

PALEONTOLOGY

Newly Found Bones Indicate That Ape Walked Like a Man

Toe Bone Is Longer Than That of a Man But Belonged To a Foot Used To Upright Walking; Arm Bones Confirm

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THREE broken pieces of bone, newly found at Kromdraai in South Africa, give strong evidence that the extinct anthropoid ape *Paranthropus* walked on two legs like a man. The discoverer, Dr. Robert Broom of the Transvaal Museum at Pretoria, reports his find in *Nature* (Dec. 3).

The three bone fragments, which Dr. Broom states almost certainly belong to *Paranthropus*, are the lower end of a right humerus (the elbow), the lower end of one of the bones of the right arm, and a bone of a toe. So nearly

human are these three bones, that Dr. Broom says that they are almost indistinguishable from those of a man. They are quite unlike the corresponding bones in either chimpanzee or gorilla. But as Dr. Broom, in sorting over between three and four thousand bones which have been collected from the Kromdraai site, has not found a single bone or tooth belonging to man, and the bones now found were quite close to the place where the skull lay, he feels justified in attributing them to *Paranthropus*.

The great importance of this discovery, however, does not lie merely in the close resemblance of these bones to those of man. Not only do they confirm Dr.

Broom's conclusion from the conformation of certain bones of the skull, that this man-like fossil walked upright when he was alive, but they extend it.

The toe bone is a little longer than that of man, but it belonged to a foot which was habituated to upright walking, while the humerus reveals that the upper limbs were not used for locomotion. Hence the upper limbs of *Paranthropus* were freed for that development of the use of arm and hand which led to the specifically human activity of tool-making, as well as tool-using, this activity in its turn helping on the development of the distinctively human characters of the brain.

The discovery of part of the thigh-bone of the Sterkfontein fossil, to which Dr. Broom has given the name *Plesianthropus*, on account of its resemblance to man, indicates that this anthropoid also probably walked upright.

A further discovery at Sterkfontein is that of the brain cast of what, it is believed, must have been a male skull of *Plesianthropus*. It is considerably larger than the brain cast made from the type skull which was found at Sterkfontein, and is believed to be that of a female. The new brain cast has a capacity of from 600 to 650 cubic centimeters.

The new skull of *Pithecanthropus erectus*, the ape-man of Java, which was found recently, has a capacity of 750 c. c., so that Dr. Broom's Sterkfontein brain cast comes very close to that of a skull which is regarded definitely as coming within the human line.

On the evidence of the fossil teeth of horse which have been found on the Kromdraai site, Dr. Broom now thinks that the Kromdraai skull may be considerably older than was at first estimated, and possibly belongs to the Middle period of the Pleistocene, or Ice Age.

Science News Letter, December 10, 1938

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