

Animal Carvings from Mounds of the Mississippi Valley eBook

Animal Carvings from Mounds of the Mississippi Valley

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ANIMAL CARVINGS FROM MOUNDS OF THE MISSISSIPPI VALLEY.

By H. W. Henshaw.

INTRODUCTORY.

The considerable degree of decorative and artistic skill attained by the so-called Mound-Builders, as evidenced by many of the relics that have been exhumed from the mounds, has not failed to arrest the attention of archaeologists. Among them, indeed, are found not a few who assert for the people conveniently designated as above a degree of artistic skill very far superior to that attained by the present race of Indians as they have been known to history. In fact, this very skill in artistic design, asserted for the Mound-Builders, as indicated by the sculptures they have left, forms an important link in the chain of argument upon which is based the theory of their difference from and superiority to the North American Indian.

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Eminent as is much of the authority which thus contends for an artistic ability on the part of the Mound-Builders far in advance of the attainments of the present Indian in the same line, the question is one admitting of argument; and if some of the best products of artistic handicraft of the present Indians be compared with objects of a similar nature taken from the mounds, it is more than doubtful if the artistic inferiority of the latter-day Indian can be substantiated. Deferring, however, for the present, any comparison between the artistic ability of the Mound-Builder and the modern Indian, attention may be turned to a class of objects from the mounds, notable, indeed, for the skill with which they are wrought, but to be considered first in another way and for another purpose than mere artistic comparison.

As the term Mound-Builders will recur many times throughout this paper, and as the phrase has been objected to by some archaeologists on account of its indefiniteness, it may be well to state that it is employed here with its commonly accepted signification, viz: as applied to the people who formerly lived throughout the Mississippi Valley and raised the mounds of that region. It should also be clearly understood that by its use the writer is not to be considered as committing himself in any way to the theory that the Mound-Builders were of a different race from the North American Indian.

Among the more interesting objects left by the Mound-Builders, pipes occupy a prominent place. This is partly due to their number, pipes being among the more common articles unearthed by the labors of explorers, but more to the fact that in the construction of their pipes this people exhibited their greatest skill in the way of sculpture. In the minds of those who hold that the Mound-Builders were the ancestors of the present Indians, or, at least, that they were not necessarily of a different race, the superiority of their pipe sculpture over their other works of art excites no surprise, since, however prominent a place the pipe may have held in the affections of the Mound-Builders, it is certain that it has been an object of no less esteem and reverence among the Indians of history. Certainly no one institution, for so it may be called, was more firmly fixed by long usage among the North American Indians, or more characteristic of them, than the pipe, with all its varied uses and significance.

Perhaps the most characteristic artistic feature displayed in the pipe sculpture of the Mound-Builders, as has been well pointed out by Wilson, in his *Prehistoric Man*, is the tendency exhibited toward the imitation of natural objects, especially birds and animals, a remark, it may be said in passing, which applies with almost equal truth to the art productions generally of the present Indians throughout the length and breadth of North America. As some of these sculptured animals from the mounds have excited much interest

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in the minds of archaeologists, and have been made the basis of much speculation, their examination and proper identification becomes a matter of considerable importance. It will therefore be the main purpose of the present paper to examine critically the evidence offered in behalf of the identification of the more important of them. If it shall prove, as is believed to be the case, that serious mistakes of identification have been made, attention will be called to these and the manner pointed out in which certain theories have naturally enough resulted from the premises thus erroneously established.

It may be premised that the writer undertook the examination of the carvings with no theories of his own to propose in place of those hitherto advanced. In fact, their critical examination may almost be said to have been the result of accident. Having made the birds of the United States his study for several years, the writer glanced over the bird carvings in the most cursory manner, being curious to see what species were represented. The inaccurate identification of some of these by the authors of "The Ancient Monuments of the Mississippi Valley" led to the examination of the series as a whole, and subsequently to the discussion they had received at the hands of various authors. The carvings are, therefore, here considered rather from the stand-point of the naturalist than the archaeologist. Believing that the question first in importance concerns their actual resemblances, substantially the same kind of critical study is applied to them which they would receive were they from the hands of a modern zoological artist. Such a course has obvious disadvantages, since it places the work of men who were in, at best, but a semi-civilized condition on a much higher plane than other facts would seem to justify. It may be urged, as the writer indeed believes, that the accuracy sufficient for the specific identification of these carvings is not to be expected of men in the state of culture the Mound-Builders are generally supposed to have attained. To which answer may be made that it is precisely on the supposition that the carvings were accurate copies from nature that the theories respecting them have been promulgated by archaeologists. On no other supposition could such theories have been advanced. So accurate indeed have they been deemed that they have been directly compared with the work of modern artists, as will be noticed hereafter. Hence the method here adopted in their study seems to be not only the best, but the only one likely to produce definite results.

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If it be found that there are good reasons for pronouncing the carvings not to be accurate copies from nature, and of a lower artistic standard than has been supposed, it will remain for the archaeologist to determine how far their unlikeness to the animals they have been supposed to represent can be attributed to shortcomings naturally pertaining to barbaric art. If he choose to assume that they were really intended as imitations, although in many particulars unlike the animals he wishes to believe them to represent, and that they are as close copies as can be expected from sculptors not possessed of skill adequate to carry out their rude conceptions, he will practically have abandoned the position taken by many prominent archaeologists with respect to the mound sculptors' skill, and will be forced to accord them a position on the plane of art not superior to the one occupied by the North American Indians. If it should prove that but a small minority of the carvings can be specifically identified, owing to inaccuracies and to their general resemblance, he may indeed go even further and conclude that they form a very unsafe basis for deductions that owe their very existence to assumed accurate imitation.

MANATEE.

In 1848 Squier and Davis published their great work on the Mounds of the Mississippi Valley. The skill and zeal with which these gentlemen prosecuted their researches in the field, and the ability and fidelity which mark the presentation of their results to the public are sufficiently attested by the fact that this volume has proved alike the mine from which subsequent writers have drawn their most important facts, and the chief inspiration for the vast amount of work in the same direction since undertaken.

On pages 251 and 252 of the above-mentioned work appear figures of an animal which is there called "Lamantin, Manitus, or Sea Cow," concerning which animal it is stated that "seven sculptured representations have been taken from the mounds." When first discovered, the authors continue, "it was supposed they were monstrous creations of fancy; but subsequent investigations and comparison have shown that they are faithful representations of one of the most singular animal productions of the world."

These authors appear to have been the first to note the supposed likeness of certain of the sculptured forms found in the mounds to animals living in remote regions. That they were not slow to perceive the ethnological interest and value of the discovery is shown by the fact that it was immediately adduced by them as affording a clew to the possible origin of the Mound-Builders. The importance they attached to the discovery and their interpretation of its significance will be apparent from the following quotation (p. 242):

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Some of these sculptures have a value, so far as ethnological research is concerned, much higher than they can claim as mere works of art. This value is derived from the fact that they faithfully represent animals and birds peculiar to other latitudes, thus establishing a migration, a very extensive intercommunication or a contemporaneous existence of the same race over a vast extent of country.

The idea thus suggested fell on fruitful ground, and each succeeding writer who has attempted to show that the Mound-Builders were of a race different from the North American Indian, or had other than an autochthonous origin, has not failed to lay especial stress upon the presence in the mounds of sculptures of the manatee, as well as of other strange beasts and birds, carved evidently by the same hands that portrayed many of our native fauna.

Except that the theories based upon the sculptures have by recent writers been announced more positively and given a wider range, they have been left almost precisely as set forth by the authors of the "Ancient Monuments," while absolutely nothing appears to have been brought to light since their time in the way of additional sculptured evidence of the same character. It is indeed a little curious to note the perfect unanimity with which most writers fall back upon the above authors as at once the source of the data they adduce in support of the several theories, and as their final, nay, their only, authority. Now and then one will be found to dissent from some particular bit of evidence as announced by Squier and Davis, or to give a somewhat different turn to the conclusions derivable from the testimony offered by them. But in the main the theories first announced by the authors of "Ancient Monuments," as the result of their study of the mound sculptures, are those that pass current to-day. Particular attention may be called to the deep and lasting impression made by the statements of these authors as to the great beauty and high standard of excellence exhibited by the mound sculptures. Since their time writers appear to be well satisfied to express their own admiration in the terms made use of by Squier and Davis. One might, indeed, almost suppose that recent writers have not dared to trust to the evidence afforded by the original carvings or their fac-similes, but have preferred to take the word of the authors of the "Ancient Monuments" for beauties which were perhaps hidden from their own eyes.

Following the lead of the authors of the "Ancient Monuments," also, with respect to theories of origin, these carvings of supposed foreign animals are offered as affording incontestible evidence that the Mound-Builders must have migrated from or have had intercourse, direct or indirect, with the regions known to harbor these animals. Were it not, indeed, for the evident artistic similarity between these carvings of supposed foreign animals and those of common domestic

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forms—a similarity which, as Squier and Davis remark, render them “indistinguishable, so far as material and workmanship are concerned, from an entire class of remains found in the mounds”—the presence of most of them could readily be accounted for through the agency of trade, the far reaching nature of which, even among the wilder tribes, is well understood. Trade, for instance, in the case of an animal like the manatee, found no more than a thousand miles distant from the point where the sculpture was dug up, would offer a possible if not a probable solution of the matter. But independently of the fact that the practically identical character of all the carvings render the theory of trade quite untenable, the very pertinent question arises, why, if these supposed manatee pipes were derived by trade from other regions, have not similar carvings been found in those regions, as, for instance, in Florida and the Gulf States, a region of which the archaeology is fairly well known. Primitive man, as is the case with his civilized brother, trades usually out of his abundance; so that not seven, but many times seven, manatee pipes should be found at the center of trade. As it is, the known home of the manatee has furnished no carvings either of the manatee or of anything suggestive of it.

