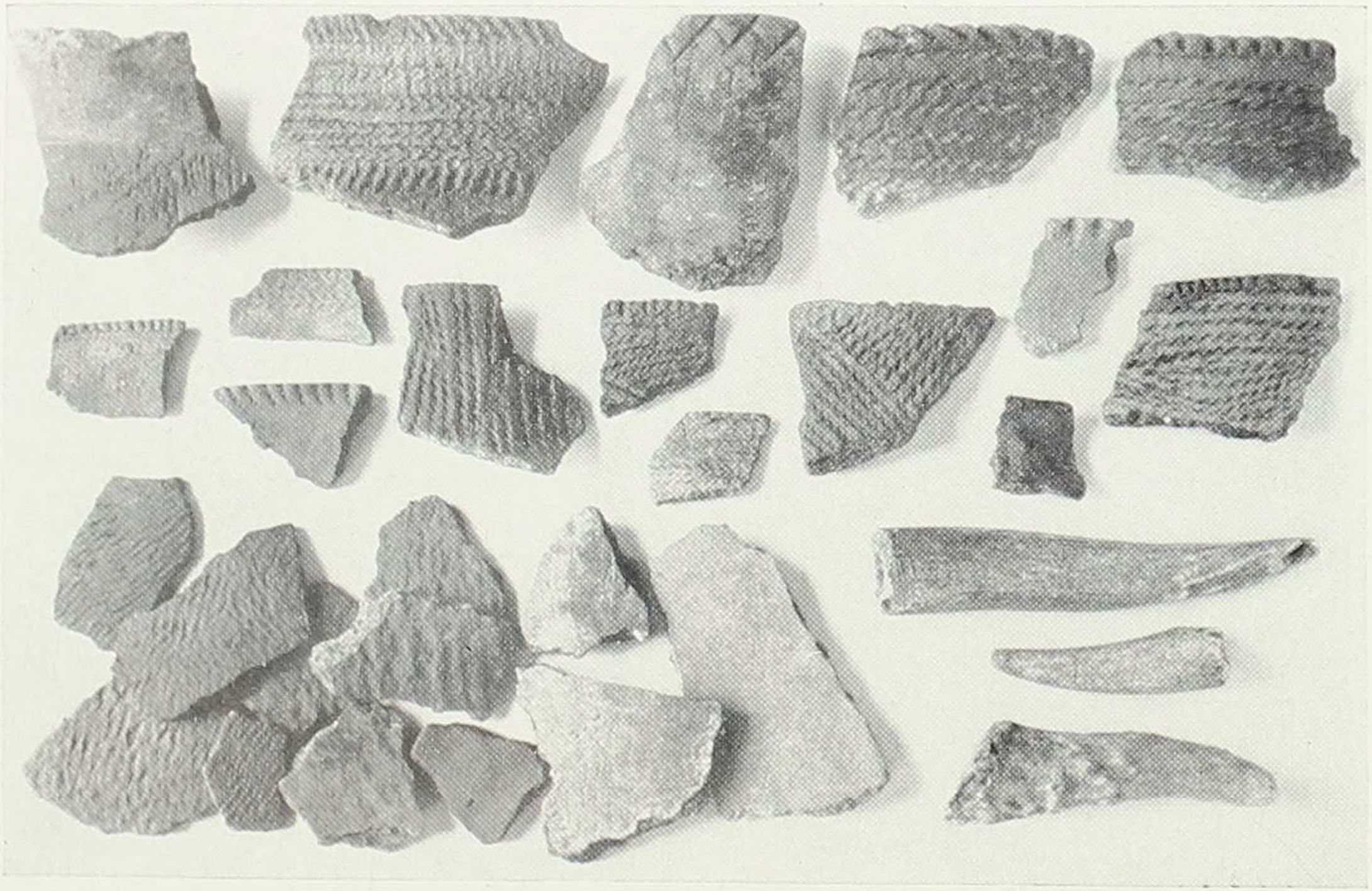


Photograph by Ellison Orr

Looking Southeast Across the Oneota Valley
O'Regan Bench, Site of an Old Siouan Village, in the Foreground

