SOME MATERIALS FOR THE STUDY OF IOWA ARCHEOLOGY

The present paper aims not so much to show what has already been done in the field of Iowa archeology as to suggest some of the possibilities of future study. Brief reference, however, to the trend of investigations in the past will show the necessary background for future work and contribute to a better appreciation of present problems.

Research in Iowa antiquities was most general and active, at least in so far as this resulted in published papers, during the seventies, eighties, and early nineties of the last century. The work centered in the Davenport Academy of Sciences or was inspired pretty largely from that source. Important discoveries in the way of curved-base pipes, copper axes, inscribed tablets, and other objects, mostly from the mounds of Scott and Louisa counties, made the Davenport Academy known nationally, even internationally, and aroused to activity a considerable part of the scientific talent of the State. The contributors to the early volumes of the *Proceedings* of the Academy formed a notable group indeed: C. E. Putnam, R. J. Farquharson, John Gass, Wm. H. Holmes, Charles E. Harrison, W. H. Pratt, Frederick Starr; and it is impossible not to feel in their papers and discussions the inspiration under which they worked.

Aside from these writers directly connected with the Davenport Academy, a rather numerous body of students was carrying on the traditions of mound investigation in nearly all parts of the State, and the results of their researches, in part at least, reached the public through vari-

ous avenues of publication. T. H. Lewis reported and described a large group of effigy mounds near North McGregor;[1] W J McGee surveyed a second group of effigies near Farley;[2] Clement L. Webster investigated extensively the mounds of Cerro Gordo, Floyd, and Chickasaw counties;[3] S. B. Evans reported on the mounds of the Des Moines Valley and elsewhere;[4] Charles Negus supplied much new information on the mounds of Jefferson and other counties;[5] the antiquities of Mills County received the attention of Seth Dean;[6] and the evidences of man's antiquity in Iowa were examined by Professor Samuel Calvin.[7]

In two notable papers published in 1897, Professor Starr lists these and many other papers having to do with Iowa antiquities, and gives a brief but definite summary of their contents.[8] The bibliography catalogues two hundred and

[1] *Lewis's Effigy Mounds in Iowa* in *Science*, Vol. VI (1885), No. 146.

[2] McGee's *The Artificial Mounds of Northeastern Iowa, and the Evidence of the Employment of a Unit of Measurement in their Erection*, in *The American Journal of Science and Arts* (Third Series), Vol. XVI (1878), pp. 272–278.

[3] Webster's *Ancient Mounds and Earth-works in Floyd and Cerro Gordo Counties, Iowa*, in the *Annual Report of the Smithsonian Institution*, 1887, Pt. I, pp. 575–589; Webster's *Indian Graves in Floyd and Chickasaw Counties, Iowa*, in the *Annual Report of the Smithsonian Institution*, 1887, Pt. I, pp. 590–592; Webster's *Ancient Mounds at Floyd, Iowa*, in the *American Naturalist*, Vol. XXIII (1889), pp. 185–188; Webster's *Aboriginal Remains Near Old Chickasaw, Iowa*, in the *American Naturalist*, Vol. XXIII (1889), pp. 650–655.

[4] Evans's *Notes on Some of the Principal Mounds in the Des Moines Valley* in the *Annual Report of the Smithsonian Institution*, 1879, pp. 344–349.

[5] Negus's *Antiquities* in *The Annals of Iowa* (First Series), Vol. V, pp. 840–841; Negus's *The River of the Mounds* in *The Annals of Iowa* (First Series), Vol. XII, pp. 253–268.

[6] Dean's *Antiquities of Mills County, Iowa*, in the *Annual Report of the Smithsonian Institution*, 1881, pp. 528–532.

[7] Calvin's *Prehistoric Iowa* in *Iowa Historical Lectures, 1892*, pp. 5–29.

[8] Starr's *Bibliography of Iowa Antiquities* in the *Proceedings of the Davenport Academy of Natural Sciences*, Vol. VI, pp. 1–24; and Starr's *Summary of the Archaeology of Iowa* in the *Proceedings of the Davenport Academy of Natural Sciences*, Vol. VI, pp. 53–124.