The possibility of the manatee having in past times possessed a wider range than at present seems to have been overlooked. But as a matter of fact the probability that the manatee ever ranged, in comparatively modern times at least, as far north as Ohio without leaving other traces of its presence than a few sculptured representations at the hands of an ancient people is too small to be entertained.

Nor is the supposition that the Mound-Builders held contemporaneous possession of the country embraced in the range of the animals whose effigies are supposed to have been exhumed from their graves worthy of serious discussion. If true, it would involve the contemporaneous occupancy by the Mound-Builders, not only of the Southern United States but of the region stretching into Southern Mexico, and even, according to the ideas of some authors, into Central and South America, an area which, it is needless to say, no known facts will for a moment justify us in supposing a people of one blood to have occupied contemporaneously.

Assuming, therefore, that the sculptures in question are the work of the Mound-Builders and are not derived from distant parts through the agency of trade, of which there would appear to be little doubt, and, assuming that the sculptures represent the animals they have been supposed to represent—of which something remains to be said—the theory that the acquaintance of the Mound-Builders with these animals was made in a region far distant from the one to which they subsequently migrated would seem to be not unworthy of attention. It is necessary, however, before advancing theories to account for facts to first consider the facts themselves, and in this case to seek an answer to the question how far the identification of these carvings of supposed foreign animals is to be trusted. Before noticing in detail the carvings supposed by Squier and Davis to

represent the manatee, it will be well to glance at the carvings of another animal figured by the same authors which, it is believed, has a close connection with them.

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[Illustration: Fig. 4.—Otter. From Ancient Monuments.]

Figure 4 is identified by the authors of the “Ancient Monuments” (Fig. 156) as an otter, and few naturalists will hesitate in pronouncing it to be a very good likeness of that animal; the short broad ears, broad head and expanded snout, with the short, strong legs, would seem to belong unmistakably to the otter. Added to all these is the indication of its fish-catching habits. Having thus correctly identified this animal, and with it before them, it certainly reflects little credit upon the zoological knowledge of the authors and their powers of discrimination to refer the next figure (Ancient Monuments, Fig. 157) to the same animal.

[Illustration: Fig. 5.—Otter of Squier and Davis.]

Of a totally different shape and physiognomy, if intended as an otter it certainly implies an amazing want of skill in its author. However it is assuredly not an otter, but is doubtless an unfinished or rudely executed ground squirrel, of which animal it conveys in a general way a good idea, the characteristic attitude of this little rodent, sitting up with paws extended in front, being well displayed. Carvings of small rodents in similar attitudes are exhibited in Stevens’s “Flint Chips,” p. 428, Figs. 61 and 62. Stevens’s Fig. 61 evidently represents the same animal as Fig. 157 of Squier and Davis, but is a better executed carving.

In illustration of the somewhat vague idea entertained by archaeologists as to what the manatee is like, it is of interest to note that the carving of a second otter with a fish in its mouth has been made to do duty as a manatee, although the latter animal is well known never to eat fish, but, on the contrary, to be strictly herbivorous. Thus Stevens gives figures of two carvings in his “Flint Chips,” p. 429, Figs. 65 and 66, calling them manatees, and says: “In one particular, however, the sculptors of the mound-period committed an error. Although the lamantin is strictly herbivorous, feeding chiefly upon subaqueous plants and littoral herbs, yet upon one of the stone smoking-pipes, Fig. 66, this animal is represented with a fish in its mouth.” Mr. Stevens apparently preferred to credit the mound sculptor with gross ignorance of the habits of the manatee, rather than to abate one jot or tittle of the claim possessed by the carving to be considered a representation of that animal. Stevens’s fish-catching manatee is the same carving given by Dr. Rau, in the Archaeological Collection of the United States National Museum, p. 47, Fig. 180, where it is correctly stated to be an otter. This cut, which can scarcely be distinguished from one given by Stevens (Fig. 66), is here reproduced (Fig. 6), together with the second supposed manatee of the latter writer (Fig. 7).

[Illustration: Fig. 6.—Otter of Rau; Manatee of Stevens.]

[Illustration: Fig. 7.—Manatee of Stevens.]

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To afford a means of comparison, Fig. 154, from the “Ancient Monuments” of Squier and Davis, is introduced (Fig. 8). The same figure is also to be found in Wilson’s Prehistoric Man, vol. i, p. 476, Fig. 22. Another of the supposed lamantins, Fig. 9, is taken from Squier’s article in the Transactions of the American Ethnological Society, vol. ii, p. 188. A bad print of the same wood-cut appears as Fig. 153, p. 251, of the “Ancient Monuments.”

It should be noted that the physiognomy of Fig. 6, above given, although unquestionably of an otter, agrees more closely with the several so-called manatees, which are represented without fishes, than with the fish-bearing otter, first mentioned, Fig. 4.

Fig. 6 thus serves as a connecting link in the series, uniting the unmistakable otter, with the fish in its mouth, to the more clumsily executed and less readily recognized carvings of the same animal.

[Illustration: Fig. 8.—Lamantin or sea-cow of Squier and Davis.]

[Illustration: Fig. 9.—Lamantin or sea-cow of Squier.]

It was doubtless the general resemblance which the several specimens of the otters and the so-called manatees bear to each other that led Stevens astray. They are by no means facsimiles one of the other. On the contrary, while no two are just alike, the differences are perhaps not greater than is to be expected when it is considered that they doubtless embody the conceptions of different artists, whose knowledge of the animal, as well as whose skill in carving, would naturally differ widely. Recognizing the general likeness, Stevens perhaps felt that what one was all were. In this, at least, he is probably correct, and the following reasons are deemed sufficient to show that, whether the several sculptures figured by one and another author are otters or not, as here maintained, they most assuredly are not manatees. The most important character possessed by the sculptures, which is not found in the manatee, is an external ear. In this particular they all agree. Now, the manatee has not the slightest trace of a pinna or external ear, a small orifice, like a slit, representing that organ. To quote the precise language of Murie in the Proceedings of the London Zoological Society, vol. 8, p. 188: “In the absence of pinna, a small orifice, a line in diameter, into which a probe could be passed, alone represents the external meatus.” In the dried museum specimen this slit is wholly invisible, and even in the live or freshly killed animal it is by no means readily apparent. Keen observer of natural objects, as savage and barbaric man certainly is, it is going too far to suppose him capable of representing an earless animal—earless at least so far as the purposes of sculpture are concerned—with prominent ears. If, then, it can be assumed that these sculptures are to be relied upon as in the slightest degree imitative, it must be admitted that the presence of ears would alone suffice to show that they cannot

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have been intended to represent the manatee. But the feet shown in each and all of them present equally unquestionable evidence of their dissimilarity from the manatee. This animal has instead of a short, stout fore leg, terminating in flexible fingers or paws, as indicated in the several sculptures, a shapeless paddle-like flipper. The nails with which the flipper terminates are very small, and if shown at all in carving, which is wholly unlikely, as being too insignificant, they would be barely indicated and would present a very different appearance from the distinctly marked digits common to the several sculptures.

Noticing that one of the carvings has a differently shaped tail from the others, the authors of the "Ancient Monuments" attempt to reconcile the discrepancy as follows: "Only one of the sculptures exhibits a flat truncated tail; the others are round. There is however a variety of the lamantin (*Manitus Senegalensis*, Desm.) which has a round tail, and is distinguished as the "round-tailed manitus." (Ancient Monuments, p. 252.) The suggestion thus thrown out means, if it means anything, that the sculpture exhibiting a flat tail is the only one referable to the manatee of Florida and southward, the *M. Americanus*, while those with round tails are to be identified with the so-called "Round-tailed Lamantin," the *M. Senegalensis*, which lives in the rivers of Senegambia and along the coast of Western Africa. It is to be regretted that the above authors did not go further and explain the manner in which they suppose the Mound-Builders became acquainted with an animal inhabiting the West African coast. Elastic as has proved to be the thread upon which hangs the migration theory, it would seem to be hardly capable of bearing the strain required for it to reach from the Mississippi Valley to Africa.

Had the authors been better acquainted with the anatomy of the manatees the above suggestion would never have been made, since the tails of the two forms are, so far as known, almost exactly alike. A rounded tail is, in fact, the first requisite of the genus *Manatus*, to which both the manatees alluded to belong, in distinction from the forked tail of the genus *Halicore*.

Whether the tails of the sculptured manatees be round or flat matters little, however, since they bear no resemblance to manatee tails, either of the round or flat tailed varieties, or, for that matter, to tails of any sort. In many of the animal carvings the head alone engaged the sculptor's attention, the body and members being omitted entirely, or else roughly blocked out; as, for instance, in the case of the squirrel given above, in which the hind parts are simply rounded off into convenient shape, with no attempt at their delineation. Somewhat the same method was evidently followed in the case of the supposed manatees, only after the pipe cavities had been excavated the block was shaped off in a manner

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best suited to serve the purpose of a handle. Without, however, attempting to institute farther comparisons, two views of a real manatee are here subjoined, which are fac-similes of Murie's admirable photo-lithograph in Trans. London Zoological Society, vol. 8, 1872-'74. A very brief comparison of the supposed manatees, with a modern artistic representation of that animal, will show the irreconcilable differences between them better than any number of pages of written criticism.

[Illustration: Fig. 10.—Manatee (*Manatus Americanus*, Cuv.). Side view.]

[Illustration: Fig. 11.—Manatee (*Manatus Americanus*, Cuv.). Front view.]

There would seem, then, to be no escape from the conclusion that the animal sculptures which have passed current as manatees do not really resemble that animal, which is so extraordinary in all its aspects and so totally unlike any other of the animal creation as to render its identification in case it had really served as a subject for sculpture, easy and certain.