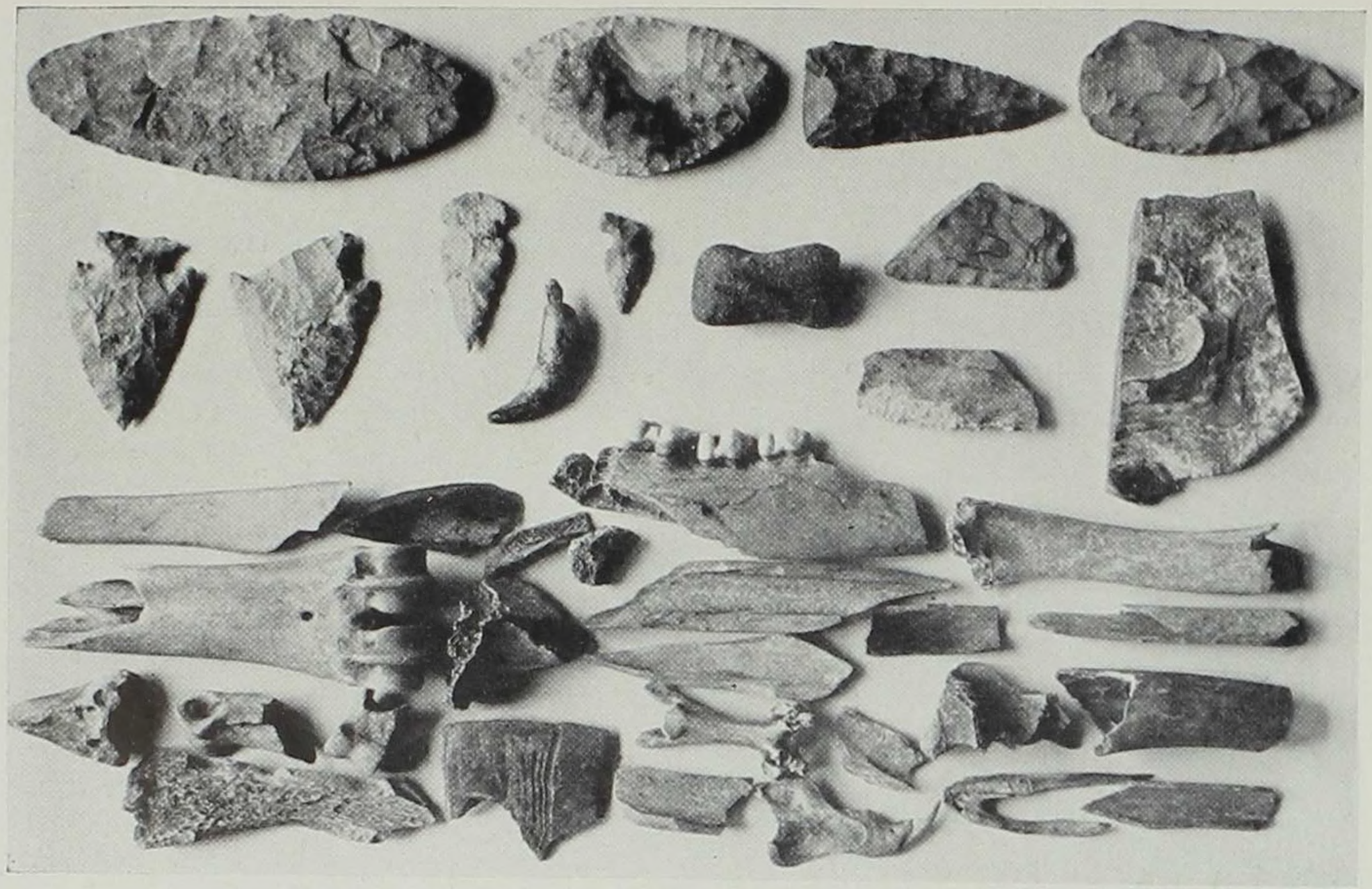


An Ancient Rock Shelter Three Miles East of Monticello, Iowa



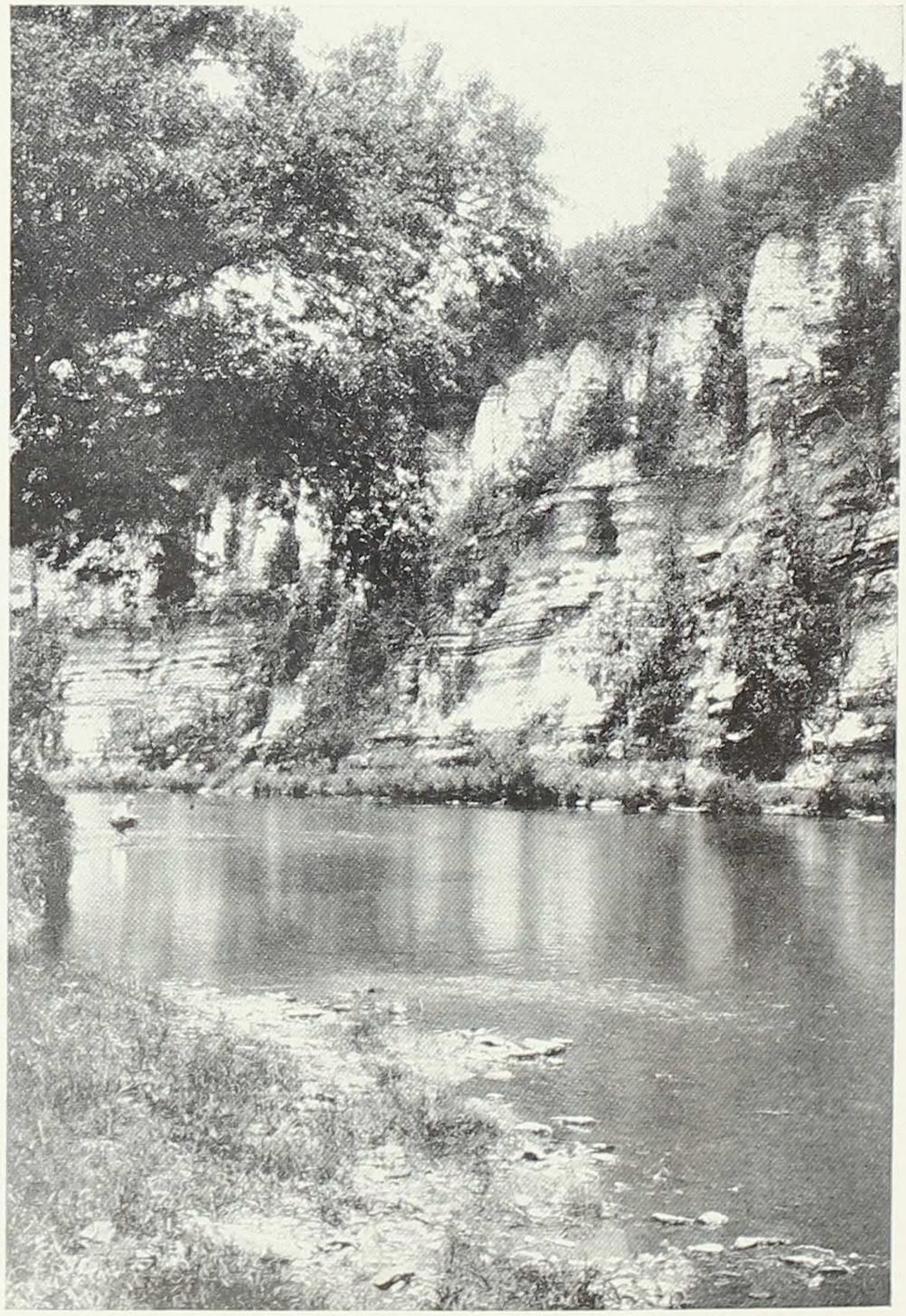
Photograph by Charles R. Keyes

Rimsherds and Bodysherds from Pottery Vessels Used in Minott's Rock Shelter;
Three Antler Tips



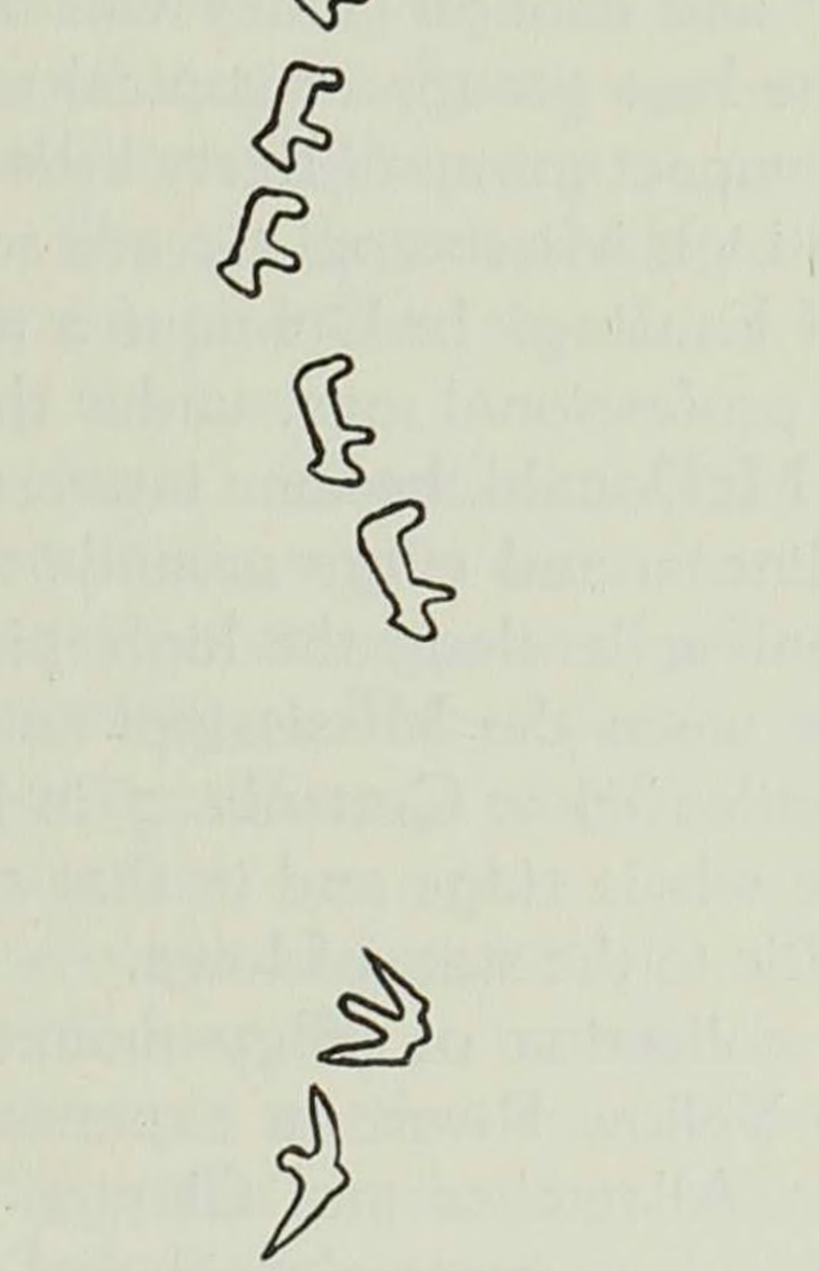
Photograph by Charles R. Keyes

Flint Knives, Projectile Points, a Canine-Tooth Pendant, Sandstone Abrader, Scraper-Knives, and Bone Refuse from Minott's Rock Shelter



