



*...going one step further*



**VP750/1**

- *Sinanthropus pekinensis* (Black 1927)
- *Homo erectus pekinensis* (Weidenreich 1940)
- Genus: *Homo erectus*<sup>1</sup>
- Reconstruction based on Weinert

The model was developed from a cast of the replica from the collection of the Johann Wolfgang Goethe University of Frankfurt am Main, Institute of Anthropology and Human Genetics for Biologists.

Between 1929 and 1936 the remains of several skulls of the *Sinanthropus* genus were excavated from a cave near Zhou Xian, 40km south west of Beijing. Unfortunately, all of the material has been lost as a result of wartime events. However, we are indebted to Black (1934), and particularly Weidenreich (1937, 1943) for descriptions, photographs, sketches, and reconstruction's which are of such good quality as to mitigate the loss to some extent and to render possible the comparison with other finds.

The skulls, without exception, must be described as long skulls. With their biggest cranial length of 192 to 199mm the values exceed the mean value of recent races. The width of the skull (temporo-parietal about 135 to 139 mm, biauricular 143 to 151 mm) ranges within the values of recent man, if taken absolutely. The essential difference lies in the location of the biggest width which is found only slightly above the opening in the ear, whereas in recent man, the biggest width of the skull is measured in the region of the parietal bones. The forehead is much narrower than that found in recent man.

All cranialbones are very solid which results in the considerable difference between the internal and external length of the skull, the ratio of which being 84:100 (in recent man 92:100). The thick supraorbital tori both sides are conspicuous. They are connected with each other by a median ridge (torus glabellaris) thus forming a continuous bone roof above the eyes (tours frontalis) which is separated from the superior section of the frontal bone by a groove. The top plan view (norma verticalis) shows a distinct narrowing of the skull behind the edges of the eye sockets. The forehead is very much recending and narrower than in recent man, and the roof of the skull is low. In addition, in all discoveries, a crest is evident as longitudinal elevation in the median sagittal plane. From the occipital views the distinctions from the temporally more recent skull discoveries are obvious. The orbital cavities being far from each other are deep and quite spacious. Due to the flat and broad zygoma the face, too, appears to be very broad and low.

At the robust lower jaw the great distance between the articular processes is conspicuous which is, of course, a necessary consequence of the external diameter of the skull in the area of the zygomatic arch. A projection of the chin has not formed yet. The foramen mentale is situated at about half way up the lower jaw.

The set of teeth is very well developed. The incisors are similar to those of recent man, especially those of the lower jaw. The inner incisors of the upper jaw are relatively large and wide (shovel likeform). The molars, however, with their more wrinkled crowns are very big and broad. The tips of the upper jaw canines clearly project over the other teeth.

The intracranial capacity amounts to 915cm<sup>3</sup> to 1,250cm<sup>3</sup>, on average 1,050cm<sup>3</sup>, at most 1,275cm<sup>3</sup>. The lower values correspond to the average value of the *Homo erectus erectus* (*Pithecanthropus erectus*, Trinil), the higher values comply roughly with those of the early *Homo sapiens*. Henke and Rothe (1994, pages 400 and 402) provide a very good morphological description of the skull of *Homo erectus*.

The terms "*Sinanthropus pekinensis*" for the Chinese and "*Pithecanthropus erectus*" for the Javanese findings are hardly used anymore today. Their close morphological similarity justifies the use of the general term "*Homo erectus*". *Homo erectus* most probably evolved from an African precursor, possibly *Homo ergaster*. Some scientists view *Homo erectus* as a purely Asian species, distinct from the contemporary *Homo heidelbergensis* in Europe and Africa, while others also use the term *Homo erectus* for the European finds. Even in the future it will probably not be possible to produce real evidence of the truth of either theory.

<sup>1</sup> Systematic classification based on Henke and Rothe (1994)