As the several sculptures bear a general likeness to each other and resemble with considerable closeness the otter, the well known fish-eating proclivities of this animal being shown in at least two of them, it seems highly probable that it is the otter that is rudely portrayed in all these sculptures.

The otter was a common resident of all the region occupied by the Mound-Builders, and must certainly have been well known to them. Moreover, the otter is one of the animals which figures largely in the mythology and folk-lore of the natives of America, and has been adopted in many tribes as their totem. Hence, this animal would seem to be a peculiarly apt subject for embodiment in sculptured form. It matters very little, however, whether these sculptures were intended as otters or not, the main point in the present connection being that they cannot have been intended as manatees.

Before leaving the subject of the manatee, attention may be called to a curious fact in connection with the Cincinnati Tablet, "of which a wood-cut is given in The Ancient Monuments" (p. 275, Fig. 195). If the reverse side as there shown be compared with the same view as presented by Short in The North Americans of Antiquity, p. 45, or in MacLean's Mound-Builders, p. 107, a remarkable discrepancy between the two will be observed.

[Illustration: Fig. 12.—Cincinnati Tablet. (Back.) From Squire and Davis.]

In the former, near the top, is indicated what appears to be a shapeless depression, formless and unmeaning so far as its resemblance to any special object is concerned. The authors remark of this side of the tablet, "The back of the stone has three deep

longitudinal grooves, and several depressions, evidently caused by rubbing,—probably produced in sharpening the instrument used, in the sculpture.” This explanation of the depressions would seem to be reasonable, although it has been disputed, and

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a “peculiar significance” (Short) attached to this side of the tablet. In Short’s engraving, while the front side corresponds closely with the same view given by Squier and Davis, there is a notable difference observable on the reverse side. For the formless depression of the Squier and Davis cut not only occupies a somewhat different position in relation to the top and sides of the tablet, but, as will be seen by reference to the figure, it assumes a distinct form, having in some mysterious way been metamorphosed into a figure which oddly enough suggests the manatee. It does not appear that the attention of archaeologists has ever been directed to the fact that such a resemblance exists; nor indeed is the resemblance sufficiently close to justify calling it a veritable manatee. But with the aid of a little imagination it may in a rude way suggest that animal, its earless head and the flipper being the most striking, in fact the only, point of likeness. Conceding that the figure as given by Short affords a rude hint of the manatee, the question is how to account for its presence on this the latest representation of the tablet which, according to Short, Mr. Guest, its owner, pronounces “the first correct representations of the stone.” The cast of this tablet in the Smithsonian Institution agrees more closely with Short’s representation in respect to the details mentioned than with that given in the “Ancient Monuments.” Nevertheless, if this cast be accepted as the faithful copy of the original it has been supposed to be, the engraving in Short’s volume is subject to criticism. In the cast the outline of the figure, while better defined than Squier and Davis represent it to be, is still very indefinite, the outline not only being broken into, but being in places, especially toward the head, indistinguishable from the surface of the tablet into which it insensibly grades. In the view as found in Short there is none of this irregularity and indefiniteness of outline, the figure being perfect and standing out clearly as though just from the sculptor’s hand. As perhaps on the whole the nearest approach to the form of a manatee appearing on any object claimed to have originated at the hands of the Mound-Builders, and from the fact that artists have interpreted its outline so differently, this figure, given by the latest commentators on the Cincinnati tablet, is interesting, and has seemed worthy of mention. As, however, the authenticity of the tablet itself is not above suspicion, but, on the contrary, is believed by many archaeologists to admit of grave doubts, the subject need not be pursued further here.

[Illustration: Fig. 13.—Cincinnati Tablet. (Back.) From Short.]

TOUCAN.

The *a priori* probability that the toucan was known to the Mound-Builders is, of course, much less than that the manatee was, since no species of toucan occurs farther north than Southern Mexico. Its distant habitat also militates against the idea that the Mound-Builders could have acquired a knowledge of the bird from intercourse with southern tribes, or that they received the supposed toucan pipes by way of trade. Without

discussing the several theories to which the toucan pipes have given rise, let us first examine the evidence offered as to the presence in the mounds of sculptures of the toucan.

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It is a little perplexing to find at the outset that Squier and Davis, not content with one toucan, have figured three, and these differing from each other so widely as to be referable, according to modern ornithological ideas, to very distinct orders.

[Illustration: Fig. 14.—Toucan of Squier and Davis.]

The first allusion to the toucan in the Monuments of the Mississippi Valley is found on page 194, where the authors guardedly remark of a bird's head in terra cotta (Fig. 79), "It represents the head of a bird, somewhat resembling the toucan, and is executed with much spirit."

This head is vaguely suggestive of a young eagle, the proportions of the bill of which, until of some age, are considerably distorted. The position of the nostrils, however, and the contour of the mandibles, together with the position of the eyes, show clearly enough that it is a likeness of no bird known to ornithology. It is enough for our present purpose to say that in no particular does it bear any conceivable resemblance to the toucan.

Of the second supposed toucan (Ancient Monuments, p. 260, Fig. 169) here illustrated, the authors remark:

The engraving very well represents the original, which is delicately carved from a compact limestone. It is supposed to represent the toucan—a tropical bird, and one not known to exist anywhere within the limits of the United States. If we are not mistaken in supposing it to represent this bird, the remarks made respecting the sculptures of the manitus will here apply with double force.

[Illustration: Fig. 15.—Toucan of Squier and Davis.]

This sculpture is fortunately easy of identification. Among several ornithologists, whose opinions have been asked, not a dissenting voice has been heard. The bird is a common crow or a raven, and is one of the most happily executed of the avian sculptures, the nasal feathers, which are plainly shown, and the general contour of the bill being truly corvine. It would probably be practically impossible to distinguish a rude sculpture of a raven from that of a crow, owing to the general resemblance of the two. The proportions of the head here shown are, however, those of the crow, and the question of habitat renders it vastly more likely that the crow was known to the Mound-Builders of Ohio than that the raven was. What possible suggestion of a toucan is to be found in this head it is not easy to see.

Turning to page 266 (Fig. 178) another and very different bird is held up to view as a toucan.

[Illustration: Fig. 16.—Toucan of Squier and Davis.]

Squier and Davis remark of this sculpture:

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From the size of its bill, and the circumstance of its having two toes before and two behind, the bird intended to be represented would seem to belong to the zygodactylous order—probably the toucan. The toucan (*Ramphastos* of Lin.) is found on this continent only in the tropical countries of South America.

In contradiction to the terms of their description their own figure, as will be noticed, shows *three* toes in front and two behind, or a total of five, which makes the bird an ornithological curiosity, indeed. However, as the cast in the Smithsonian collection shows three toes in front and one behind, it is probably safe to assume that the additional hind toe was the result of mistake on the part of the modern artist, so that four may be accepted as its proper quota. The mistake then chargeable to the above authors is that in their discussion they transferred one toe from before and added it behind. In this curious way came their zygodactylous bird.

This same pipe is figured by Stevens in *Flint Chips*, p. 426, Fig. 5. The wood-cut is a poor one, and exhibits certain important changes, which, on the assumption that the pipe is at all well illustrated by the cast in the Smithsonian, reflects more credit on the artist's knowledge of what a toucan ought to look like than on his fidelity as an exact copyist.

The etchings across the upper surface of the base of the pipe, miscalled fingers, are not only made to assume a hand-like appearance but the accommodating fancy of the artist has provided a roundish object in the palm, which the bird appears about to pick up. The bill, too, has been altered, having become rounded and decidedly toucan-like, while the tail has undergone abbreviation, also in the direction of likeness to the toucan. In short, much that was lacking in the aboriginal artist's conception towards the likeness of a toucan has in this figure been supplied by his modern interpreter.

[Illustration: Fig. 17.—Toucan as figured by Stevens.]

This cut corresponds with the cast in the Smithsonian collection, in having the normal number of toes, four—three in front and one behind. This departure from the arrangement common to the toucan family, which is zygodactylous, seems to have escaped Stevens's attention. At least he volunteers no explanation of the discrepancy, being, doubtless, influenced in his acceptance of the bird as a toucan by the statements of others.

Wilson follows the cut of Squier and Davis, and represents the bird with five toes, stating that the toucan is "imitated with considerable accuracy." He adds: "The most important deviation from correctness of detail is, it has three toes instead of two before, although the two are correctly represented behind." How Wilson is guided to the belief that the sculptor's mistake consists in adding a toe in front instead of one behind it would be difficult to explain, unless, indeed, he felt the necessity

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of having a toucan at all hazards. The truth is that, the question of toes aside, this carving in no wise resembles a toucan. Its long legs and proportionally long toes, coupled with the rather long neck and bill, indicate with certainty a wading bird of some kind, and in default of anything that comes nearer, an ibis may be suggested; though if intended by the sculptor as an ibis, candor compels the statement that the ibis family has no reason to feel complimented.

The identification of this sculpture as a toucan was doubtless due less to any resemblance it bears to that bird than to another circumstance connected with it of a rather fanciful nature. As in the case of several others, the bird is represented in the act of feeding, upon what it would be difficult to say. Certainly the four etchings across the base of the pipe bear little resemblance to the human hand. Had they been intended for fingers they would hardly have been made to extend over the side of the pipe, an impossible position unless the back of the hand be uppermost. Yet it was probably just this fancied resemblance to a hand, out of which the bird is supposed to be feeding, that led to the suggestion of the toucan. For, say Squier and Davis, p. 266:

In those districts (*i.e.*, Guiana and Brazil) the toucan was almost the only bird the aborigines attempted to domesticate. The fact that it is represented receiving its food from a human hand would, under these circumstances, favor the conclusion that the sculpture was designed to represent the toucan.

Rather a slender thread one would think upon which to hang a theory so far-reaching in its consequences.