Photograph by Charles R. Keyes

The Upper Iowa River



Effigy and Linear Mounds on Mississippi River Bluffs, Clayton County

Pine Hollow. The McGregor areas, which came to Iowa through the Munn Estate in 1936, deserve especial mention, including, as they do, Pike's Peak, Point Ann, and McGregor Heights, 544 acres in all, with no fewer than nine groups of conical, linear, and effigy mounds. Many people have seen the big bear on Pike's Peak opposite the mouth of the Wisconsin River.

Other mound groups of especial interest and value were given to the state by groups of citizens: in Waukon and Lansing hats were passed (belonging to Ellison Orr and I. E. Beaman, according to report) and enough money was secured to buy one of the best groups of conical mounds in existence, a compact group of thirty little ones and big ones on a high Mississippi terrace some eight miles north of Lansing. In Dubuque a number of business and professional men, under the leadership of J. M. McDonald, became interested in the fine conical, linear, and effigy mounds extending for about a half mile along the high, picturesque ridge lying between the Mississippi and Turkey rivers, a few miles below Guttenberg; in 1934 they purchased the whole ridge and in that same year they passed title to the state of Iowa.

The great collection of effigy mounds at the mouth of the Yellow River, an expanse of some 1,200 acres in Allamakee and Clayton counties, was at last, after long years of work and agitation, made into Iowa's first National Monument on No-

vember 22, 1949, when President Truman formally established the Effigy Mounds National Monument. The land had been bought up by the Iowa Conservation Commission; it was turned over to the national government by the legislature; the national government in turn gave the area to the National Parks Service for the establishment of the Monument. Iowa's first National Monument, fittingly enough, is a memorial to Iowa's prehistoric Indians.

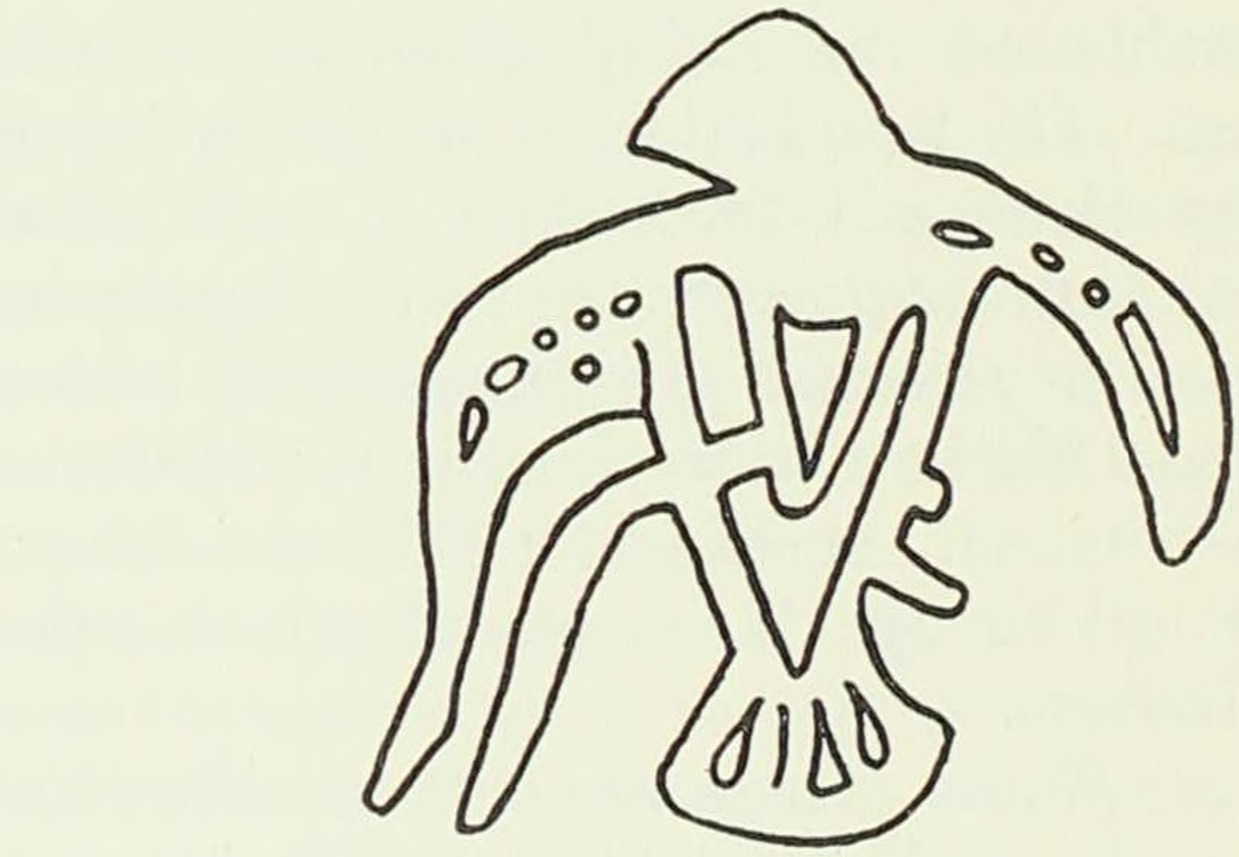
Boulder effigies. These are outlines of an animal or reptile, made by sinking small boulders in the original prairie sod. A number formerly existed in northwestern Iowa; apparently all have disappeared under cultivation.

