

The Tabun Remains

The Tabun materials consists of a nearly complete adult female skeleton and a large mandible belonging to a male person, along with a few other post-cranial bones like radius, ulna, tibia, pelvis and some vertebrae. These were discovered through the Joint Expedition of the British School of Archaeology in Jerusalem and the American School of Prehistoric Research during 1929-34. The Expedition was directed by D. A. E. Garrod. The discovery was made in the floor of the Tabun Cave which disclosed a number of archaeological layers. The associated fauna includes hippopotamus, wild bear, wild ox, gazelle, rhinoceros, etc.

The geological age, according to Garrod and Bate, belonged to the latter part of the Third Interglacial (Riss-Wurm). The faunal break here indicated the onset of the Wurm glaciation. In 1963, Vogel and Waterbolk have suggested a radio carbon date of 40,000 years B.P. $\pm 1,000$ years for the hominid layer in Tabun Cave.

The cranium of Tabun Woman (Tabun I) was fragmentary and it was carefully restored. The cranium is small and low-vaulted having a pronounced continuous orbital torus. There is no lambdoid flattening, no occipital bun. The orbits are rounded, the face is long but without any prognathism. The nose exhibits prominent development and the chin is retreating. The mastoid



Fig. 15.7 : Skull of Tabun Woman Found from the Cave of et. Tabun

processes are small. The tooth line creates an angle to the eye-ear plane and the mouth opened somewhat downward. The mandible is stout in formation. It is provided with broad rami and widely separated condyles.

The teeth are of moderate size with characteristically thick incisors. The dentition of the Tabun I is complete but the upper right third molar is lacking. The incisors are worn out; lingual tubercles are seen on both incisors and canines. The first two molars are provided with four-cusped square crowns with prominent oblique ridges. The third molars are triangular.

The maximum length and breadth of the skull are 183.0 mm. and 141.0 mm. respectively. The skull is mesocranial having a cranial index 70.0; the cranial capacity is estimated at about 1,270 c.c. Tabun I was a short statured woman, and she was about 154 cm. (5 feet) tall.

The Tabun II male mandible is large, deep and squarish looking. The ascending rami are seen to spread far apart for accommodating a broad cranial base. The mandible is provided with worn-out teeth. The lingual tubercles are less developed in comparison to those in the Tabun I. Excepting the left lateral incisor all the teeth are present, in this mandible, in a good condition. In it the molars indicate *Dryopithecinae* cusp pattern. In crown morphology so far as the lower teeth are concerned, the Tabun II goes in line with Tabun I.

The postcranial bones of Tabun I are short but robust and to some extent, bowed. The vertebrae are short-bodied, ribs are deeply curved and the sternum is long. The scapulae resemble those of La Chapelle-aux-Saints. The pelvic girdle is low and narrow. The pubic rami are flattened.

The humerus is not stout but its head is directed upward, to some extent, as is seen in the Western Neanderthals. The radius and ulna are widely separated due to bowing. The tibia is short and thick and the fibula is rounded in section which resembles the La Chapelle-aux-Saints. The foot is as long as that of the modern European Women, but it is, to some extent, broader. The big toe is short.

PHYLOGENETIC POSITION

The Tabun I skeleton shows such features that are in close relation to the Third Interglacial European women who could acquire some of the Western Neanderthal specialization. It may be the fact that she might be a Neanderthal characterised by the loss of some specializations in consequence of mixture. This

Tabun I woman shows similarities of features with those of the Asiatic Neanderthal people.

The Skhul Remains

The Skhul Cave site presents ten different fossil remains which fall in two groups. These are numbered Skhul Skulls 1 to 10. No. 4 skull is the best preserved in the first group, and Nos. 2, 7 and 9 are fragmentary but they show resemblance to the group concerned. In this four skulls a blending of Neanderthal and modern Caucasoid features are noticed. In the second group, Skull No. 5 is the best preserved specimen.

Skull No. 4 belonged to male about 45 years of age. This skull is mostly preserved but the region around glabella and nasion is lacking. The skull is large with a cranial capacity of 1,554 c.c. It is long and low-vaulted. The brow ridge of the skull is thick and wide. In this aspect it is in line with the La Chapelle-aux-Saints. The face is long and the mandible is wide. The palate is deep. The chin is well developed. The occiput of the skull is rounded and not bun-shaped.