Nor was it necessary to go as far as Guiana and Brazil to find instances of the domestication of wild fowl by aborigines. Among our North American Indians it was a by no means uncommon practice to capture and tame birds. Roger Williams, for instance, speaks of the New England Indians keeping tame hawks about their dwellings "to keep the little birds from their corn." (Williams's *Key into the Language of America*, 1643, p. 220.) The Zunis and other Pueblo Indians keep, and have kept from time immemorial, great numbers of eagles and hawks of every obtainable species, as also turkies, for the sake of the feathers. The Dakotas and other western tribes keep eagles for the same purpose. They also tame crows, which are fed from the hand, as well as hawks and magpies. A case nearer in point is a reference in Lawson to the Congarees of North Carolina. He says, "they are kind and affable, and tame the cranes and storks of their savannas." (Lawson's *History of Carolina*, p. 51.) And again (p. 53) "these Congarees have an abundance of storks and cranes in their savannas. They take them before they can fly, and breed them as tame and familiar as a dung-hill fowl. They had a tame crane at one of these cabins that was scarcely less than six feet in height."

So that even if the bird, as has been assumed by many writers, be feeding from a human hand, of which fact there is no sufficient evidence, we are by no means on this account driven to the conclusion, as appears to have been believed, that the sculpture could be no other than a toucan.

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As in the Cass of the manatee, it has been thought well to introduce a correct drawing of a toucan in order to afford opportunity for comparison of this very striking bird with its supposed representations from the mounds. For this purpose the most northern representative of the family has been selected as the one nearest the home of the Mound-Builders.

The particulars wherein it differs from the supposed toucans are so many and striking that it will be superfluous to dwell upon them in detail. They will be obvious at a glance.

Thus we have seen that the sculptured representation of three birds, totally dissimilar from each other, and not only not resembling the toucan, but conveying no conceivable hint of that very marked bird, formed the basis of Squier and Davis' speculations as to the presence of the toucan in the mounds. These three supposed toucans have been copied and recopied by later authors, who have accepted in full the remarks and deductions accompanying them.

At least two exceptions to the last statement may be made. It is refreshing to find that two writers, although apparently accepting the other identifications by Squier and Davis, have drawn the line at the toucan. Thus Rau, in *The Archaeological Collections of the United States National Museum*, pp. 46-47, states that—

The figure (neither of the writers mentioned appear to have been aware that there was more than one supposed toucan) is not of sufficient distinctness to identify the original that was before the artist's mind, and it would not be safe, therefore, to make this specimen the subject of far-reaching speculations.

[Illustration: Fig. 18.—Keel-Billed Toucan of Southern Mexico (*Rhamphastos carinatus*.)]

Further on he adds, "Leaving aside the more than doubtful toucan, the imitated animals belong, without exception, to the North American fauna." Barber, also, after taking exception to the idea that the supposed toucan carving represents a zygodactylous bird, adds in his article on Mound Pipes, pp. 280-281 (*American Naturalist* for April, 1882), "It may be asserted with a considerable degree of confidence that no representative of an exclusively exotic fauna figured in the pipe sculptures of the Mound-Builders."

PAROQUET.

The presence of a carving of the paroquet in one of the Ohio mounds has been deemed remarkable on account of the supposed extreme southern habitat of that bird. Thus Squier and Davis remark ("Ancient Monuments of the Mississippi Valley," p. 265, Fig. 172), "Among the most spirited and delicately executed specimens of ancient art found in the mounds, is that of the paroquet here presented."

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"The paroquet is essentially a southern bird, and though common along the Gulf, is of rare occurrence above the Ohio River." The above language would seem to admit of no doubt as to the fact of the decided resemblance borne by this carving to the paroquet. Yet the bird thus positively identified as a paroquet, upon which identification have, without doubt, been based all the conclusions that have been published concerning the presence of that bird among the mound sculptures is not even distantly related to the parrot family. It has the bill of a raptorial bird, as shown by the distinct tooth, and this, in connection with the well defined cere, not present in the paroquet, and the open nostril, concealed by feathers in the paroquet, places its identity as one of the hawk tribe beyond doubt.

[Illustration: Fig. 19.—Paroquet of Squier and Davis.]

In fact it closely resembles several of the carvings figured and identified as hawks by the above authors, as comparison with figures given below will show. The hawks always appear to have occupied a prominent place in the interest of our North American Indians, especially in association with totemic ideas, and the number of sculptured representations of hawks among the mound relics would argue for them a similar position in the minds of the Mound-Builders.

A word should be added as to the distribution of the paroquet. The statement by Squier and Davis that the paroquet is found as far north as the Ohio River would of itself afford an easy explanation of the manner in which the Mound-Builders might have become acquainted with the bird, could their acquaintance with it be proved. But the above authors appear to have had a very incorrect idea of the region inhabited by this once widely spread species. The present distribution, it is true, is decidedly southern, it being almost wholly confined to limited areas within the Gulf States. Formerly, however, it ranged much farther north, and there is positive evidence that it occurred in New York, Pennsylvania, Ohio, Illinois, Indiana, Michigan, and Nebraska. Up to 1835 it was extremely abundant in Southern Illinois, and, as Mr. Ridgway informs the writer, was found there as late as 1861. Specimens are in the Smithsonian collection from points as far north as Chicago and Michigan. Over much of the region indicated the exact nature of its occurrence is not understood, whether resident or a more or less casual visitor. But as it is known that it was found as far north as Pennsylvania in winter it may once have ranged even farther north than the line just indicated, and have been found in Southern Wisconsin and Minnesota.

Occurring, as it certainly did, over most of the mound region, the peculiar habits of the paroquet, especially its vociferous cries and manner of associating in large flocks, must, it would seem, have made it known to the Mound-Builders. Indeed from the ease with which it is trapped and killed, it very probably formed an article of food among them as it has among the whites and recent tribes of Indians. Probable, however, as it is that the Mound-Builders were well acquainted with the paroquet, there appears to be no evidence of the fact among their works of art.

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KNOWLEDGE OF TROPICAL ANIMALS BY MOUND-BUILDERS.

The supposed evidence of a knowledge of tropical animals possessed by the ancient dwellers of the Mississippi Valley which has just been discussed seems to have powerfully impressed Wilson, and in his *Prehistoric Man* he devotes much space to the consideration of the matter. His ideas on the subject will be understood from the following quotation:

By the fidelity of the representations of so great a variety of subjects copied from animal life, they furnish evidence of a knowledge in the Mississippi Valley, of the fauna peculiar not only to southern, but to tropical latitudes, extending beyond the Isthmus into the southern continent; and suggestive either of arts derived from a foreign source, and of an intimate intercourse maintained with the central regions where the civilization of ancient America attained its highest development: or else indicative of migration, and an intrusion into the northern continent, of the race of the ancient graves of Central and Southern America, bringing with them the arts of the tropics, and models derived from the animals familiar to their fathers in the parent-land of the race. (Vol. 1, p. 475.)

The author subsequently shows his preference for the theory of a migration of the race of the Mound-Builders from southern regions as being on the whole more probable. Wilson does not, however, content himself with the evidence afforded by the birds and animals which have just been discussed, but strengthens his argument by extending the list of supposed exotic forms known to the Mound-Builders in the following words (vol. 1, p. 477):

But we must account by other means for the discovery of accurate miniature representations of it (*i.e.* the Manatee) among the sculptures of the far-inland mounds of Ohio; and the same remark equally applies to the jaguar or panther, the cougar, the toucan; to the buzzard possibly, and also to the paroquet. *The majority of these animals are not known in the United States; some of them are totally unknown to within any part of the North American continent.* (Italics of the present writer.) Others may be classed with the paroquet, which, though essentially a southern bird, and common in the Gulf, does occasionally make its appearance inland; and might possibly become known to the untraveled Mound-Builder among the fauna of his own northern home.

The information contained in the above paragraph relative to the range of some of the animals mentioned may well be viewed with surprise by naturalists. To begin with, the jaguar or panther, by which vernacular names the *Felis onca* is presumably meant, is not only found in Northern Mexico, but extends its range into the United States and appears as far north as the Red River of Louisiana. (See Baird's *Mammals of North America*.) Hence a sculptured representation of this animal in the mounds, although by no means likely, is not entirely out of the question. However, among the several

carvings of the cat family that have been exhumed from the mounds and made known there is not one which can, with even a fair degree of probability, be identified as this species in distinction from the next animal named, the cougar.

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The cougar, to which several of the carvings can with but little doubt be referred, was at the time of the discovery of America and is to-day, where not exterminated by man, a common resident of the whole of North America, including of course the whole of the Mississippi Valley. It would be surprising, therefore, if an animal so striking, and one that has figured so largely in Indian totemism and folk-lore, should not have received attention at the hands of the Mound-Builders.

Nothing resembling the toucan, as has been seen, has been found in the mounds; but, as stated, this bird is found in Southern Mexico.

The buzzard is to-day common over almost the entire United States, and is especially common throughout most of the Mississippi Valley.

As to the paroquet, there seems to be no evidence in the way of carvings to show that it was known to the Mound-Builders, although that such was the case is rendered highly probable from the fact that it lived at their very doors.

It therefore appears that of the five animals of which Wilson states "the majority are not known in the United States," and "some of them are totally unknown, within any part of the North American continent," every one is found in North America, and all but one within the limits of the United States, while three were common residents of the Mississippi Valley.

As a further illustration of the inaccurate zoological knowledge to which may be ascribed no small share of the theories advanced respecting the origin of the Mound-Builders, the following illustration may be taken from Wilson, this author, however, being but one of the many who are equally in fault. The error is in regard to the habitat of the conch shell, *Pyrula (now Busycon) perversa*.

After exposing the blunder of Mr. John Delafield, who describes this shell as unknown on the coasts of North and South America, but as abundant on the coast of Hindostan, from which supposed fact, coupled with its presence in the mounds, he assumes a migration on the part of the Mound-Builders from Southern Asia (Prehistoric Man, vol. 1, p. 219, *ibid.*, p. 272), Wilson states.