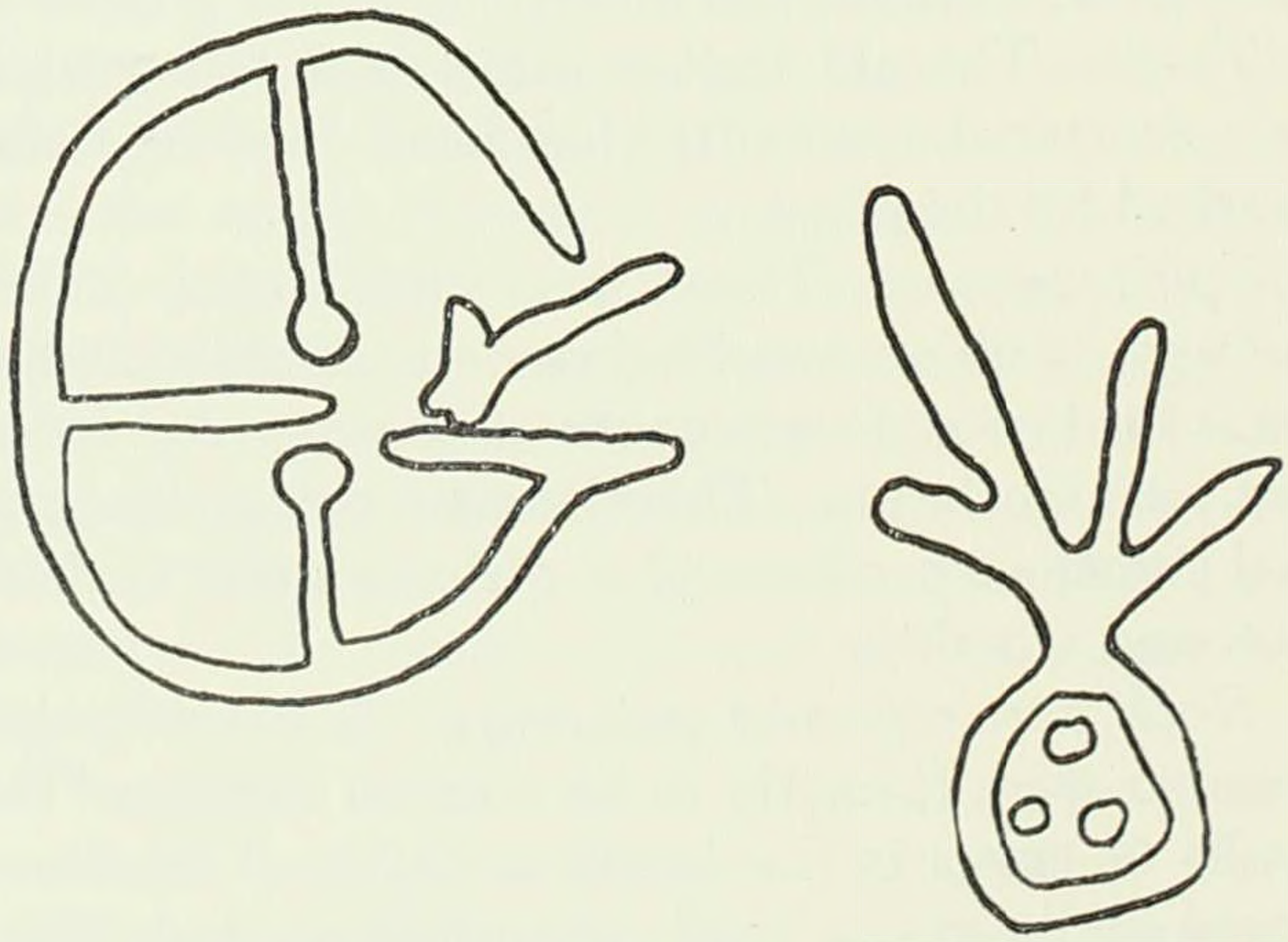
Trails. The old Indian trails exist today as a few scattered remnants that have remained untouched by the plow.

Spirit places. These are hills, trees, cliffs, springs, boulders, and other natural objects that were held sacred on account of some special form, use, or association. They became places for special ceremonies, offerings of gifts, or quiet meditation and worship.

Rock carvings and paintings. A considerable number were formerly to be seen on cliffs and the walls of caves in northeastern Iowa. They have fared badly at the hands of picnickers, but a few remain in out-of-the-way places.

Stone dams. V-shaped boulder dams, with the





Rock Carvings on Mississippi River Bluff near
Lansing, Allamakee County

open point down stream, provided places where the ancient Indians set their fish traps. But few of these have come down to the present. The best known example is in the Iowa River south of Middle Amana, where it may be seen at a time of low water.

Quarries. These are places where the Indians formerly mined their flint and hematite for the making of implements, ornaments, or paint. The sources of hematite occur in south central Iowa, and the old flint quarries were most numerous a few miles north of Burlington.

CHARLES REUBEN KEYES

Archaeological Patterns

A few words of explanation may help the reader understand the general features of the archaeology of the Mississippi Valley. It should not be forgotten that the American Indians were found by white men as members of a large number of linguistic and cultural groups. It follows, therefore, that the student will very soon find himself confronted, even within the boundaries of a single state, not by one uniform archaeology, but by a number of different archaeologies.

Four specialized terms must now be used, indicated on first use by quotation marks. According to general agreement, most of the archaeologies of the Mississippi Valley belong to two great "patterns," the Woodland and the Mississippi. The Woodland presents a still undetermined number of "phases"; the Mississippi appears fairly satisfactorily in three phases, the Upper, Middle, and Lower Mississippi. The phases resolve themselves into smaller groupings known as "aspects," and these into still smaller, called "foci." With the focus one reaches, generally speaking, the various tribal units.

So far as known historically, the Woodland archaeology is largely traceable to peoples of Algon-

kian stock, though a very few tribes not Algonkian are believed, on historical evidence, to have taken over at least a material culture of an Algonkian type. Thus Woodland is an archaeological term with broader content than Algonkian, which is linguistic. Most of the Woodland manifestations the country over are not historically documented and so are assigned to the Woodland pattern on archaeological evidence only. They give the impression of a very early occupation of Canada and the United States east of the Rockies. Where stratification of cultures occurs, the Woodland is quite regularly the lowermost element. In Iowa all of the many known Woodland sites (the Peoria villages visited by Marquette never having been identified) are beyond the reach of history.

The Mississippi pattern includes the archaeologies of various Indian stocks, often with historical connections: Siouan, Caddoan, Muskogean, Iroquoian, and others. Just as the Woodland manifestations thin out as the Gulf of Mexico is approached, but few of the Mississippi extend as far north as the Canadian boundary. The two archaeologies have little in common. This fact and the facts of their geographic distribution suggest strongly that the Woodland and the Mississippi were remote from each other in origin. A working hypothesis, supported by a considerable amount of evidence, contemplates a northern origin for the Woodland, directly from Asia by way of Bering

Strait and the interior route, and a southern origin for the Mississippi, indirectly from the more advanced populations of Central America or Mexico, either by migration of peoples or diffusion of culture from these regions by smaller numbers of hardy travelers. A brief comparison of the two patterns may be stated.

The differences begin with the nature of the sites chosen for their homes. The Woodland, as the name indicates, hid their villages away in the forest and developed a forest economy. The sites are small, often covering less than an acre in the valley of a creek or larger stream, on a lake margin, along some sandy ridge, or in the shelter of a cavern or cliff overhang. The Mississippi sites are comparatively large, often covering from ten to a hundred acres or more, and placed in the open on terraces or broad bluffs of a prairie type. The Woodland houses were generally round and of temporary construction; the Mississippi were generally square or rectangular and of semipermanent construction.

The early Woodland sites show no evidence that the inhabitants cultivated the soil; they were quite clearly hunters and food gatherers only. The latest Woodland apparently had a few garden beds where horticulture was practiced on a small scale, the beginning of an industry probably learned from the Mississippians who came into the Great Valley at a later time. The Mississippi peo-

ples possessed a quite well developed agriculture, the considerable variety of corn, beans, pumpkins, and other products of which made possible a more stable economy.