Skull No. 5 belonged to a male about 35 years of age. This skull is large and its cranial capacity is 1,518 c.c. The brow ridges are heavy but not so as are seen in the conservative Neanderthals. When it is seen from above the brow ridge looks nearly like a straight bar in place of bow-curved feature as is seen in Neanderthals and Skull No. 4. The orbits are low and square. The skull is marked by prominent parietal bosses. The upper jaw is prognathic subnasally. The forehead is moderately straight.

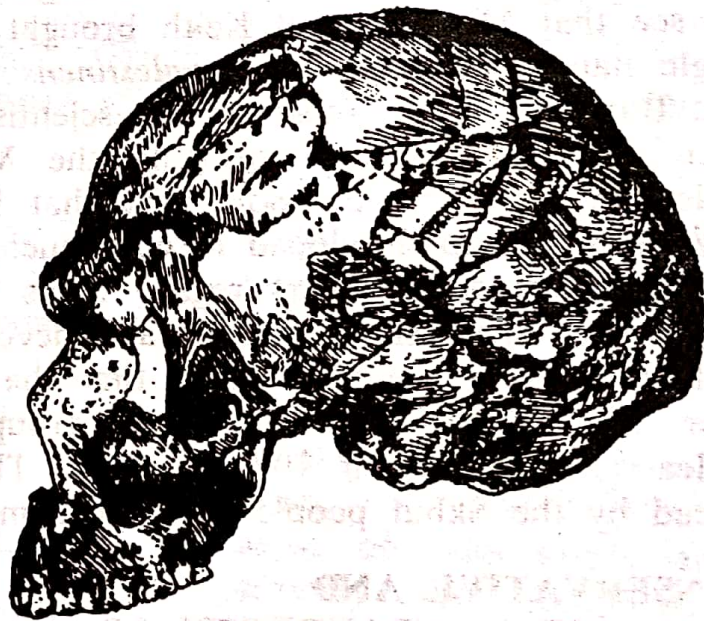


Fig. 15.8 : Skull of Skhul 5 Found from the Cave of es-Skhul

The Skhul teeth resemble those of Tabun and these are characterized by less shovelling and ridging. The postcranial bones of the Skhul Cave show similarity with those of modern man and at the same time these show some trends towards Tabun Skeleton. The vertebrae, all belong to Skull Nos. 4 and 5, are small. In both

these finds the scapulae are small which indicates narrow shoulder. Along the auxiliary margin a lipped groove is noticed which has been noted by Boule in La Chapelle-aux-Saints specimen. The clavicle looks like that of modern man. The humerus is long and slender; it is provided with small olecranon fossae. In proportion to the humerus, the radius and ulna are long. The femur is long and straight, but it is bowed in the female skeleton of Skull No. 9. The tibia is also long. The foot bones of Skull No. 4 are long and slender and in No. 7 these are smaller.

It has been stated by the scientists after authoritative study on Skhul remains that Skull Nos. 4 and 5 show more or less similar features down their neck regions. But Skull No. 4 was stockier and, in his two features like a large lower rib cage and a low femoral neck-to-shaft angle, this specimen comes closer to Neanderthals. Skull No. 5 shows more Negroid or Australoid feature than Skull No. 4, whereas the female Skull No. 7 exhibits a number of Neanderthaloid characters in her widely bowed radius and ulna round-sectioned tibia and Tabun-like foot.

The Tabun and the Skhul remains indicate two specific groups of population. The Tabun specimens indicate conservative Neanderthaloid features and the Skhul remains exhibit Homo sapiens features to a great extent. Formerly, some authorities liked to group these two specific remains under a single population group. Thus, we see that McCown and Keith brought these specimens under a single name *Palaeoanthropus palestinensis*.

But now-a-days most of the scientists are in great disagreement with this view of bringing the Mount Carmel population under the same group. Some say that Mount Carmel population is a hybrid group developed in consequence of meeting of different groups of people. Others regard it as a transitional group that has evolved from Homo erectus and developed into Homo sapiens. A few of them are of opinion that the Skhul population was a later development than the Tabun group of people. There was at least a time gap of 10,000 years. The Tabun people was replaced by the Skhul people with more modernized characteristics.

CONSERVATIVE AND

FIRST MODERN HUMAN FORMS

The emergence of modern human forms, in the proper sense of the term, is marked by the discovery of Cro-Magnon man in the Dordogne region of France, twelve years later than the discovery of the Neanderthal man at Neander Valley in Germany. It is a prominent landmark in the history of human evolution. The Cro-Magnon man established the specific phase of humanity by virtue of its advanced biological traits as well as varied cultural achievements. The modern human forms as exemplified by Cro-Magnon men differentiated themselves from the archaic human types by their more higher skulls and having rounded foreheads with non-prominent brow ridges. They had small faces, jaws and chins, and the teeth were, on the average, smaller.