No question can exist as to the tropical and marine origin of the large shells exhumed not only in the inland regions of Kentucky and Tennessee, but in the northern peninsula lying between the Ontario and Huron Lakes, or on the still remoter shores and islands of Georgian Bay, at a distance of upwards of three thousand miles from the coast of Yucatan, on the mainland, *the nearest point where the Pyrula perversa is found in its native locality*. (Italics of the present writer.)

Now the plain facts on the authority of Mr. Dall are that the *Busycon (Pyrula) perversa* is not only found in the United States, but extends along the coast up to Charleston, S.C.,

with rare specimens as far north as Beaufort, N.C. Moreover, archaeologists have usually confounded this species with the *Busycon carica*, which is of common occurrence in the mounds. The latter is found as far north as Cape Cod. The facts cited put a very different complexion on the presence of these shells in the mounds.

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OTHER ERRORS OF IDENTIFICATION.

[Illustration: Fig. 20.—“Owl,” from Squier and Davis.]

The erroneous identification of the manatee, the toucan, and of several other animals having been pointed out, it may be well to glance at certain others of the sculptured animal forms, the identification of which by Squier and Davis has passed without dispute, with a view to determining how far the accuracy of these authors in this particular line is to be trusted, and how successful they have been in interpreting the much lauded “fidelity to nature” of the mound sculptures.

Fig. 20 (Squier and Davis, *Ancient Monuments of the Mississippi Valley*, p. 225, Fig. 123) represents a tube of steatite, upon which is carved, as is stated, “in high relief this figure of an owl, attached with its back to the tube.” This carving, the authors state, is “remarkably bold and spirited, and represents the bird with its claws contracted and drawn up, and head and beak elevated as if in an attitude of defense and defiance.”

[Illustration: Fig. 21.—“Grouse,” from Squier and Davis.]

This carving differs markedly from any of the avian sculptures, and probably was not intended to represent a bird at all. The absence of feather etchings and the peculiar shape of the wing are especially noticeable. It more nearly resembles, if it can be said to resemble anything, a bat, with the features very much distorted.

Fig. 21 (Fig. 170 from Squier and Davis) it is stated, “will readily be recognized as intended to represent the head of the grouse.”

The cere and plainly notched bill of this carving clearly indicate a hawk, of what species it would be impossible to say.

[Illustration: Fig. 22.—“Turkey Buzzard,” from Squier and Davis.]

Fig. 22 (Fig. 171 from Squier and Davis) was, it is said, “probably intended to represent a turkey buzzard.” If so, the suggestion is a very vague one. The notches cut in the mandibles, as in the case of the carving of the wood duck (Fig. 168, *Ancient Monuments*), are perhaps meant for serrations, of which there is no trace in the bill of the buzzard. As suggested by Mr. Ridgway, it is perhaps nearer the cormorant than anything else, although not executed with the detail necessary for its satisfactory recognition.

[Illustration: Fig. 23.—“Cherry-bird,” from Squier and Davis.]

Fig. 23 (Fig. 173 from Squier and Davis) it is claimed “much resembles the tufted cherry-bird,” which is by no means the case, as the bill bears witness. It may pass,

however, as a badly executed likeness of the tufted cardinal grosbeak or red-bird. The same is true of Figs. 174 and 175, which are also said to be “cherry-birds.”

Fig. 24 (Fig. 179 from Squier and Davis), of which Squier and Davis say it is uncertain what bird it is intended to represent, is an unmistakable likeness of a woodpecker, and is one of the best executed of the series of bird carvings. To undertake to name the species would be the merest guess-work.

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[Illustration: Fig. 24.—Woodpecker, from Squier and Davis.]

The heads shown in Fig. 25, which the authors assert “was probably intended to represent the eagle” and “are far superior in point of finish, spirit, and truthfulness to any miniature carving, ancient or modern, which have fallen under the notice of the authors,” cannot be identified further than to say they are raptorial birds of some sort, probably not eagles but hawks.

Fig. 26 (Fig. 180 from Squier and Davis), according to the authors, “certainly represents the rattlesnake.” It certainly represents a snake, but there is no hint in it of the peculiarities of the rattlesnake; which, indeed, it would be difficult to portray in a rude carving like this without showing the rattle. This is done in another carving, Fig. 196.

[Illustration: Fig. 25.—“Eagle,” from Squier and Davis.]

The extraordinary terms of praise bestowed by the authors on the heads of the hawks just alluded to, as well as on many other of the sculptured animals, suggest the question whether the illustrations given in the *Ancient Monuments* afford any adequate idea of the beauty and artistic excellence asserted for the carvings, and so whether they are fair objects for criticism. While of course for the purpose of this paper an examination of the originals would have been preferable, yet, in as much as the Smithsonian Institution contains casts which attest the general accuracy of the drawings given, and, as the illustrations by other authors afford no higher idea of their artistic execution, it would seem that any criticism applicable to these illustrations must in the main apply to the originals. With reference to the casts in the Smithsonian collection it may be stated that Dr. Rau, who had abundant opportunity to acquaint himself with the originals while in the possession of Mr. Davis, informs the writer that they accurately represent the carvings, and for purposes of study are practically as good as the originals. The latter are, as is well known, in the Blackmore Museum, England.

[Illustration: Fig. 26.—“Rattlesnake,” from Squier and Davis.]

Without going into further detail the matter may be summed up as follows: Of forty-five of the animal carvings, including a few of clay, which are figured in Squier and Davis’s work, eleven are left unnamed by the authors as not being recognizable; nineteen are identified correctly, in a general way, as of a wolf, bear, heron, toad, &c.; sixteen are demonstrably wrongly identified, leaving but five of which the species is correctly given.

From this showing it appears that either the above authors’ zoological knowledge was faulty in the extreme, or else the mound sculptors’ ability in animal carving has been amazingly overestimated. However just the first supposition may be, the last is certainly true.

SKILL IN SCULPTURE OF MOUND-BUILDERS.

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In considering the degree of skill exhibited by the mound sculptors in their delineation of the features and characteristics of animals, it is of the utmost importance to note that the carvings of birds and animals which have evoked the most extravagant expressions of praise as to the exactness with which nature has been copied are uniformly those which, owing to the possession of some unusual or salient characteristic, are exceedingly easy of imitation. The stout body and broad flat tail of the beaver, the characteristic physiognomy of the wild cat and panther, so utterly dissimilar to that of other animals, the tufted head and fish-eating habits of the heron, the raptorial bill and claws of the hawk, the rattle of the rattlesnake, are all features which the rudest skill could scarcely fail to portray.

It is by the delineation of these marked and unmistakable features, and not the sculptor's power to express the subtleties of animal characteristics, that enables the identity of a comparatively small number of the carvings to be established. It is true that the contrary has often been asserted, and that almost everything has been claimed for the carvings, in the way of artistic execution, that would be claimed for the best products of modern skill. Squier and Davis in fact go so far in their admiration (*Ancient Monuments*, p. 272), as to say that, so far as fidelity is concerned, many of them (*i.e.*, animal carvings) deserve to rank by the side of the best efforts of the artist naturalists in our own day—a statement which is simply preposterous. So far, in point of fact, is this from being true that an examination of the series of animal sculptures cannot fail to convince any one, who is even tolerably well acquainted with our common birds and animals, that it is simply impossible to recognize specific features in the great majority of them. They were either not intended to be copies of particular species, or, if so intended, the artist's skill was wholly inadequate for his purpose.

Some remarks by Dr. Coues, quoted in an article by E. A. Barber on Mound Pipes in the *American Naturalist* for April, 1882, are so apropos to the subject that they are here reprinted. The paragraph is in response to a request to identify a bird pipe:

As is so frequently the probable case in such matters, I am inclined to think the sculptor had no particular bird in mind in executing his rude carving. It is not necessary, or indeed, permissible, to suppose that particular species were intended to be represented. Not unfrequently the likeness of some marked bird is so good as to be unmistakable, but the reverse is oftener the case; and in the present instance I can make no more of the carving than you have done, excepting that if any particular species may have been in the carver's mind, his execution does not suffice for its determination.

The views entertained by Dr. Coues as to the resemblances of the carvings will thus be seen to coincide with those expressed above. Another prominent ornithologist, Mr. Ridgway, has also given verbal expression to precisely similar views.

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So far, therefore, as the carvings themselves afford evidence to the naturalist, their general likeness entirely accords with the supposition that they were not intended to be copies of particular species. Many of the specimens are in fact just about what might be expected when a workman, with crude ideas of art expression, sat down with intent to carve out a bird, for instance, without the desire, even if possessed of the requisite degree of skill, to impress upon the stone the details necessary to make it the likeness of a particular species.

GENERALIZATION NOT DESIGNED.

While the resemblances of most of the carvings, as indicated above, must be admitted to be of a general and not of a special character, it does not follow that their general type was the result of design.

Such an explanation of their general character and resemblances is, indeed, entirely inconsistent with certain well-known facts regarding the mental operations of primitive or semi-civilized man. To the mind of primitive man abstract conceptions of things, while doubtless not entirely wanting, are at best but vaguely defined. The experience of numerous investigators attests how difficult it is, for instance, to obtain from a savage the name of a class of animals in distinction from a particular species of that class. Thus it is easy to obtain the names of the several kinds of bears known to a savage, but his mind obstinately refuses to entertain the idea of a bear genus or class. It is doubtless true that this difficulty is in no small part due simply to the confusion arising from the fact that the savage's method of classification is different from that of his questioner. For, although primitive man actually does classify all concrete things into groups, the classification is of a very crude sort, and has for a basis a very different train of ideas from those upon which modern science is established—a fact which many investigators are prone to overlook. Still there seems to be good ground for believing that the conception of a bird, for instance, in the abstract as distinct from some particular kind or species would never be entertained by a people no further advanced in culture than their various relics prove the Mound-Builders to have been. In his carving, therefore, of a hawk, a bear, a heron, or a fish, it seems highly probable that the mound sculptor had in mind a distinct species, as we understand the term. Hence his failure to reproduce specific features in a recognizable way is to be attributed to the fact that his skill was inadequate to transfer the exact image present in his mind, and not to his intention to carve out a general representative of the avian class.