The Woodland built a very large number of burial mounds, not very large, containing burials of flexed-primary or the secondary type. In Iowa the latter is more generally found, and these much more often than not without grave goods. The Mississippi built comparatively few mounds, mostly large in size and often in the shape of truncated pyramids which were intended as substructures of buildings of temporary construction. Their burials were usually in cemeteries, primary, extended on the back, and rather well supplied with grave goods.

In their industries, the Woodland developed stone work of an almost endless variety in the way of notched, shouldered, and barbed projectile points, grooved axes, and art objects of problematical uses. The Mississippi stone work is comparatively simple: small triangular projectile points, great numbers of flint scrapers, ungrooved axes or celts, and few art forms. The Woodland used bone implements sparingly either for tools or ornaments; the Mississippi used bone, shell, and antler for a great variety of tools and art forms: fish hooks, knives, digging tools, fleshers, pendants, arm bands, game counters, and the like.

The Woodland pottery is crushed rock or sand

tempered, the body generally elongated and the base rather pointed, the decorations most elaborate on the outside rim, the vessel walls rather thick, the colors dull red or brown, and the vessels without handles. The Mississippi pottery is most often crushed-shell tempered, globular or flattened-globular in shape, with added varieties of bowls, basins, and beakers, thin walled, with decorations generally on lip, collar, or shoulder of the jar forms, colors light gray or tan. The vessels are frequently supplied with handles or lugs, these often in effigy forms.

CHARLES REUBEN KEYES

Iowa Prehistoric Cultures

Of the five distinct archaeological manifestations that have been established for Iowa, one belongs certainly, and a second probably, to the Woodland pattern. Surprisingly enough, considering Iowa's northern position, three of the five manifestations definitely belong to the Mississippi pattern. In the following brief statement, it will not be necessary to repeat the main features of the two patterns, as outlined above, though it should be of interest to locate the five archaeologies and to add some items of description distinctive for those peoples who dwelt within the boundaries of Iowa before the white man came.

THE WOODLAND PATTERN

The Woodland

The Woodland forms of Iowa's archaeology occur in every part of the state, as might be expected from their wide diffusion over the eastern half of the American continent. It was foreseen too, at the inception of the Iowa survey, that the Woodland was likely to prove complex because of its state-wide distribution and its great number of traits. The facts have gone far beyond expectations; indeed, restraint has been necessary to keep the Woodland confined to as few as six different

aspects within the state. In a brief discussion of Iowa archaeology, of course, these cannot be described, and without description there is no point at all in naming them. Just one or two little hints as to certain facts involved may be given. In the one category of Woodland chipped-flint implements, over five hundred different types have turned up, based on form alone without reference, as a rule, to either size or proportion. The decorative designs on pottery have the same strong tendency in the direction of infinity.

Facts such as these might be explained in two quite different ways, by the processes of change and invention through a long period of time, or perhaps by the mental characteristics of a people who could not be satisfied except in pursuing old aims in forms ever new. Whatever the explanation may be, the time span for the Woodland in Iowa was certainly a long one, several thousand years possibly. A very few typical Folsom-type projectile points have been found within our borders, and a larger number of points that are Folsom-like and Yuma-like — whatever these facts may mean.

The Hopewellian

This is the archaeology that first made American antiquities well known in Europe as well as at home, an account of the striking discoveries in some southern Ohio mounds in 1846. Similar finds followed later in a number of other states. The

name derives from the Hopewell farm some eight miles northwest of Chillicothe, Ohio, where some of the original finds were made. In Iowa some Hopewellian finds were made by members of the Davenport Academy of Sciences, working in mounds along the Mississippi River from Davenport to old Toolesboro near the mouth of the Iowa River, during the seventies and eighties of the last century. These finds consisted of grave goods such as necklaces of fresh-water pearls and tubular copper beads; copper axes and skewers; curved-base, plain-bowl, and effigy-bowl stone pipes; sea shells from the Gulf of Mexico; obsidian from the Rockies; sheet mica from the Carolinas; and some other objects generally foreign to the Woodland. A few pottery vessels were more or less like Woodland specimens. These finds may be seen in the Davenport Public Museum, successor to the Davenport Academy. Comparatively few Hopewellian products have been found outside of this limited area. Whether the Hopewellian is a pattern or a highly specialized phase of the Woodland remains unsettled, with a majority opinion apparently favoring the latter.

THE MISSISSIPPI PATTERN

The Oneota

The only Iowa archaeology connected with history is the Oneota, which takes its name from a beautiful little river that reaches the Mississippi flood plain a short distance south of the Minnesota

line. The early Indians called this stream Oneota, Place of a Rock (four syllables, with the accent on the third). White men later called it the Upper Iowa. Here in the late seventeenth century the early French explorers found the Ioway Indians. Chief among these Frenchmen was the smart, honest, and dependable Nicholas Perrot, who visited the Ioway in 1685 and wrote an account of the event, of which, unfortunately, a few sentences only have survived. They were then living in as wonderful a valley as any river ever carved out of the territory for which these Ioway were destined to furnish an appropriate and euphonious name.

The Ioway spent most of their free and unhampered existence within what became Iowa. Their close Siouan relatives were the Oto and the Missouri. All three were offshoots, it is believed, of the Wisconsin Winnebago, the four tribes forming the Chiwere (Chee-way-re) branch of the Siouan stock. They left the Iowa region ultimately, the one to cross the Missouri River into Nebraska and the other to reside in and leave a name for the neighbor commonwealth to the south. Oneota village sites are so well scattered over the present Iowa landscape that the most natural interpretation of them, putting together archaeological evidence and what pointers may be gleaned from history, is that all three of these related tribes had their villages in Iowa for longer or shorter periods, the Ioway certainly, the Oto with almost equal cer-

tainty, and the Missouri very likely, though probbably for a shorter time.

We may follow briefly the destiny of the Ioway. For unknown reasons the Ioway moved out of the Oneota valley sometime after Perrot's visit and prior to 1700. Contemporary French references to them at the turn of the seventeenth century, also the 1703 and 1718 maps of Delisle (the best of their period), indicate the presence of the Ioway in a lake region at the head of a river flowing to the southwest into the Missouri. This is now known as the Little Sioux, and the lakes are those we now call Spirit Lake, the Okobojis, and the rest. The archaeology of the region furnishes entirely satisfactory, even abundant, confirmation. Not on a lake margin, as Delisle's informant had supposed, but within the big loop of the Little Sioux, an easy walking distance southwest from the University of Iowa biological laboratory on Miller's Bay, West Okoboji, is a large Oneota village site from which can be gathered village refuse and lost artifacts a-plenty. These are quite identical with the same things that people have collected, for just about three generations, from the old terrace sites of the Ioway on the Upper Iowa River. There are shell-tempered potsherds with high flaring rims, notched lips, and strap-shaped handles which spring from the outer rim below the lip and are attached at the lower end to the shoulder of the vessel to which the fragments once belonged. The decorations on

the shoulder are carried out in simple designs made up of straight, incised, or trailed lines in groups of parallels, interspersed sometimes with groups of shallow punctates or incised dashes. Many snub-nosed flint scrapers are there, together with numerous small, thin, triangular arrowpoints of flint; an occasional milling stone of about forty pounds weight; some bun-shaped hand mullers (or stone corn-crushers, to use the term employed in the Ioway tale quoted above) to accompany the nether millstones; fireplace stones, fire-reddened and usually broken; clam shells, both whole and broken; refuse flint and quartzite of various colors; and even, at rare intervals, if one happened along before anyone else saw it, a little catlinite pipe with a disc-shaped bowl.