twenty-four titles, and the summary, covering sixty-nine pages of the *Proceedings*, affords a very satisfactory view of Iowa archeology from the beginning to the date of publication. Intended by their author more as the foundation for future research than as a retrospect of past accomplishments, these two papers were, nevertheless, the summary and, in a sense, the valedictory of an epoch that had closed. The fact that during the years 1903–1906 some excellent work in mound surveys and investigations was done in Johnson, Iowa, and Dickinson counties by Dr. Duren J. H. Ward, under the direction of the State Historical Society of Iowa, can not change this essential truth.[9] The early members of the Davenport Academy had passed away or were scattered, and the work of Dr. Ward, for the State Historical Society, was too soon interrupted by his removal from the State. That the interest of the State, however, was aroused by the work of Dr. Ward, is evidenced by the fact that the General Assembly in 1904, in restating the purposes of the State Historical Society of Iowa, added as a function, the "carrying out of a systematic and scientific anthropological survey of the state."[10] The interest was sufficient, furthermore, to lead to the organization, in October, 1903, of the Iowa Anthropological Association.

[9] The following articles by Dr. Ward written in connection with, and as a result of, the investigations mentioned were published by the State Historical Society of Iowa: Ward's *Historico-Anthropological Possibilities in Iowa* in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. I, pp. 47–76; Ward's *Anthropological Instruction in Iowa* in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. I, pp. 312–328; Ward's *Some Iowa Mounds — An Anthropological Survey* in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. II, pp. 34–68; Ward's *The Problem of the Mounds* in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. III, pp. 20–40. The investigation and relics of the Okoboji Mounds in Dickinson County were discussed in detail at the second yearly meeting of the Iowa Anthropological Association at Iowa City in 1905. The proceedings of this meeting are reported by Dr. Ward in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. III, pp. 422–458.

[10] *Laws of Iowa*, 1904, Ch. 117.

Nevertheless, though fine work had indeed been done, Iowa had not proved itself ready as yet to undertake and support a really comprehensive archeological survey, not even of the mounds, the one type of antiquities with which the earlier writers had been chiefly concerned. A rough analysis of the titles listed in Professor Starr's bibliography will be useful as showing the direction taken by the researches of this first epoch. Of the two hundred and twenty-four papers, one hundred and ninety-seven are concerned with the mounds or their contents; of the other twenty-seven, eight treat of the modern Indian tribes, two deal with the lodge circles of the Missouri Valley, five with rock inscriptions, seven with shell heaps or kitchen middens, four with implements found in so-called "loess" deposits, and one with five artifacts of supposedly paleolithic type from near Bonaparte, the exact origin not indicated. Dr. Ward's work also had to do with the mounds or with the present-day Indian tribes. These facts are striking and show that the writers of Iowa archeological history have generally held that any reconstruction of the prehistoric past depends primarily on mound exploration. One need not wonder too much at this, for it was not the Iowa scholars alone who for two generations lived under the influence of such works as Squier and Davis's famous report "The Ancient Monuments of the Mississippi Valley".[11] The antiquities revealed by this work, great enclosures with earthen ramparts, great mounds that produced wonderful treasures in sculptured stone, wrought copper implements and ornaments, broad knives of obsidian and chalcedony — were not these surely the products of a greater and more cultured people than any the white man had met upon the American continent? Thus a vanished race of mound builders became fixed in the imagination and in the liter-

11 *Smithsonian Contributions to Knowledge,* Vol. I (1848).

ature of the new people who occupied the lands and upset the cultures of the old.

Nevertheless, facts and observations gradually undermined the theory that the mound builders were a separate people, and tended to establish the red man as the one race that had occupied the Western World and whose very diverse monuments remain throughout the two Americas. But if the American Indian built the mounds, and if it is his past that we are studying, then not the mounds only become, but everything that this past produces becomes, the object of our quest: the mounds, the cave deposits, the village and camp sites with their hearth stones, lodge circles, workshops, garden beds, cornfields, and kitchen middens, the cemeteries, the remnants of old trails, the innumerable objects of his use, most of which never found their way into the mounds — all these things become the real subject matter of American archeology. With this new assumption — and nothing about or within the mounds justifies any other — the whole question of mounds and mound builders is seen in a new perspective and the whole subject of American archeology acquires a new unity and a new breadth.

