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# Pseudo-Fossil Man

## Not All Human Skulls that Look Primitive Are

### Those of Ancient Primitive Man, and Why

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SOME years ago, when the writer was engaged in archeological work near a small western town, a villager drew him aside and said: "You should see Mrs. Jones. She is the widow of a doctor who used to collect fossils all over this country. She has some very wonderful things, and probably would be glad to dispose of them now."

Seeking out the woman, I was led into a parlor ornamented, in the fashion of the '90's, with the usual array of sea-shells, baskets, and other odd items. Following a proper interval of small talk we came around to the subject of the interview—her husband's collection. After I had examined and made notes upon some items of local interest, a pause fell. Looking carefully about, and lowering her voice, the woman said: "This is not all. I have something very, very valuable. I have part of the skull of a primitive man."

Now, though extinct types of man have never been recovered in the New World, and the likelihood is that they never will be, it is not the business of science to make snap judgments. Mentally expecting no more than some odd and misinterpreted fossil, I waited while the doctor's widow eagerly uncovered her prize.

As the last wrapping fell away, there was dropped into my hand what I had least expected: a human frontal or forehead bone which, without doubt, carried an extremely massive supra-orbital torus, or ridge of bone above the eyes, such as is commonly found upon the skulls of the fossil men of the Ice Age. The rest of the skull was missing. Only this massive fragment of the skull remained.

"Where," said I, my pulse rising a point or two, "did your husband get this?"

"Oh," said the woman eagerly, "he found it buried with that other skull you've been looking at, in the Indian village up the road."

At this remark my heart quickly sub-

sided to normal, if not below. No fossil man was going to get himself buried in a mere 500-year old Indian village. I had been digging there myself, and I knew. Moreover, fossil men are not laid out in Indian cemeteries along with the bones of the existing species of man. I tried, gently, to explain this to the widow.

"But," she exclaimed triumphantly, "look at that forehead. It's not modern.



Photos by Dr. G. Ekholm, courtesy  
American Museum of Natural History

This skull suggests incipient acromegaly. Notice particularly the helmet-like protrusion of the brow beyond the root of the nose, and the massive character of the zygomatic arch (the slender, constricted part of the cheek bone just forward of the ear)

My husband said it wasn't. He was a doctor, and he knew. That piece of bone is worth a lot of money."

The talk shifted. We exchanged some pleasantries and I left, albeit wishing I might have carried away with me that intriguing fragment of frontal bone. I knew by then what it represented, but it still appealed to me.

At rare intervals these fragments persist in turning up. To some laymen they are extremely attractive and, forgetting that a fossil type of man is a much more complicated structure than an individual possessing a supra-orbital torus, or brow ridge, of unusual size, the finder generally visualizes in them

the primitive European "cave men" about whom he has read. So scarce are these objects and so infrequent is their complete preservation that it is very easy to be deceived by them, particularly at a time when the discovery of the late glacial Folsom culture in the United States has made us extremely conscious of the possible antiquity of man in the New World. If his find is not primitive—the layman is likely to insist vociferously—what in heaven's name *can* it be?

Such specimens of pseudo-fossil men can be classified into two general types: first, the "normal" individual who represents, in one or another feature, a more primitive appearance than the average for his group; and, second, the individual who, through a glandular disorder, has suffered a marked thickening of the bony structure.

IN CONNECTION with the first, or "normal," type, we may say that in no human population are the individuals exactly alike. Each person varies in his features from what we may term the ultra-human or vanguard types, to those who, in one or another characteristics, have retained some indication of the more primeval features of the earlier men. As Dr. Franz Weidenreich, distinguished authority on fossil man, has pointed out, "within each group . . . we may be confronted with specimens seemingly anticipating future development, while primitive features are retained in others." These by no means necessarily imply intellectual inferiority, but may include an odd array of little skeletal variations of which only the anatomist has knowledge. Occasionally, however, out of so many thousands of individuals, one may show unusually pronounced brow ridges or some other feature noticeably striking to the untrained eye.

The writer can testify that he long coveted the skull of an unsuspecting colleague who approached close to the Neanderthal type in one or two characteristics of the skull. I say one or two advisedly. Viewed in its entirety, my good friend's cranium would have deceived no competent anatomist into imagining him to be one of our early forerunners. If, however, the right fragment of his skull—the "primitive" part—had been recovered from an archeological deposit of some antiquity, discussion might have arisen. Such instances are not unknown here in America, and more than one well-intentioned student has gone off the deep end in favor of some very ancient form of man having existed in the New World, only to suffer humiliation later.