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To carry the imitative idea farther and to suggest, as has been done by writers, that the carver of the Mound-Building epoch sat down to his work with the animal or a model of it before him, as does the accurate zoological artist of our own day, is wholly unsupported by evidence derivable from the carvings themselves, and is of too imaginative a character to be entertained. By the above remarks as to the lack of specific resemblances in the animal carvings it is not intended to deny that some of them have been executed with a considerable degree of skill and spirit as well as, within certain limitations heretofore expressed, fidelity to nature. Taking them as a whole it can perhaps be asserted that they have been carved with a skill considerably above the general average of attainments in art of our Indian tribes, but not above the best efforts of individual tribes.

That they will by no means bear the indiscriminate praise they have received as works of art and as exact imitations of nature may be asserted with all confidence.

PROBABLE TOTEMIC ORIGIN.

With reference to the origin of these animal sculptures many writers appear inclined to the view that they are purely decorative and ornamental in character, *i.e.*, that they are attempts at close imitations of nature in the sense demanded by high art, and that they owe their origin to the artistic instinct alone. But there is much in their general appearance that suggests they may have been totemic in origin, and that whatever of ornamental character they may possess is of secondary importance.

With, perhaps, no exceptions, the North American tribes practiced totemism in one or other of its various forms, and, although it by no means follows that all the carving and etchings of birds or animals by these tribes are totems, yet it is undoubtedly true that the totemic idea is traceable in no small majority of their artistic representations, whatever their form. As rather favoring the idea of the totemic meaning of the carvings, it may be pointed out that a considerable number of the recognizable birds and animals are precisely the ones known to have been used as totems by many tribes of Indians. The hawk, heron, woodpecker, crow, beaver, otter, wild cat, squirrel, rattlesnake, and others, have all figured largely in the totemic divisions of our North American Indians. Their sacred nature too would enable us to understand how naturally pipes would be selected as the medium for totemic representations. It is also known to be a custom among Indian tribes for individuals to carve out or etch their totems upon weapons and implements of the more important and highly prized class, and a variety of ideas, superstitious and other, are associated with the usage; as, for instance, in the case of weapons of war or implements of the chase, to impart greater efficiency to them. The etching would also serve as a mark of ownership, especially where property of certain kinds was regarded as belonging to the tribe or gens and not to the individual. Often, indeed, in the latter case the individual used the totem of his gens instead of the symbol or mark for his own name.

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As a theory to account for the number and character of these animal carvings the totemic theory is perhaps as tenable as any. The origin and significance of the carvings may, however, involve many different and distinct ideas. It is certain that it is a common practice of Indians to endeavor to perpetuate the image of any strange bird or beast, especially when seen away from home, and in order that it may be shown to his friends. As what are deemed the marvellous features of the animal are almost always greatly exaggerated, it is in this way that many of the astonishing productions noticeable in savage art have originated. Among the Esquimaux this habit is very prominent, and many individuals can show etchings or carvings of birds and animals exhibiting the most extraordinary characters, which they stoutly aver and doubtless have come to believe they have actually seen.

ANIMAL MOUNDS.

As having, for the purposes of the present paper, a close connection with the animal carvings, another class of remains left by the Mound-Builders—the animal mounds—may next engage attention. As in the case of the carvings, the resemblance of particular mounds to the animals whose names they bear is a matter of considerable interest on account of the theories to which they have given rise.

The conclusion reached with respect to the carvings that it is safe to rely upon their identification only in the case of animals possessed of striking and unique characters or presenting unusual forms and proportions, applies with far greater force to the animal mounds. Perhaps in none of the latter can specific resemblances be found sufficient for their precise determination. So general are the resemblances of one class that it has been an open question among archaeologists whether they were intended to represent the bodies and arms of men, or the bodies and wings of birds. Other forms are sufficiently defined to admit of the statement that they are doubtless intended for animals, but without enabling so much as a reasonable guess to be made as to the kind. Of others again it can be asserted that whatever significance they may have had to the race that built them, to the uninstructed eyes of modern investigators they are meaningless and are as likely to have been intended for inanimate as animate objects.

There are many examples among the animal shapes that possess peculiarities affording no hint of animals living or extinct, but which are strongly suggestive of the play of mythologic fancy or of conventional methods of representing totemic ideas. As in the case of the animal carvings, the latter suggestion is perhaps the one that best corresponds with their general character.

THE “ELEPHANT” MOUND.

By far the most important of the animal mounds, from the nature of the deductions it has given rise to, is the so-called “Elephant Mound,” of Wisconsin.

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By its discovery and description the interesting question was raised as to the contemporaneousness of the Mound-Builder and the mastodon, an interest which is likely to be further enhanced by the more recent bringing to light in Iowa of two pipes carved in the semblance of the same animal, as well as a tablet showing two figures asserted by some archaeologists to have been intended for the same animal.

Although both the mound and pipes have been referred in turn to the peccary, the tapir, and the armadillo, it is safe to exclude these animals from consideration. It is indeed perhaps more likely that the ancient inhabitants of the Upper Mississippi Valley were autoptically acquainted with the mastodon than with either of the above-named animals, owing to their southern habitat.

Referring to the possibility that the mastodon was known to the Mound-Builders, it is impossible to fix with any degree of precision the time of its disappearance from among living animals. Mastodon bones have been exhumed from peat beds in this country at a depth which, so far as is proved by the rate of deposition, implies that the animal may have been alive within five hundred years. The extinction of the mastodon, geologically speaking, was certainly a very recent event, and, as an antiquity of upwards of a thousand or more years has been assigned to some of the mounds, it is entirely within the possibilities that this animal was living at the time these were thrown up, granting even that the time of their erection has been overestimated. It must be admitted, therefore, that there are no inherent absurdities in the belief that the Mound-Builders were acquainted with the mastodon. Granting that they may have been acquainted with the animal, the question arises, what proof is there that they actually were? The answer to this question made by certain archaeologists is—the Elephant Mound, of Wisconsin.

[Illustration: Fig. 27.—The Elephant Mound, Grant County, Wisconsin.]

Recalling the fact that among the animal mounds many nondescript shapes occur which cannot be identified at all, and as many others which have been called after the animals they appear to most nearly resemble, carry out their peculiarities only in the most vague and general way, it is a little difficult to understand the confidence with which this effigy has been asserted to represent the mastodon; for the mound (a copy of which as figured in the Smithsonian Annual Report for 1872 is here given) can by no means be said to closely represent the shape, proportions, and peculiarities of the animal whose name it bears. In fact, it is true of this, as of so many other of the effigies, the identity of which must be guessed, that the resemblance is of the most vague and general kind, the figure simulating the elephant no more closely than any one of a score or more mounds in Wisconsin, except in one important particular, viz, the head has a prolongation

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or snout-like appendage, which is its chief, in fact its only real, elephantine character. If this appendage is too long for the snout of any other known animal, it is certainly too short for the trunk of a mastodon. Still, so far as this one character goes, it is doubtless true that it is more suggestive of the mastodon than of any other animal. No hint is afforded of tusks, ears, or tail, and were it not for the snout the animal effigy might readily be called a bear, it nearly resembling in its general make-up many of the so-called bear mounds figured by Squier and Davis from this same county in Wisconsin. The latter, too, are of the same gigantic size and proportions.

If it can safely be assumed that an animal effigy without tusks, without ears, and without a tail was really intended to represent a mastodon, it would be stretching imagination but a step farther to call all the large-bodied, heavy-limbed animal effigies hitherto named bears, mastodons, attributing the lack of trunks, as well as ears, tusks, and tails, to inattention to slight details on the part of the mound artist.

It is true that one bit of good, positive proof is worth many of a negative character. But here the one positive resemblance, the trunk of the supposed elephant, falls far short of an exact imitation, and, as the other features necessary to a good likeness of a mastodon are wholly wanting, is not this an instance where the negative proof should be held sufficient to largely outweigh the positive?

In connection with this question the fact should not be overlooked that, among the great number of animal effigies in Wisconsin and elsewhere, this is the only one which even thus remotely suggests the mastodon. As the Mound Builders were in the habit of repeating the same animal form again and again, not only in the same but in widely distant localities, why, if this was really intended for a mastodon, are there no others like it? It cannot be doubted that the size and extraordinary features of this monster among mammals would have prevented it being overlooked by the Mound-Builders when so many animals of inferior interest engaged their attention. The fact that the mound is a nondescript, with no others resembling it, certainly lessens the probability that it was an intentional representation of the mastodon, and increases the likelihood that its slight resemblance was accidental; a slide of earth from the head, for instance, might readily be interpreted by the modern artist as a trunk, and thus the head be made to assume a shape in his sketch not intended by the original maker. As is well known, no task is more difficult for the artist than to transfer to paper an exact copy of such a subject. Especially hard is it for the artist to avoid unconsciously magnifying or toning down peculiarities according to his own conceptions of what was originally intended, when, as is often the case, time and the elements have combined to render shape and outlines

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obscure. Archaeologic treatises are full of warning lessons of this kind, and the interpretations given to ancient works of art by the erring pencil of the modern artist are responsible for many an ingenious theory which the original would never have suggested. It may well be that future investigations will show that the one peculiarity which distinguishes the so-called Elephant Mound from its fellows is really susceptible of a much more commonplace explanation than has hitherto been given it.

