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AFRICAN MANLIKE APE SKULL NEW LINK IN MAN'S ANCESTRY

By Prof. Raymond A. Dart,
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Johannesburg, South Africa

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(This is the first reliable description of the newly found African precursor of man to reach America. It was received from Prof. Dart, the discoverer, by cable from Johannesburg, South Africa.)

The skeletal remains of *Australopithecus Africanus* consist of two fragments. One is an endocranial brain cast (the form of the interior of the cranium) and this is complete and whole. The other is the face of the skull which was found completely imbedded in the limestone of an old cavern. This ancient cave was completely filled with bedded sand infiltrated with lime.

The site of the discovery is near the locality of Taungs, Kalahari, Bechuanaland, and the cave is in the Kaap Plateau composed of dolomitic rocks.

The skull is dolichocephalic (long and narrow and somewhat oblong in shape). The face is leptoprosopic (relatively long and narrow).

The remains are those of a juvenile subject with the first permanent molars erupted. The brain has a size just slightly larger than that of an adult chimpanzee. The sulcus lunatus (the lunar fissure, one of the convolutions of the brain) shows a position approaching the same feature in the human being. The brain shows ^{marked}temporo-parieto-occipital expansion (enlargement of the posterior or back two-thirds of the cerebrum). There is an absence of the pre-rolandic and post-rolandic flattening of the skull. (That is, the muscles of the jaw at the stage of evolution shown by the skull had decreased in size due to lack of hard usage so as to allow the brain in the region of the temples to bulge out. This is a humanlike characteristic.)

The ridges above the eye orbits of the skull are absent (unlike those in apes). The eye orbits are rounded. The nasal or nose bones terminate above the lines connecting the lower margins of the eye orbits. (This is human-like.) The upper dental arch is parabolic in shape (this type of setting for the teeth is more nearly human than that of the apes). The canine teeth are small and their diastema (the space between the canine and front teeth) is three millimeters. There is no diastema or space in front of the canine teeth of the lower jaw. This lower jaw resembles in its front portion the famous Heidelberg jaw.

Another point of importance showing the jaw's close approach to human characteristics is the lack of a simian shelf, a ledge on the interior of the lower jaw present in the apes. The canines of the jaws are small and lie in line with the slightly crowded vertical incisors or front teeth.

The foramen magnum (hole through which the spinal cord enters the brain) is placed well forward. (In the monkeys this is well to the rear of the skull and its location in the newly found skull indicates that the creature to whom it belonged may have walked upright.)

The specimens are diagnosed as those of a manlike or anthropoid ape, and classified as a new family, the Homosimiidae.

(By Science Service)

That the skull of the anthropoid ape child found by Prof. Dart in Africa is an important link in the ancestry of man is the opinion of Dr. Ales Hrdlicka, anthropologist of the Smithsonian Institution, after he had read and studied the exclusive article sent by Prof. Dart to Science Service.

The remains of this four year old child, just beginning to cut its first permanent teeth, will probably take their place beside Pithecanthropus, Piltown man, and the other famous relics of man's evolution and antiquity. Buried as they were deep in limestone, Dr. Hrdlicka believes it probable that they date from Tertiary times, a time more ancient than any in which human remains have heretofore been found. In this case they have been preserved for hundreds of thousands of years.

The fact that the skull was so young when its owner met death is a disadvantage from the standpoint of anthropological study for the skull of a young ape has more human characteristics than the skull of an adult ape.

Yet there seems to be a little doubt but that there has been discovered on the reputed "dark" continent a most important step in the evolutionary history of man who arose from the same stock as the present apes. Australopithecus Africanus is probably more remote in human ancestry than Pithecanthropus, the ape man of Java, up to now considered the oldest manlike creature known to science.

Australopithecus was not an ape-man like Pithecanthropus, but a man-ape. He was a creature who emerged just before the dawn of man. He is one of those beings popularly known as a "missing link", intermediate forms having both human and ape-like characteristics.

Australopithecus may be related to America through two lines, that of man and monkey. The descendants of Australopithecus through evolutionary processes may have become modern man. His ancestors evolving in a different direction may also have given rise to the kind of monkeys that now inhabits South America.

Dr. Hrdlicka believes that the new African man-ape is more closely related to the old African stem of the American monkey than to the type of monkey now living in the old world. It is generally conceded that the American type of monkey came from Africa in Tertiary times when there was a land bridge between Africa and South America. In characteristics, Australopithecus resembles the American type of monkey more closely than the African.