The second type of pseudo-fossil man

—the glandular disorder type—represents an anatomical condition which may also contrive to trick the unwary archeologist. In this case we are dealing with a glandular disorder of the pituitary, a small gland at the base of the brain whose secretions control the course of human growth. This disease, known as acromegaly, overstimulates bone growth and, over a period of years, causes a great coarsening and thickening of the bones of the skull, particularly in the region of the brow ridges, cheek bones, and other portions of the facial structure. The result is to lend the face a somewhat bestial and primitive appearance which is even more pronounced in the skull.

There are degrees of intensity of affliction with this disease, and variation in its anatomical effects. In general, however, it has long been recognized that the skull, under this unusual stimulation, tends in a certain degree to simulate, in portions of its structure, anatomical traits of the primitive past of mankind. Indeed, so distinguished an anatomist as Sir Arthur Keith has suggested that man still carries within his body, and ordinarily regulated by a well-controlled pituitary, the biological mechanism which produced the physical structure of his early fore-runners.

**B**E THAT as it may, however, this rare disease, scarcely ever identified archeologically, is well worth considering as a possible explanation for unusual skulls from recent deposits. Moreover, in its milder stages, it may be difficult to distinguish skeletally from a case of extreme normal variation.

The skull featured in the first photograph was collected from an early site in the Southwest, along with many other perfectly normal individuals. There is nothing mysterious about it. It is something over a thousand years old, and its associates were all perfectly normal Indians of that place and time. Yet this skull in many of its features is a remarkably rugged and "stone age" specimen of man to be encountered among American Indians; most of whom, incidentally, are by no means effeminate in skeletal structure.

Unfortunately, the bones of the body of this specimen are gone, so that we do not have them as an added check on the pathological nature of the skull. The latter has been slightly crushed. Because of the fragile nature of the bone, complete restoration has not been attempted. Nevertheless the general effect is plain; great size, ruggedness, and measurements which are very large. This skull was found in an area now

being combed for traces of late glacial man, and I shudder to think what extensive essays might have been written upon that porching frontal bone if it had ever washed out of some convenient river bed or gravel deposit.

The skull is still not in what might be termed an advanced state of the disease. Nevertheless an excessive heaping up of porous vascular bone on the edges of the tooth-bearing portion of the upper jaw, and a chalky and spongy bony texture, are very suggestive of acromegaly. The brows contain huge air sinuses and the condition of the sutures of the skull suggests unusually early closure. Notable, too, is the bicanine index of this specimen.

This index, expressed as a percentage, indicates the width between the two canine, or "eye teeth," as compared to the width as measured across the maximum expanse between the molars.



A high index is a sign of primitiveness because the primitive or anthropoid jaw is more U-shaped or rectangular, and hence the canine teeth are almost as far apart as the molars. On the other hand, due to the more retracted and curving palate of modern man the index is much less in the latter. In the anthropoid apes, the index ranges in the high nineties, or even to 100 or over. In modern Europeans, it ranges in the low sixties. In the powerful and anthropoidal Rhodesian man, the index is 68 percent. Our specimen has an index of 68.5, indicating a wide primitive muzzle. As a matter of fact, the bicanine width is 48 mm., which is much beyond the average. It is interesting in this connection to note that in acromegaly there is sometimes a tendency for the "eye" teeth to advance slightly in position and be more directly in line with the incisors, thus creating a wider, more primitive arch.

If, however, one has access to the whole skull, as in this unusual specimen, there should be nothing deceptive to the trained eye. It is not really primitive. The brain case is capacious, and the face, though formidable in its ruggedness, is that of our own species.

It is important to remember that none of our human forerunners is ever completely imitated by either pathological or normal variation. In the case of disease, the bone betrays evidence, not of primitive strength, but of ab-



*Left and above: Front and side view of the skull of a native of New Britain (northwest of the Solomon Islands). This individual is markedly variant toward the primitive, but not in a pathological manner. Note heavy development of the brow ridge, which is striking, even when it is seen in this somewhat archaic group of people*

normality. Moreover, the spurious primitiveness will tend to be localized and asymmetrical. One never gets, for example, the lack of the chin eminence so characteristic of the sub-human remains. On the contrary, in acromegaly the chin eminence may be pronounced. In the case of extreme normal variation of an atavistic nature the duplication is also not complete, but generally confined to a single character.

Such specimens as we have discussed remain as an emphatic scientific warning against easy and popular supposition. This is not to say, when you remove a curious and exciting skeletal fragment from its ancient resting place, that it should be casually dismissed. But before letters are written to authorities or dramatic announcements made to the newspapers, make sure that your prized, and in any case interesting, specimen is not that of a forgotten acromegalic, or an extreme case of normal variation toward the primitive. The search for fossil man is more, far more, than a search for skulls with big brow ridges.