Even if such explanation be not forthcoming, the “Elephant Mound” of Wisconsin should be supplemented by a very considerable amount of corroborative testimony before being accepted as proof positive of the acquaintance of the Mound-Builders with the mastodon.

As regards likeness to the mastodon, the pipes before alluded to, copies of which as given in Barber’s articles on Mound Pipes in *American Naturalist* for April, 1882, Figs. 17 and 18, are here presented, while not entirely above criticism, are much nearer what they have been supposed to be than the mound just mentioned.

[Illustration: Fig. 28.—Elephant Pipe, Iowa]

[Illustration: Fig. 29.—Elephant Pipe, Iowa.]

Of the two, figure 29 is certainly the most natural in appearance, but, if the pipes are intentional imitations of any animal, neither can be regarded as having been intended for any other than the mastodon. Yet, as pointed out by Barber and others, it is certainly surprising that if intended for mastodons no attempt was made to indicate the tusks, which with the trunk constitute the most marked external peculiarities of all the elephant kind. The tusks, too, as affording that most important product in primitive industries, ivory, would naturally be the one peculiarity of all others which the ancient artist would have relied upon to fix the identity of the animal. It is also remarkable that in neither of these pipes is the tail indicated, although a glance at the other sculptures will show that in the full-length figures this member is invariably shown. In respect to these omissions, the pipes from Iowa are strikingly suggestive of the Elephant Mound of Wisconsin, with the peculiarities of which the sculptor, whether ancient or modern, might almost be supposed to have been acquainted. It certainly must be looked upon as a curious coincidence that carvings found at a point so remote from the Elephant Mound, and presumably the work of other hands, should so closely copy the imperfections of that mound.

In considering the evidence afforded by these pipes of a knowledge of the mastodon on the part of the Mound-Builders, it should be borne in mind that their authenticity as specimens of the Mound-Builders’ art has been called seriously in question. Possibly the fact that the same person was instrumental in bringing to light both the pipes has

had largely to do with the suspicion, especially when it was remembered that although explorers have been remarkably active in the same region, it has fallen to the good fortune of no one else to find anything conveying the most distant suggestion of the mastodon. As the manner of discovery of such relics always forms an important part of their history, the following account of the pipes as communicated to Mr. Barber by Mr. W. H. Pratt, president of the Davenport Academy (*American Naturalist* for April, 1882, pp. 275, 276), is here subjoined:

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The first elephant pipe, which we obtained (Fig. 17) a little more than a year ago, was found some six years before by an illiterate German farmer named Peter Mare, while planting corn on a farm in the mound region, Louisa County, Iowa. He did not care whether it was elephant or kangaroo; to him it was a curious 'Indian stone,' and nothing more, and he kept it and smoked it. In 1878 he removed to Kansas, and when he left he gave the pipe to his brother-in-law, a farm laborer, who also smoked it. Mr. Gass happened to hear of it, as he is always inquiring about such things, hunted up the man and borrowed the pipe to take photographs and casts from it. He could not buy it. The man said his brother-in-law gave it to him and as it was a curious thing—he wanted to keep it. We were, however, unfortunate, or fortunate, enough to break it; that spoiled it for him and that was his chance to make some money out of it. He could have claimed any amount, and we would, as in duty bound, have raised it for him, but he was satisfied with three or four dollars. During the first week in April, this month, Rev. Ad. Blumer, another German Lutheran minister, now of Geneseo, Illinois, having formerly resided in Louisa County, went down there in company with Mr. Gass to open a few mounds, Mr. Blumer being well acquainted there. They carefully explored ten of them, and found nothing but ashes and decayed bones in any, except one. In that one was a layer of red, hard-burned clay, about five feet across and thirteen inches in thickness at the center, which rested upon a bed of ashes one foot in depth in the middle, the ashes resting upon the natural undisturbed clay. In the ashes, near the bottom of the layer, they found a part of a broken carved stone pipe, representing some bird; a very small beautifully formed copper 'axe,' and this last elephant pipe (Fig. 18). This pipe was first discovered by Mr. Blumer, and by him, at our earnest solicitation, turned over to the Academy.

It will be seen from the above that the same gentleman was instrumental in bringing to light the two specimens constituting the present supply of elephant pipes.

The remarkable archaeologic instinct which has guided the finder of these pipes has led him to even more important discoveries. By the aid of his divining rod he has succeeded in unearthing some of the most remarkable inscribed tablets which have thus far rewarded the diligent search of the mound explorer. It is not necessary to speak in detail of these here, or of the various theories to which they have given rise and support, including that of phonetic writing, further than to call attention to the fact that by a curious coincidence one of the tablets contains, among a number of familiar animals, figures which suggest in a rude way the mastodon again, which animal indeed some archaeologists have confidently asserted them to be. The resemblance they bear to that animal is, however, by no means as close as exhibited by the pipe carvings; they are therefore not reproduced here. Both figures differ from the pipes in having tails; both lack trunks, and also tusks.

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Archaeologists must certainly deem it unfortunate that outside of the Wisconsin mound the only evidence of the co-existence of the Mound-Builder and the mastodon should reach the scientific world through the agency of one individual. So derived, each succeeding carving of the mastodon, be it more or less accurate, instead of being accepted by archaeologists as cumulative evidence tending to establish the genuineness of the sculptured testimony showing that the Mound-Builder and mastodon were coeval, will be viewed with ever increasing suspicion.

This part of the subject should not be concluded without allusion to a certain class of evidence, which, although of a negative sort, must be accorded very great weight in considering this much vexed question. It may be asked why if the Mound-Builders and the mastodon were contemporaneous, have no traces of the ivory tusks ever been exhumed from the mounds? No material is so perfectly adapted for the purposes of carving, an art to which we have seen the Mound-Builders were much addicted, as ivory, both from its beauty and the ease with which it is worked, to say nothing of the other manifold uses to which it is put, both by primitive and civilized man. The mastodon affords an abundant supply of this highly prized substance, not a particle of which has ever been exhumed from the mounds either in the shape of implements or carving. Yet the exceedingly close texture of ivory enables it to successfully resist the destroying influences of time for very long periods—very long indeed as compared with certain articles which commonly reward the search of the mound explorer.

Among the articles of a perishable nature that have been exhumed from the mounds are large numbers of shell ornaments, which are by no means very durable, as well as the perforated teeth of various animals; sections of deers' horns have also been found, as well as ornaments made of the claws of animals, a still more perishable material. The list also includes the bones of the muskrat and turtle, as of other animals, not only in their natural shape, but carved into the form of implements of small size, as awls, *etc.* Human bones, too, in abundance, have been exhumed in a sufficiently well preserved state to afford a basis for various theories and speculations.

But of the mastodon, with which these dead Mound-Builders are supposed to have been acquainted, not a palpable trace remains. The tale of its existence is told by a single mound in Wisconsin, which the most ardent supporter of the mastodon theory must acknowledge to be far from a facsimile, and two carvings and an inscribed tablet, the three latter the finds of a single explorer.

Bearing in mind the many attempts at archaeological frauds that recent years have brought to light, archaeologists have a right to demand that objects which afford a basis for such important deductions as the coeval life of the Mound-Builder and the mastodon, should be above the slightest suspicion not only in respect to their resemblances, but as regards the circumstances of discovery. If they are not above suspicion, the science of archaeology can better afford to wait for further and more certain evidence than to

commit itself to theories which may prove stumbling-blocks to truth until that indefinite time when future investigations shall show their illusory nature.

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THE “ALLIGATOR” MOUND.

Although of much less importance than the mastodon, a word may be added as to the so-called alligator mound, more especially because the alligator, owing to its southern habitat, is not likely to have been known to the Mound-Builders of Ohio. That it may have been known to them either through travel or hearsay is of course possible. A copy of the mound from the “Ancient Monuments” is subjoined.

The alligator mound was described under this name for no other reason than because it was known in the vicinity as such, this designation having been adopted by Squier and Davis, as they frankly say, “for want of a better,” adding “although the figure bears as close a resemblance to the lizard as any other reptile.” (Ancient Monuments, p. 99.)

In truth it bears a superficial likeness to almost any long-tailed animal which has the power of curling its tail—which, the alligator has not—as, for instance, the opossum. It is, however, the merest guess-work to attempt to confine its resemblances to any particular animal. Nevertheless recent writers have described this as the “alligator mound” without suggesting a word of doubt as to its want of positive resemblance to that saurian.

[Illustration: Fig. 30.—“Alligator” Mound.]

HUMAN SCULPTURES.

The conclusion reached in the foregoing pages that the animal sculptures are not “exact and faithful copies from nature,” but are imitations of a general rather than of a special character, such as comport better with the state of art as developed among certain of the Indian tribes than among a people that has achieved any notable advance in culture is important not only in its bearing on the questions previously noticed in this paper, but in its relation to another and highly interesting class of sculptures.

If a large proportion of the animal carvings are so lacking in artistic accuracy as to make it possible to identify positively only the few possessing the most strongly marked characters, how much faith is to be placed in the ability of the Mound sculptor to fix in stone the features and expressions of the human countenance, infinitely more difficult subject for portrayal as this confessedly is?

That Wilson regards the human sculptures as affording a basis for sound ethnological deductions is evident from the following paragraph, taken from *Prehistoric Man*, vol. 1, p. 461:

Alike from the minute accuracy of many of the sculptures of animals, hereafter referred to, and from the correspondence to well known features of the modern Red Indian

suggested by some of the human heads, these miniature portraits may be assumed, with every probability, to include faithful representations of the predominant physical features of the ancient people by whom they were executed.