The mounds are important. I should desire to be the last one to derogate anything from the fruitful and inspiring work done upon them. Iowa, at least, would scarcely be known as a field for archeological research except for the past interest in mound exploration and the important finds which happily resulted from the excavations. The fact remains, however, that while the mounds occupied the focus of attention other resources of our archeology remained comparatively untouched or received no consideration whatever. At best any reconstruction of the life of Iowa's prehistoric man is difficult and likely to remain fragmentary. Our climate does not favor the survival during long periods of time of articles, for example,

of wood, fabric, or even bone. If it were necessary to depend entirely on the mounds for our reconstruction, only a fraction of what may possibly be learned would ever come to light. Whole classes of mounds contain no deposits whatever. Moreover, only a part of the ancient burials were made in mounds, and of this part the majority were unaccompanied by the objects with which the living had to deal. Furthermore, so far as Iowa, at least, is concerned, whole categories of artifacts have never been found represented in the mounds at all. The spade has been called the chief instrument of archeological research; it probably is such, as a rule. In Iowa, however, the plow has rather the best of it, with its work followed up by the dash of spring rains and the wash of swollen streams. Some further considerations will, I believe, make this clear.

Before attempting to discuss the resources of Iowa archeology, I would hasten to say that I pretend to know these only in part. Iowa is a big State and no one, so far as I know, has ever comprehended its archeological possibilities as a whole. My own knowledge is somewhat intensive only in the region of the middle Iowa and Cedar rivers. Outside of this area my conceptions are based on a limited amount of field work in Hancock County and in the McGregor region, on the inspection of many locally collected materials in various parts of the State, on correspondence, and of course on the published literature already mentioned. Lack of materials from many localities, or rather lack of acquaintance with any materials, necessarily limits my view of the field and renders many of the general statements in this paper more or less tentative.

It will be safe to say, however, that in its archeology, as in its biology, Iowa is a meeting ground of North and South, East and West. The materials available quite definitely connect us with culture areas extending far beyond our

boundaries and, inasmuch as we almost surely have some native and original developments in addition, the whole situation presents features as amazing in their complexity as they are fascinating in their detail. For the purpose of a brief summary of features, four rather distinct culture areas may be tentatively recognized: the McGregor or Upper Mississippi, the Davenport or Lower Mississippi, the Plains, and Lower Iowa. Definite boundary lines are, of course, lacking and there is overlapping of types in these regions, both in respect to the earthworks and the artifacts; nevertheless, typical showings of the antiquities from each area are distinct enough and even a novice could scarcely confuse them.

The McGregor region is first of all distinguished by a wonderful series of effigy and linear mounds, doubtless a westward extension of the Wisconsin tradition. On the Iowa side the effigies lie in groups, or in connection with mounds of other types, along the Mississippi terraces and bluffs from the Minnesota line to at least the vicinity of Farley. The forms represented are generally the bird and the bear, though a few bison occur, and possibly several long-tailed specimens may be panther or otter. There are some scores of these effigy mounds, probably a few hundred in all. The number of linears is apparently smaller. Of the mounds with circular bases, or conicals, there are many hundreds, both along the Mississippi and its various tributaries. These have not been very productive of relics, and the linears and effigies produce none at all, except those due to chance intrusion. A few large enclosures with embankments and ditches occur on the Upper Iowa. These are now, I believe, nearly cultivated out of existence. The other earthworks, however, especially the linear and effigy mounds, are generally in a good state of preservation and the chief problem concerning them is to keep them as they

are. In so far as the National Park project fails to do this, the State should take a hand. Adequate surveys and illustrations of the remarkable mound groups of this region are still lacking, though Mr. Ellison Orr, of Waukon, is getting this work well in hand.

The field relics of the McGregor area, the chipped flint implements, the celts, and the grooved axes, are neither especially numerous nor of especially fine workmanship. The axes are generally of the all-around grooved type, the least specialized of the various ax forms. The products of the village sites and cemeteries on the other hand, especially those on the terraces of Turkey and Upper Iowa rivers, are noteworthy and will hardly fail to attract considerable attention when they become generally known. These consist, in part, of large and fine arrow-shaft grinders of sandstone, large knives and spearheads of dark brown chalcedony, gorgets, pipes, and pottery vessels. At least one engraved tablet of catlinite and one boatstone of diorite have also been found. The pottery of the Upper Iowa, a part of which has been described in a notable paper by Mr. Orr,[12] is abundant and comparatively well preserved, the smaller vessels coming from the cemeteries and the larger ones, up to sixteen inches or more in diameter, from the village sites. The carved stone pipes, largely from the cemeteries and rather numerous for this class of artifacts, are of great variety of form and fineness of finish. They are of three types, at least, the straight-based monitor, the effigy, and the smaller-sized red catlinite calumet. Seven collections of McGregor area materials, containing about four thousand specimens of all kinds, are known to me, and of these only the pottery of Mr. Orr's collection has appeared in the literature of Iowa archeology.