But Delisle's map of 1703 has a second important contribution to make. Sitting at his drawing board in Paris he must have been a good listener when returning travelers from New France told him about other Ioway Indian villages on the Little Sioux. For he labels the entire river *R. des Aiaouez*. It was indeed the River of the Ioway — all of the upper third of it, at least, the part opposite the lakes and down through what is now Clay County, just to the south. On two different occasions, big and kindly Jens Thompson of Spencer was guide to the old Ioway villages in Clay County. One of them is a short distance west of Spencer, another less than three miles southwest of

Gillett Grove, and a third some five miles southwest of Webb. All are situated on high ground overlooking the Little Sioux, and cover from ten to twenty acres each. Potsherds and other relics and refuse, quite the same as those found within the big loop near West Okoboji or on the high terraces of the Upper Iowa, are abundant. Neighboring farmers have good collections to show, and it is still possible to pick up things on these sites, if one is not too particular about the quality of the specimens that years of cultivation have left. Among these will be pieces of sheet brass and copper to tell the story of direct or indirect contact with the French traders from the region of the Great River to the east.

A few years later (1718), Delisle has his finest map ready and on this he placed another Ioway village on the east bank of a river which flows southward and reaches the Missouri about where Sioux City now stands. The village is of evident importance, for it is the terminus of a clearly drawn "travelers' highway" marked *Chemin des Voyageurs,* extending slightly to the southeast, just below the lakes region and on to the mouth of the Wisconsin River. The river that flows into the Missouri from the north must be the Big Sioux, and the village was undoubtedly the great Blood Run site, the largest known to have been built in Iowa. It was beautifully situated on a high terrace overlooking the Big Sioux and the plains of South

Dakota. The site extends for more than a mile along the Iowa terrace of the Big Sioux, about a mile west of the little Rock Island station called Granite, and only two miles south of the South Dakota and Minnesota boundary lines. After sixty years of cultivation, the distinctive artifacts and refuse of an Ioway village continue as a never ending supply. Martin Johnson, whose farm occupies about the center of the old village, had picked up so many things on his place by the time we called at his home that, to be certain the state had a good usable supply, he gave us about a thousand specimens: diagnostic fragments of pottery, hundreds of the little triangular arrowpoints and snub-nosed scrapers, knives of flint and quartzite, inscribed tablets of pipestone, hammerstones and milling stones of Sioux quartzite and granite, ornaments of pipestone, and ornaments of brass and copper, the goods in trade from the *voyageurs*. Life had begun to turn a little more in the white man's direction, while for the most part the native ways remained.

The Delisle map of 1718 still retained for both the lakes and the Little Sioux the name *Aiaouez,* though it is doubtful whether the old village sites there were still occupied, considering the teeming population center on both sides of Blood Run. Probably the Ioway occupied the site on the Big Sioux for something like half a century. By about 1760, and in the years following, they are men-

tioned several times, in rather indefinite terms, as being now here, now there: in southwestern Iowa, in the general Council Bluffs region; on the Des Moines River; in southeastern Iowa; and even on the Illinois side of the Mississippi. Not much can be made of these reports. Very likely the criteria for safe differentiation of one abandoned village site from another no longer existed in the second half of the eighteenth century, the primitive Indian cultures having so largely disappeared. From 1777 onward for nearly half a century numerous reports speak of an Ioway village on the lower Des Moines River, some of these definite enough for an exact placement on a terrace on the north bank of this river a mile west of where the little town of Selma now stands in the northwest corner of Van Buren County.

In late March of 1924, the writer left the little morning train that rumbled up the north bank of the Des Moines River and began inquiries in Selma as to where old Iowaville used to be. This was easily learned. The old hotel, now a farm house, was still standing as the one remaining building of the village which the earliest settlers had built in 1837, but which had become a ghost town before the century ended, since the Selma site was so much closer to where the railroad went through. However, Iowaville did look very promising as an Indian village site, since a terrace was high enough to escape flood waters and sandy

enough to provide surface comfort at all times of the year. So the day was spent in an intensive search over about a square mile of terrace, eyes to the ground for any trace of former Indian occupation. Not one fragment of Indian pottery, not a single arrowhead or scraper of chipped flint, no stone refuse of any kind was found. These native industries were never practiced here.

In the evening "Bud" Hinkle was back from Ottumwa, the man everyone said could tell all about the early Indian conditions at Iowaville, for he was a grandson of James Jordan, the trader who served the Sauk Indians under Keokuk during the thirties. "The Sauk Indians," Mr. Hinkle said that evening, to quote him correctly, but probably not verbally, "had their village where you were hunting today, where Iowaville later stood; the Ioway Indians lived on the same river terrace a little earlier and slightly closer to Selma. Early white settlers used to find such things as glass and shell beads, parts of old flintlock guns, iron tomahawks, a few pipes and fragments of pipes made of pipestone; but not much can be found there now." Such was the brief story, undoubtedly a true one. Nevertheless, in 1938 three of us, to be very sure, searched the Iowaville terrace again, this time a little closer to Selma. Dr. Waldo Wedel, Curator of Archaeology at the United States National Museum, and Mrs. Mildred Mott Wedel, his wife, author of "The Relation of Historic Indian

Tribes to Archaeological Manifestations in Iowa" (*Iowa Journal of History and Politics,* July, 1938), were the interested and very efficient helpers. The sum total of our finds were these: seven pieces of broken clam shell; nine pieces of broken granite, quartzite, and limestone that might have belonged to any Indian culture at all or to any period whatsoever; one piece of a pottery pipe bowl, such as were made in quantities by the whites and traded to the Indians. Not a thing was found that would identify the Ioway, or any other group that ever lived within our borders. By 1830 the Ioway, under pressure from the whites, had given up all their claims to lands in Iowa, and reservation life in southeastern Nebraska and in Oklahoma was on the way. In the 1920's, Alanson Skinner, Curator of Anthropology at the Milwaukee Public Museum, was able to secure from some Ioway in Oklahoma three or four examples of the sacred catlinite pipes that had been treasured and handed down for a century or more after the other elements of a native culture had passed to oblivion.

Brief reference should be made to the Oto and the Missouri, tribes that, archaeologically speaking, like the Ioway, were foci of the Oneota aspect of the Upper Mississippi phase. When speaking of Indian groups, especially if these are remote enough from the white man's history to be without dependable identification, and always if they entirely lack this, it is desirable to have a few handy

words by which to refer to the different archaeologies and their various connections (the four "specialized terms" defined in the second paragraph of our section on "Archaeological Patterns"). Otherwise one would be forced to overwork the good but too indefinite word "culture."

It will be necessary to return to western Iowa. The Oto are not without mention in history, though the references are uniformly quite vague. Pierre Le Sueur spent the winter of 1700-1701 at the mouth of the Blue Earth River in south central Minnesota, where Mankato now stands. Here he was told by some Sioux Indians that this was the country of the Ioway, the Oto, and the Western Sioux. The Ioway, they informed him, lived on a lake shore (actually, as we have seen, near West Okoboji in the big loop of the Little Sioux), the Oto "a little farther on." But beware of an Indian's "a little farther on." His one method of overland travel was on a good pair of legs so used to action that a difference of a hundred miles or so scarcely counted. On his 1703 map, Delisle placed the Oto with the Ioway in the lake region, but in 1718 he removed the name Oto from here and twice placed it on the lower Platte in Nebraska and, in larger letters, in the wide space between the Missouri and the Des Moines. With about equal frequency, the eighteenth century maps, well into the sixth decade, placed the Oto now in the one location, now in the other.