Short, too, accepting the popular idea that they are faithful and recognizable copies from nature, remarks in the North Americans of Antiquity, p. 98, *ibid.*, p. 187:

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There is no reason for believing that the people who wrought stone and clay into perfect effigies of animals have not left us sculptures of their own faces in the images exhumed from the mounds;" and again, "The perfection of the animal representations furnish us the assurance that their sculptures of the human face were equally true to nature.

Squier and Davis also appear to have had no doubt whatever of the capabilities of the Mound-Builders in the direction of human portraiture. They are not only able to discern in the sculptured heads niceties of expression sufficient for the discrimination of the sexes, but, as well, to enable them to point out such as are undoubtedly ancient and the work of the Mound-Builders, and those of a more recent origin, the product of the present Indians. Their main criterion of origin is, apparently, that all of fine execution and finish were the work of the Mound sculptors, and those roughly done and "immeasurably inferior to the relics of the mounds," to use their own words, were the handicraft of the tribes found in the country by the whites. Conclusions so derived, it may strike some, are open to criticism, however well suited they may be to meet the necessities of preconceived theories.

After discussing in detail the methods of arranging the hair, the paint lines, and tattooing, the features of the human carvings, Squier and Davis arrive at the conclusion that the "physiological characteristics of these heads do not differ essentially from those of the great American family."

Of later writers some agree with Squier and Davis in believing the type illustrated by these heads to be Indian; others agree rather with Wilson, who dissents from the view expressed by Squier and Davis, and, in conformity with the predilections visible throughout his work, is of the opinion that the Mound-Builders were of a distinct type from the North American Indian, and that "the majority of sculptured human heads hitherto recovered from their ancient depositories do not reproduce the Indian features." (Wilson's Prehistoric Man, vol. 1, p. 469.) Again, Wilson says that the diversity of type found among the human sculptures "proves that the Mound-Builders were familiar with the American Indian type, but nothing more."—*Ibid.*, p. 469.

The varying type of physiognomy represented by these heads would better indicate that their resemblances are the result of accident rather than of intention. For the same reason that the sculptured animals of the same species display great differences of form and expression, according to the varying skill of the sculptors or the unexact demands made by a rude condition of art, so the diversified character of the human faces is to be ascribed, not to the successful perpetuation in stone by a master hand of individual features, but simply to a want of skill on the part of the sculptor. The evidence afforded by the animal sculptures all tends to the conclusion that

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exact individual portraiture would have been impossible to the mound sculptor had the state of culture he lived in demanded it; the latter is altogether improbable. A glance at the above quotations will show that it is the assumed fidelity to nature of the animal carvings and their fine execution which has been relied upon in support of a similar claim for the human sculptures. As this claim is seen to have but slight basis in fact the main argument for asserting the human sculptures to be faithful representations of physical features, and to embody exact racial characters falls to the ground, and it must be admitted as in the last degree improbable that the art of the mound sculptor was adequate for the task of accurate human portraiture. To base important ethnologic deductions upon the evidence afforded by the human sculptures in the present state of our knowledge concerning them would seem to be utterly unscientific and misleading.

Copies of several of the heads as they appear in "Ancient Monuments" (pp. 244-247) are here subjoined to show the various types of physiognomy illustrated by them:

[Illustration: Fig. 31. Fig. 32. Fig. 33. Human Carvings from the Mounds.]

[Illustration: Fig. 34. Fig. 35. Human Carvings from the Mounds.]

Could the many other stone and terra-cotta sculptures of the human face which have been ascribed to the Mound-Builders be reproduced here it would be seen that the specimens illustrated above are among the very best. In not a few, traces of the grotesque are distinctly visible, and there is little in their appearance to suggest that they had a different origin or contain a deeper meaning than similar productions found among present Indians. As each of the many carvings differ more or less from every other, it will at once be perceived that the advocates of different theories can readily find in the series abundant testimony in support of any and all assumptions they may choose to advance.

INDIAN AND MOUND-BUILDERS' ART COMPARED.

Turning from special illustrations of the artistic skill of the Mound-Builders, brief attention may be paid to their art in its more general features, and as compared with art as found among our Indian tribes.

Among some of the latter the artistic instinct, while deriving its characteristic features, as among the Mound-Builders, from animated nature, exhibits a decided tendency towards the production of conventional forms, and often finds expression in creations of the most grotesque and imaginative character.

While this is true of some tribes it is by no means true of all, nor is it true of all the art products of even those tribes most given to conventional art. But even were it true in its broadest terms, it is more than doubtful if the significance of the fact has not been greatly overestimated. Some authors indeed seem to discern in the introduction of the grotesque element and the substitution of conventional designs of animals for a more natural portrayal, a difference sufficient to mark, not distinct eras of art culture merely, but different races with very different modes of art expression.

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To trace the origin of art among primitive peoples, and to note the successive steps by which decorative art grew from its probable origin in the readily recognized adornments of nature and in the mere "accidents of manufacture," as they have been termed, would be not only interesting, but highly instructive. Such a study should afford us a clew to the origin and significance of conventional as contrasted with imitative art.

The natural process of the evolution of art would seem to be from the purely imitative to the conventional, the tendency being for artistic expression of a partially or wholly imaginative character to supplant or supplement the imitative form only in obedience to external influences, especially those of a religious or superstitious kind. In this connection it is interesting to note that even among tribes of the Northwest, the Haidahs, for instance, whose carvings or paintings of birds and animals are almost invariably treated in a manner so highly conventional or are so distorted and caricatured as to be nearly or quite unrecognizable, it is still some natural object, as a well known bird or animal, that underlies and gives primary shape to the design. However highly conventionalized or grotesque in appearance such artistic productions may be, evidences of an underlying imitative design may always be detected; proof, seemingly, that the conventional is a later stage of art superimposed upon the more natural by the requirements of mythologic fancies.

As it is with any particular example of savage artistic fancy, so is it with the art of certain tribes as a whole. Nor does it seem possible that the growth of the religions or mythologic sentiment has so far preceded or outgrown the development of art as to have had from the first a dominating influence over it, and that the art of such tribes as most strongly show its effect has never had what may be termed its natural phase of development, but has reached the conventional stage without having passed through the intermediate imitative era.

It is more natural to suppose, so far, at least as the North American Indians are concerned, that the road to conventionalism has always led through imitation.

The argument, therefore, that because a tribe or people is less given than another to conventional methods of art, it therefore must necessarily be in a higher stage of culture, is entitled to much less weight than it has sometimes received. Squier and Davis, for instance, referring to the Mound-Builders, state that "many of these (*i.e.*, sculptures) exhibit a close observance of nature such as we could only expect to find among a people considerably advanced in the minor arts, and to which the elaborate and laborious, but usually clumsy and ungraceful, not to say unmeaning, productions of the savage can claim but a slight approach."

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It is clearly not the intention of the above authors to claim an entire absence of the grotesque method of treatment in specimens of the Mound-Builder's art, since elsewhere they call attention to what appears to be a caricature of the human face, as well as to the disproportionate size of the heads of many of the animal carvings. Not only are the heads of many of the carvings of disproportionate size, which, in instances has the effect of actual distortion, but in not a few of the sculptures nature, instead of being copied, has been trifled with and birds and animals show peculiarities unknown to science and which go far to prove that the Mound-Builders, however else endowed, possessed lively imaginations and no little creative fancy.

Decided traces of conventionalism also are to be found in many of the animal carvings, and the method of indicating the wings and feathers of birds, the scales of the serpent, &c., are almost precisely what is to be observed in modern Indian productions of a similar kind.

Few and faint as are these tendencies towards caricaturing and conventionalizing as compared with what may be noted in the artistic productions of the Haidahs, Chinooks, and other tribes of the Northwest, they are yet sufficient to show that in these particulars no hard and fast line can be drawn between the art of the Indian and of the Mound-Builder.

As showing how narrow is the line that separates the conventional and imitative methods of art, it is of interest to note that among the Esquimaux the two stages of art are found flourishing side by side. In their curious masks, carved into forms the most quaint and grotesque, and in many of their carvings of animals, partaking as they do of a half human, half animal character, we have abundant evidence of what authors have characterized as savage taste in sculpture. But the same tribes execute carvings of animals, as seals, sea-lions, whales, bears, &c., which, though generally wanting in the careful modeling necessary to constitute fine sculpture, and for absolute specific resemblance, are generally recognizable likenesses. Now and then indeed is to be found a carving which is noteworthy for spirited execution and faithful modeling. The best of them are far superior to the best executed carvings from the mounds, and, are much worthier objects for comparison with modern artistic work.

As deducible from the above premises it may be observed that, while the state of art among primitive peoples as exemplified by their artistic productions may be a useful index in determining their relative position in the scale of progress, unless used with caution and in connection with other and more reliable standards of measurement it will lead to very erroneous conclusions. If, for instance, skill and ingenuity in the art of carving and etching be accepted as affording a proper idea of a people's progress in general culture, the Esquimaux of Alaska should be placed in the front rank of American tribes, a position needless to say which cannot be accorded them from more general considerations. On the other hand, while the evidences of artistic skill left by the Iroquoian tribes are in no way comparable to the work produced by the Esquimaux, yet

the former have usually been assigned a very advanced position as compared with other American tribes.

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GENERAL CONCLUSIONS.

The more important conclusions reached in the foregoing paper may be briefly summed up as follows:

That of the carvings from the mounds which can be identified there are no representations of birds or animals not indigenous to the Mississippi Valley.

And consequently that the theories of origin for the Mound Builders suggested by the presence in the mounds of carvings of supposed foreign animals are without basis.

Second. That a large majority of the carvings, instead of being, as assumed, exact likenesses from nature, possess in reality only the most general resemblance to the birds and animals of the region which they were doubtless intended to represent.

Third. That there is no reason for believing that the masks and sculptures of human faces are more correct likenesses than are the animal carvings.

Fourth. That the state of art-culture reached by the Mound Builders, as illustrated by their carvings, has been greatly overestimated.

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