## **Most Complete Hominin Skull**

Written by Administrator Thursday, 31 October 2013 23:45 -

Most complete hominin skull ever found, according to ScienceDaily and ScienceShots 17 October 2013, and *Science* vol. 342 pp297-298 DOI: 10.1126/science.342.6156.297. Palaeontologists have found a "remarkably complete ancient hominin skull" in Dmanisi, Georgia (the country near Russia, not the US state). The skull is dated as 1.8 million years old and has been classified as *Homo erectus*, believed to be a species of early humans who left Africa and evolved into modern man. The skull has "strikingly primitive features" with a low forehead, a brain capacity 546 cc, and a large face with the jaws projecting forward, and has large, very worn teeth. As described in a News and Analysis article in *Science* 

: "When the researchers attached the lower jaw to the new cranium, designated Skull 5, the lower face bones jutted out more like an

Australopithecus

". According to Yoel Rak of Tel Aviv University in Israel, one of the researchers, "This is, in essence, a very primitive face".

The skull was found at a site containing other bones, including bones of carnivores including saber-toothed cats and an extinct giant cheetah, and four similar, but incomplete skulls. The new skull makes a total of five skulls from the same site, so the researchers were able to carry out a statistical analysis of the variation in their features. Christoph Zollikofer, anthropologist at the University of Zurich summed up their conclusions: "Firstly, the Dmanisi individuals all belong to a population of a single early Homo species. Secondly, the five Dmanisi individuals are conspicuously different from each other, but not more different than any five modern human individuals, or five chimpanzee individuals from a given population". The researchers also suggest that many "homo" fossils that have been classified as separate species such as *Homo ergaster* 

Homo habilis

Homo rudolfensis

and

Homo erectus

, are all the same species. Zollikofer explained: "Most of these fossils represent single fragmentary finds from multiple points in space and geological time of at least 500,000 years. This ultimately makes it difficult to recognize variation among

species in the African fossils as opposed to variation within

species". (Emphasis in original) Marcia Ponce de León, another anthropologist at the University of Zurich summed up the problem: "At present there are as many subdivisions between species as there are researchers examining this problem".

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**Editorial Comment**: Because this skull is complete, and not broken into fragments, we can make good comparisons between its features and those of living human beings. The Dmanisi skull certainly has a small brain space. At 546 cc it is close to the average for a modern gorilla (about 500cc but can be up to 700 cc) and little above the estimated value for an *Australopithecus* 

of 450 cc. It is also less than half the modern human average of 1,350 cc. (The normal human range varies from around 1,000 cc to over 1,800 cc.)

The fact that the new skull has a small brain and lower face bones that "jutted out more like an *Australopithecus* 

"is further indication that it is also a dead Australopithecine (dead ape). It has other ape-like characteristics, including a lower jaw that protrudes in front of the upper jaw, and a dental arch that is more U shaped than the human parabola shape. Furthermore, it lacks the prominent nose bridge and chin that are distinctive features of a human skull. We also agree with the University of Zurich anthropologists comments about the problems with classifying "homo" fossils – the evidence is fragmentary and does not take into account natural variation within species. Most so-called "hominid" fossils consist of incomplete skulls and other bones, which are nearly always broken into many fragments. Therefore, we have no doubt that many have been reconstructed to look like something sufficiently different from other finds to be given a new name, for no better reason than to give those who found them the kudos of having found another "human ancestor" to prop up the theory of evolution. (Ref. anthropology, palaeontology)

Evidence News, 30 October 2013