However, the testimony of archaeology is that the Oto had their villages rather remote from the Ioway; that these were more numerous than those of the Ioway, though smaller; and that trade goods from the whites were entirely lacking. Our collected materials, though considerable in amount, have been derived from surface collecting on all the sites listed below and from generous gifts by collectors who watched the operations of gravel crews as the old refuse pits came to light on the terraces of the Little Sioux. It would seem that some trade goods might exist; but, if they do, it will take some extensive future excavations to find them.

On archaeological evidence, the habitation areas of the Oto were in the middle and lower Little Sioux and the middle Des Moines. The remains of the old Oto villages are believed to be a site at the mouth of Mill Creek in Cherokee County; four sites in or near Correctionville and three between Anthon and Oto in Woodbury County; and six more along the Des Moines and two south tributaries in Polk, Warren, and Marion counties. The pottery is readily distinguished from that of the Ioway. It is definitely Oneota, but differs from the Ioway in these respects: low or medium rims that are as often recurved as straight; shallow, elongated notches, or even short chevron designs, on the inner rims frequently, instead of notched lips; shoulder designs more elaborate, being composed

of a larger number of incised, trailed, or fluted parallel lines in vertical, horizontal, or diagonal groups; larger use of curved parallel lines forming festoons or concentric circles with a single interior punctate; the handles often wider than high and generally attached to the lip rather than the outer rim. Some contact with Plains people is shown by the presence of diamond-shaped chipped flint or quartzite knives with the four edges beveled to make a cutting tool. Other traits are much like the Ioway.

Where, if anywhere, were the Missouri village sites in Iowa? As there is a succession of old One-ota sites along the Mississippi from Muscatine to Burlington, quite without trace of trade goods and quite without notice by white explorers, it is difficult to reach any other conclusion than that the Missouri once occupied them. Their archaeology is not that of the Ioway, but is very close to that of the Oto of Iowa and the Missouri of the early historic village on the Missouri River, in Saline County in Missouri. The three archaeological complexes are distinguishable, but only in certain minor details.

The Iowa sites that ought to be Missouri, by absence of history and presence of an abundant archaeology, also by their location on the natural down-river route, begin with the site at the north end of Muscatine Island. Unfortunately, most of this old village has journeyed down the Missis-

sippi to the Gulf of Mexico; fortunately, the heirs of Theron Thompson of Muscatine gave his fine archaeological collection to the state of Iowa. The Great River comes in here from the east, and the north end of the Island deflects its mighty current to the south. Mr. Thompson watched some of the old refuse pits as the waves caused crumbling and exposed the fine large fragments of pottery and numerous bone implements. And Mr. Thompson acted promptly.

A second site is on a level bluff top opposite the south end of Muscatine Island and near the old white settlement at Toolesboro. John B. Newhall in his *Sketches of Iowa,* published in 1841, has a good deal to say about this site and even provides a nice plat of a large enclosure with earthen ramparts that once occupied the center of it. Despite cultivation for over a century, the hunting for relics is still good here. The other villages are near Burlington, three on terraces to the north and two on bluff tops to the south. Roy A. Friedel has long been the interested and diligent collector in these parts. The state owes to his diligence and his generosity goodly collections of potsherds and other artifacts. The abundance of flint scrapers made of the Burlington flint is especially noteworthy. As flint of good quality was plentiful in the limestone cliffs, possibly the ancient Indians of the Flint Hills villages had a good market for these little implements. Mr. Friedel and Robert Sloan, cus-

todian of the Flint Hills Park, always had a surplus to turn over to the state. Together they furnished two big double handfuls of scrapers, nearly two hundred specimens in all, and many of the little triangular arrowpoints as well.

The Glenwood

Along the south slopes and rounded summits of the great loess hills that form the eastern border of the flood plain of the Missouri River in southwestern Iowa, the early settlers found saucer-shaped depressions from two to four feet deep and from thirty to sixty feet in diameter. They were called buffalo wallows at first, until someone dug into one and the refuse of Indian habitation came to light; then the term "earth lodges" gradually came into use. They were indeed earth lodges, though the real nature of them was not known until careful excavations were made, for the most part west of the Missouri during the twenties and thirties, where the culture was much more widely distributed in Nebraska and Kansas than in Iowa. In all three states the lodges were found to have been earth covered, resting on a sturdy framework of logs from about 25 by 25 feet to 40 by 40 feet square, or even larger, and thus capable of sheltering more than a single family. Being set in a square pit and entered by a ramp that was also roofed and earth covered, the lodges afforded ample protection from the cold and winds of the Plains. These large houses were scattered, often a

quarter of a mile apart, and usually not grouped to form a village. The manifestation was named the "Nebraska culture" by Dr. Robert F. Gilder, editor of the Omaha *Bee,* who described it briefly in 1926.

In Iowa the Glenwood focus of the Nebraska, which is an aspect of the Upper Mississippi phase of the Mississippi pattern, has a very narrow and not very extensive range. "Glenwood focus of the Nebraska" means at once that the Glenwood of Iowa will not differ very much from any foci of the Nebraska that students in Nebraska and Kansas have turned up or may yet be able to find. And "aspect of the Upper Mississippi phase" suggests at once its relationship with the Oneota, an important aspect of this same phase, to which the Winnebago, Ioway, Oto, and Missouri belong who had their villages in Wisconsin and Iowa, and indeed in every state touching the Iowa borders. While differing radically from the Oneota in the possession of certain striking traits, such as the building of great earth lodges, still the Glenwood must be similar to the Oneota in some of its broader traits, otherwise it could not be an aspect of the same phase. Our excavation of twelve houses near Glenwood in 1938 shows the possession of traits, in Iowa as in Nebraska and Kansas, that place the Nebraska culture, although believed to be without any connection with history, as an aspect of the Upper Mississippi: a pottery complex that does

not differ in essentials from the Oneota and other aspects of the Upper Mississippi; celts and small triangular arrowpoints, instead of the grooved axes and larger notched projectile points of the Woodland, with all the implications involved; and especially a well developed agriculture. The Iowa sites — originally some hundreds of individual houses — extend from the Missouri state line to nearly the middle of Monona County, close to one hundred miles. Apparently a walk of thirty minutes, or less, from any one of these houses would have brought an occupant to a full view of the six-mile-wide flood plain of the Missouri River.

The Mill Creek

One more very distinctive and very interesting and important archaeology remains, and thus far little has been said about it anywhere. As known at this time it consists of fifteen small and very compact village sites on the Sioux rivers in northwestern Iowa, twelve on the Little Sioux and two small tributaries in Buena Vista, O'Brien, and Cherokee counties, and three on the Big Sioux and its tributary, the Broken Kettle Creek in the southwest corner of Plymouth County. With one exception all of the sites have long been under cultivation; the exception is happily now owned by the state of Iowa and apparently preserves the general size and form of all the villages as they originally stood. This is the Wittrock site on Waterman Creek, a clear tributary of the Little Sioux in

O'Brien County. In form it is a rectangle of about an acre and a half, a little longer than wide; the creek forms one boundary and a broad artificial ditch, two feet deep at this time and about eighteen feet wide, forms the other three sides. The ditch is interrupted by a level entrance on the downstream side, and the level area inside the ditches shows thirteen circular depressions, each about thirty feet across, where the native houses once stood. The ditch and entry-way suggest a village that was originally enclosed by palisades. In the Little Sioux drainage, the villages have a quite uniform depth of five feet of debris, unbelievably rich in bone, stone, shell, horn, and antler refuse, broken pottery, and everything of an imperishable nature that would help to interpret the story of human activities here, when an unknown people controlled the destinies of what is now the northwest corner of Iowa.