12 Orr's *Indian Pottery of the Oneota or Upper Iowa River in Northeastern Iowa* in the *Proceedings of the Iowa Academy of Science* for 1914, Vol. XXI, pp. 231–239.

The antiquities of the Davenport area represent a culture very much in contrast with that which we have just considered. Effigy and long linear mounds appear to be quite lacking and some of the conical sepulchral mounds are here richly productive, a fact on which rests the fame of the Davenport Academy collections. These contain no less than thirty-four pipes of the so-called mound builder type, the type with curved platform base surmounted either by a plain bowl or an animal effigy; no less than thirty-three copper axes, several still covered in part by the cloth in which they were wrapped; several hundred copper and shell beads; three inscribed tablets; some miscellaneous copper and bone implements. The only other large find of relics like these, like the pipes especially, was that made by Squier and Davis near Chillicothe, Ohio, during the forties and, as most of this found its way to England, these Scott and Louisa county collections are, I believe, the largest and most important of their kind to be found in any American museum. The time has perhaps come when these relics should be reëxamined and fully illustrated by methods which were not known to the workers of the seventies and eighties. In antiquities not found extensively in the mounds (chipped implements, grooved axes, hammerstones, and celts) the Davenport Academy has also rich series which have scarcely appeared in the literature. Of these some three thousand specimens are on exhibit and many more are in storage. I have no knowledge of other collections of scientific value in this area. A large collection in Muscatine was unfortunately left without data at the death of its owner. Many mounds along the Mississippi are still unopened and may possibly be still preserving objects as important as those which produced the furor of forty years ago.

The Plains area of Iowa is known to me only through the

scant literature, three small collections of material and a number of scattered objects — some one thousand specimens in all. Mounds of the conical type are numerous, especially along the bluffs of the Missouri, though the level country is also well supplied. A fine group, for example, stands on some vacant lots in Webster City. So far as I know, the mounds have produced but few relics, though apparently sepulchral in purpose. A mound near West Okoboji Lake was thoroughly explored by Dr. Ward and his party and found to contain about thirty burials, both ancient and modern.[13] Lodge circles so-called — excavations over which the lodges of the Plains Indians were erected — exist from at least as far south as Glenwood to the Dakota line, and with these are sometimes associated stone circles and boulder effigies. The last represent animals or reptiles of large dimensions and are made of boulders sunk nearly flush with the present surface. The most characteristic implements found appear to be the granite hammerstones and mauls. The grooved axes are not highly specialized, as a rule, and many of them are made of the more friable materials, as granite and hornblende schist. Some of finely polished greenstone come from the Emmetsburg region, but these, too, lack high specialization of form. The materials available are really too scant, however, for very safe generalization.

The Lower Iowa area includes, for present purposes, the valleys of the middle Cedar, Iowa, and Des Moines rivers. Probably that part of lower Iowa lying west of the Des Moines River nearly to the Missouri also belongs to this area, but the few artifacts examined permit of no confident statement. Mounds are very numerous, standing generally on both the terraces and bluffs of the rivers, and are mostly

[13] A discussion of these remains may be found in the IOWA JOURNAL OF HISTORY AND POLITICS, Vol. III, pp. 427–444.

of the conical type in groups or rows of from two or three to twenty mounds each. Dr. Ward listed three hundred mounds on the Iowa between Iowa City and West Amana, a distance of about thirty miles; seventy-one are distributed along the Cedar within six miles of Mt. Vernon; eighty-four stand within the township in which Cedar Rapids is located; and there is no reason to believe them less numerous in other localities. Many show no traces at all of burials, others contain a small heap of bones which were clearly deposited as such, some only a few burned stones and pieces of charcoal; very few have produced any implements or ornaments. A small number of elliptical mounds exist, but real linears and effigies have not come to light. Nevertheless, few areas in this or any State have produced more of the work of the primitive Americans than has this Lower Iowa area.

The materials located and, for the most part, examined come from about Moscow to Vinton on the Cedar River, Lone Tree to a little above Marshalltown on the Iowa, and Keosauqua to Boone on the Des Moines. From the Cedar River ten fairly large collections of from two hundred to a thousand specimens each are known, and forty-six smaller collections — some six thousand objects in all. From the Iowa River there are twenty larger and one hundred forty-four smaller collections with a total of over twenty-two thousand specimens. Only one Des Moines River collection is known to me, but its contents are from widely distributed localities and are probably typical; it contains about two thousand specimens. Of the total of more than thirty thousand artifacts, less than one hundred are mound products; the others are either turned up from the fields or are excavated from cellars, cisterns, railroad cuts, or, more purposefully, from the Indian cemeteries, wherever it is possible to locate these. The great majority are from the hilly country next to the rivers themselves. The farmer and the

farmer's boys and girls are generally the collectors of these materials and most of them remain at this time in their hands. Some of the collections are catalogued; some are not; all possess scientific value as long as anyone still lives who knows the details of their history.

