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REMARKS ON CERTAIN INDIAN SKULLS FROM
BURIAL MOUNDS IN MISSOURI, ILLINOIS,
AND WISCONSIN.¹

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THIS series of interesting specimens is of historical as well as of anthropological interest. The first deformed American skull that was ever described came from exactly the region from which these came. It was described by Blumenbach in 1789. It was exhumed opposite St. Louis, on the Illinois shore.

Most of the skulls that you see before you are deformed skulls. The study of deformities in the American skull is truly a rich field. Of all the races of men, no one race has so given itself up to the artificial deformation of the skull as has the American. The subject of cranial study has been enriched by a work, that has reached Philadelphia within the past week, by Virchow, entitled *Crania Ethnica Americana*. It may be classed with the well-known work by Morton as the second complete exhaustive treatise, bringing the science up to date in this department of craniology. I am proud to say that Virchow repeatedly refers to the work of Morton as a work most meritorious in its day, and handing down to all craniologists many true conditions of

¹ Dr. Hinsdale announced to the College a donation to the Mütter Museum of sixty Indian skulls, presented by Dr. S. Weir Mitchell, to whom they had been given by Dr. George J. Engelmann, of St. Louis, Missouri. They were exhumed by Dr. Engelmann and Dr. Wislizenus from cysts near French Village, Illinois, eight miles southeast of St. Louis; from New Madrid County, Missouri, and from Geneva Lake, in southeastern Wisconsin. Seven of the skulls were from the big mound in St. Louis, now completely levelled.

The bones were found in single graves at a depth of two or three feet, and they had been buried probably after decay of the flesh. Some of the cysts in which they had been placed were lined with flat pieces of limestone. Dr. Brinton's remarks were made at the request of the President.

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accurate science. Of course, as we might expect, a half-century has obliterated many of the ideas which Morton advanced.

The characteristics of these specimens is in their deformations. Most of the skulls present decided abnormalities, artificial in character. The deformities of the American skull have been classified by a number of authors, not by any means agreeing with one another, and, in fact, I may say that scarcely two agree. We may, however, assume certain general principles. There are two deformities, not intentional, though marked. We do not consider flattening of the occiput as intentional. Those who have been among Indians will have observed the method by which the papoose is carried on the back of the mother, usually strapped to a board, and in the flexible condition of the bones of the skull this brings about a flattening of the occiput. Morton was not entirely clear that this was an artificial deformity. In his lectures, and in some instances in his work, he classes flattening of the occiput as a characteristic of the American race. We, however, do not consider that it is, strictly speaking, an artificial deformity. It is accidental, not intentional. Nor do we consider the flattening of the front, in most cases, a deliberate deformity. It is also unintentional. The papoose, in addition to having the back of the head against the board, is secured to the board by a band passing around the front of the head, and this leads to flattening of the frontal region. These deformities are not considered in any sense intentional, but there are at least six others which have been carefully catalogued, and which are artificial and deliberate. This brings about these curious shapes of skulls, one of which Morton called the cuneiform, another the mitre skull, resulting in those excessive brachycephalic skulls which we see in the natives of the Lucayan Islands, where we find some skulls with a biparietal diameter of 90 to 100.¹ These are undoubtedly brought about by antero-posterior compression, with the intention of making the head very broad and short. The very short heads are found principally in the Lucayan Islands. There are two extreme forms, the short skull and the extremely long skull, where pressure is made laterally. Glancing over this collection, I do not find a fair type of the latter. They are found in two parts of the continent very remote from each other, to wit: in Peru and among the Flatheads of the northwest coast. These two nations, evidently without any communication with each other, developed the same ideas of the beautiful as regards the shape of the head. The characters of the deformities of the skull are closely localized throughout America, and when we see a deformed skull we can, as a rule, refer it to certain areas. I should have been somewhat surprised to have found a typical case of a long skull in this collection, for we do not find them in the locality from which the collection comes. Bartram, who lived, about 1790, among the Chickasaws, states that the braves have high foreheads and a small back of the head, and he regarded this as a characteristic of the race. It is, however, artificial. We do not find the low

¹ Percentage of occipito-frontal diameter.

and retreating forehead that we find among the Incas of Peru and the Chinooks of the northwest coast.

The skulls before us are, as a rule, typical of what we call southwest skulls. This division includes the skulls of the Choctaws, Chickasaws, Natchez, and, to some extent, the tribes north of them. The nations who inhabited the locality from which these skulls came must have derived the practice from the tribes south of them, which they could do by interchange of women.

Several questions come up in considering this subject. One is, Does this flattening, which is extreme in some cases, make any difference in the cubic capacity of the skull? An investigation of the cubical capacity of these deformed skulls shows that there has been a compensation, and that the capacity of the skull is not materially or not at all interfered with. Many range above 1500 cubic centimetres.

Again, does this displacement of the contents bring about any alteration in the intellectual capacity? The answer to this is likewise in the negative. As I have before observed, we find in Peru probably the most extraordinary cases of cranial deformity anywhere in the world, and yet it is a familiar fact that the Incas stood at the high-water mark of intellectual capacity.

Another question is whether these deformities, which have been continued generation after generation for many centuries, have exerted any influence in the way of transmission of the peculiar form of skull? This subject is very interesting in reference to some recent biological studies. The opinion has finally drifted toward the conclusion that there is no tendency whatever to the transmission of these deformed skulls, no matter for how many generations the practice has been continued.

These deformities did not belong to the American race originally. The old skulls are not deformed either in North or South America. When we go far back to the time when many of the now extinct mammalia were still extant, we find the skulls normal in character. Evidently, therefore, the method of carrying the children which brought about these unintentional deformities was learned after the American race had been on this continent for a long time.

In conclusion, I would say that the general character of the American cranium, wherever you see it, has been said by Virchow to be uniformly high. We do not find among them skulls presenting any anthropoid or theramorphic characters, as in the oldest skulls of Europe. There may be some exceptions which have not as yet been brought before the eye of science. There are alleged to be such. We, however, do not find the characters seen in the old European skulls. The conclusion that morphologists have arrived at is that the human race appeared first in America at a time when man was developed much higher in Europe than at the oldest time that we can trace him there.