Two of the three villages in the Big Sioux area, the one despite its use for eighty years as a barnyard, the other after a generation or two of cultivation, still have eight feet of refuse deposits. The state collections, after six months of excavating during the WPA days, much shorter periods of work in the earlier FERA days, and some very generous gifts, now contain some 30,000 items from the Mill Creek archaeology. Nothing shows connection with the white man's history. It is one of the most complex of all the known Mississippi

pattern archaeologies, either North or South. It must suffice to say here that the Mill Creek presents a commingling of Middle and Upper Mississippi phase traits, the remains of a culture that was in process of change from a former home in the South to a new habitation area on the edge of the northern Plains.

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Such, in brief, is the story of prehistoric man in Iowa, at least as far as it is known today. As the years pass, and the archaeologists dig deeper and look more closely, our knowledge of Iowa's early men will be expanded and enriched.

CHARLES REUBEN KEYES

SUMMARY OF IOWA ARCHAEOLOGICAL PATTERNS

I. *Woodland Pattern*

- A. Stock — Algonkian
- B. Aspects in Iowa
  1. Woodland
  2. Hopewellian
- C. Location
  1. Woodland — state-wide
  2. Hopewellian — mostly along Mississippi, from Iowa River to McGregor
- D. Iowa tribes or Foci
  1. Sauk
  2. Fox or Meskwaki
  3. Potawatomi

II. *Mississippi Pattern — Upper Phase*

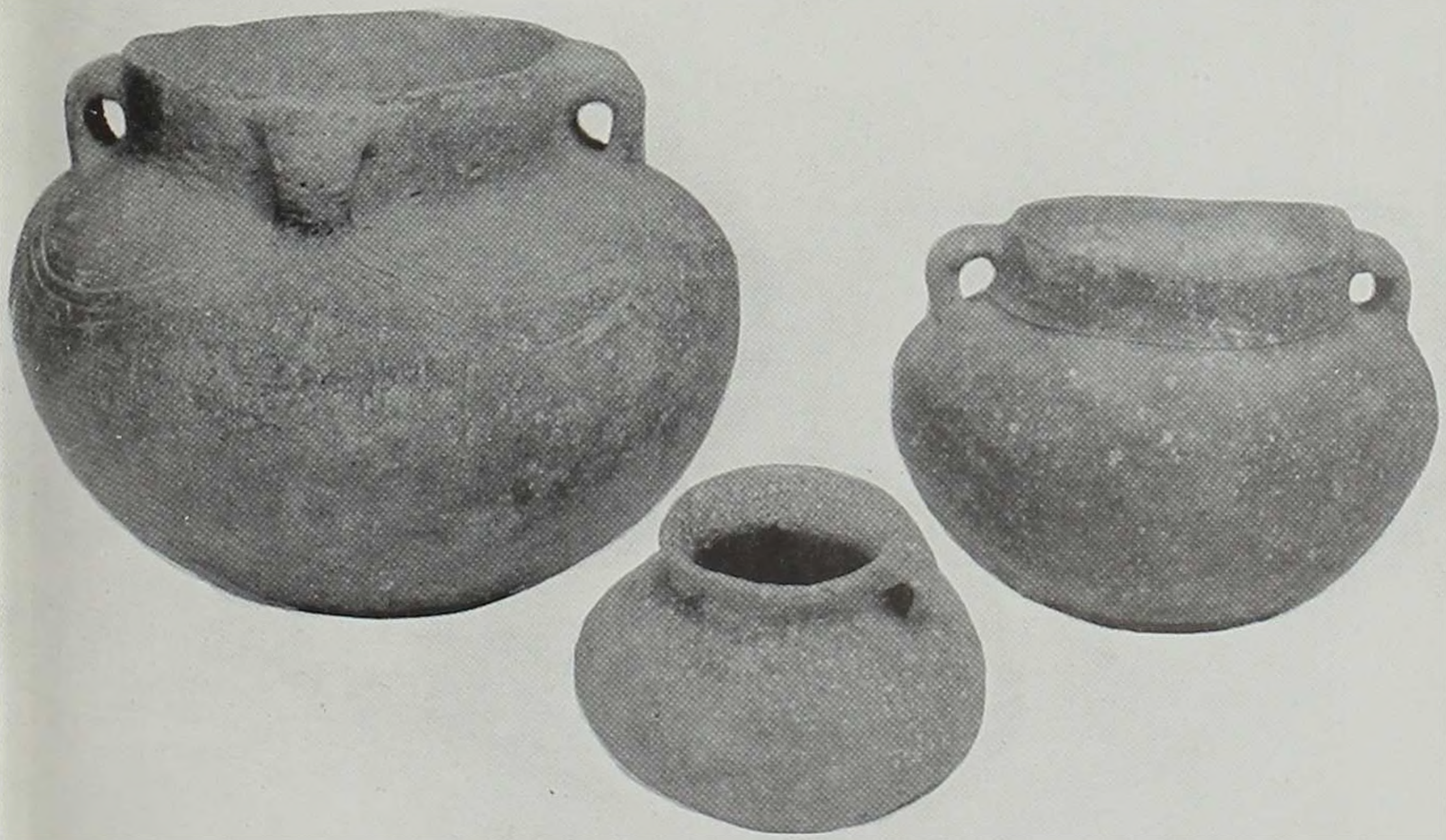
- A. Stock — Siouan
- B. Aspects in Iowa
  1. Oneota
  2. Glenwood (a foci of Nebraska aspect?)
  3. Mill Creek
- C. Location
  1. Oneota — On Upper Iowa, Big and Little Sioux, Des Moines, and Iowa rivers
  2. Glenwood — In Mills County
  3. Mill Creek — On Little Sioux River
- D. Iowa Tribes or Foci
  1. Ioway
  2. Oto
  3. Missouri
  4. Winnebago

COMPARISON OF WOODLAND AND MISSISSIPPI PATTERNS

Ancient Sites	*Woodland*	*Mississippi*
Villages	Small — in forests	Large — on open terraces of bluffs
Houses	Round	Square or rectangular
Mode of life	Hunters and food-gatherers	Well developed agriculture
Burials	Mounds	Cemeteries, few mounds
Implements	Elaborate stonework; few bone tools	Simple stonework; bone, shell, antler tools
Pottery:		
Texture	Crushed rock or sand tempered	Crushed shell tempered
Shape	Elongated	Globular
Decoration	Elaborate, on outside rim	On lip, shoulder, collar
Color	Dull red or brown	Light gray or tan
Handles	None	Handles or lugs in effigy form

State Historical Society of Iowa Collection

Woodland Pottery Vessels
Collected from the Lane Farm Mound Group in the Summer of 1934



State Historical Society of Iowa Collection

Siouan Pottery Vessels
Collected on the O'Regan Terrace by Dr. Frederick J. Becker