What now are these field and cemetery materials? One might answer, in brief, that they include most of the forms of chipped and ground stone found in the upper Mississippi Valley, but with certain classes, such as flint hoes and spades, discoidals, and boatstones, conspicuously absent; while other forms, such as chipped arrowheads, spearheads, knives, drills, and scrapers, ground celts and grooved axes, are developed in a variety of forms and fineness of materials hardly surpassed, and possibly not equaled, elsewhere. Without straining at over-nice distinctions in form I have thus far listed over one hundred types of chipped implements and over fifty of celts and grooved axes. Not satisfied with mere purposes of utility, the flint workers and ax makers of lower Iowa simply played with their art, now chipping deep and narrow notches in their flint implements, now beveling and twisting their blades, or concaving, convexing, or indenting their bases, now cutting on their celts and axes unnecessary facets and angles, little depressions and protuberances, and then frequently bringing to a high polish the whole implement, even the grooves and the flattened or rounded poll — all this apparently rather to satisfy the taste of the master craftsman than to fashion an article of use. In the matter of grooved axes especially, I believe that lower Iowa is likely to prove the classic region of highest development. Not in form only, but also in materials used and in the range of sizes, did the ancient artisan show his interest in the grooved ax. He rarely chose granite as his material, but rather the finer and tougher diorite or diabase, and sometimes even hematite, porphyry, flint, and quartz. An

ax of four ounces weight was not too small to claim his attention, nor did he wince at a small boulder which would give him a finished product weighing thirty-two pounds. In other forms of artifacts too the Iowa workman was inclined to choose harder and more refractory materials than were ordinarily used for related forms elsewhere. We do not have a large number of banner stones and perforated gorgets, but nearly all of those found are of diorite, porphyry, quartz, or hematite; only two specimens are of the soft banded slate common in the States east of the Mississippi. Other antiquities must be merely mentioned: the rather numerous small hematite celts; the stone balls and hammerstones; the few arrow-shaft grinders, gouges, pestles, mortars, plummets, birdstones, and pipes; the small amount of copper; the large number of pottery fragments — for entire vessels are scarce — from the village sites and cemeteries; the camp and village sites themselves in their sightly situations along the rivers; the cemeteries on the sandy terraces of streams, where occasionally the wash of high waters may disclose them. These are some of the materials for future study; there are many others that resist ready classification.

Further materials from the State at large, though in comparatively small amount, exist in the collections of various public institutions. The Historical Department at Des Moines has most of these, about two thousand five hundred specimens, representing a large variety of forms. Small collections, though important, are preserved in the American Museum of Natural History, the Museum of the American Indian, the Peabody Museum of American Archeology, the Andover Museum of American Archeology, the Smithsonian Institution, and the Field Museum. According to present information, these have a total of about one thousand Iowa specimens.

It would be of doubtful value to attempt any further de-

tailed summary. Nor is it necessary to emphasize the fact that the materials known to any one person must be only a fraction of those that really exist. New earthworks or new artifacts, in collections little or big, nearly always come to light whenever a day or two can be spent in the field. As new tracts are cleared and come under cultivation, new relics are found, though at the same time more groups of mounds join the vast numbers of those that the plow has leveled.

It is this gradual wastage of some of the resources of study, as well as the fact that only a small portion of the rich supply of materials is publicly owned and thus permanently preserved, that raises the question of the future of Iowa archeology. Fortunately we now have a State law under which it will be possible to preserve many of the earthworks, either within the limits of State parks or as separate prehistoric monuments. And I believe it has become clear now that, although a certain amount of mound excavation is still desirable and necessary, the chief problem of the earthworks in our day is one of preservation. Fortunately, moreover, the many local collections of material have thus far largely escaped that commercialization which has been the bane of scientific collecting and study in nearly every other State. A few Iowa collections have been sold outside of the State and scattered without data as mere "relics", but these cases are not numerous. Generally the owners of materials have the feeling that their collections should remain in the State and numbers of them would be glad to see their possessions put to some constructive use. The time would seem to be propitious for some centralization of interests for the purpose of research in the archeology of Iowa and the permanent preservation of the materials with which such research is concerned.

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