Homo sapiens sapiens may have evolved from early Homo sapiens and ultimately they trace their descent from Homo erectus. This particular pattern of development took place by phyletic change and by hybridization from earlier populations having consi-

derable variations. Variations in skull caps are the specific features of these modern sapiens, and these are well documented in the caves of Mount Carmel and also by the remains from the Niah Cave in Borneo which has been dated to 40,000 B.C.

THE CRO-MAGNON MAN

The name has been derived from the village Cro-Magnon in the Dordogne region of Southern France where, in the year 1868, a few workmen of the Railway unearthed the remains of five human skeletons associated with dressed flints and great quantities of sea-shells. On getting the information M. Louis Lartet, a renowned Geologist, went to the said site and continued the excavation work scientifically. Those skeletons were studied first by Broca and Pruner-Bey, and later by Dr. Quatrefages and Hamy who named these as Cro-Magnon Race. After this, various discoveries were also made at different regions of Europe.

The geological age of these fossil finds is late Pleistocene period and later than the Grimaldi Negroids. The associated implements are those that have flourished in the Aurignacian stage of the Upper Palaeolithic period. The implements are characterised by better finish and wonderful drawings. Different excellent artistic activities, such as, cave paintings, stone and ivory statuettes are also the characteristic feature of this period.

While discussing the characteristic physical features of the Cro-Magnon race, we should take up the 'Old Man of Cro-Magnon', which is the typical skeleton of this group.

The Skull

The skull is large. The length and breadth of the skull are 203 mm. and 150 mm. respectively. The vault is low. The cranial index is 73.7, and it is dolichocranial. The whole brain-box exhibits a pentagonal contour when seen from above. It has resulted due to the marked projection of the parietal bosses. The forehead is vertical and wide. The occiput is bulging.

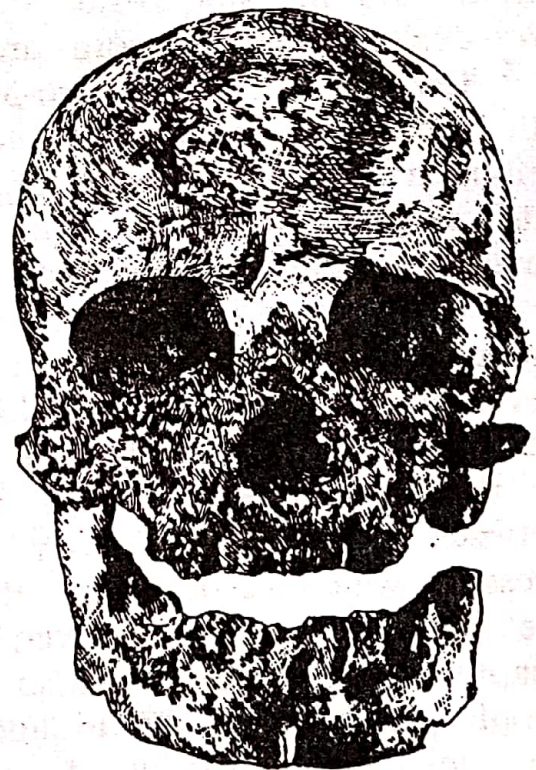


Fig. 16.3 : Skull of the Old Man of Cro-Magnon with Well-developed Chin and High Forehead

Supra-orbital ridges are low

The face is flat and very broad. Thus, here we see that the long and narrow head is associated with the broad and short face—a *disharmonic* type. The orbits are wide and rectangular in form. The cheek bones are strong and prominent. The nose is narrow and long. The nasal bones are high. The upper maxillary shows a somewhat marked prognathism. The roof of the palate is narrow and shallow.

The lower jaw is strong; the ramus is not wide and the sigmoid notch is of fair depth. The chin is prominent and there is a well-marked mental eminence. The teeth are large.

The Long Bones, etc.

The long bones suggest a great height which is 5 ft. 11.6 inches for males (according to Boule). The muscle imprints are strongly marked on the surface of the bones. The leg and the forearm are long in comparison to the thigh and the upper arm respectively. Some suggest that it shows a Negroid feature in limb proportion. In the femur the *linea aspera* is well-developed and it forms a prominent column. The most characteristic features of the Cro-Magnon limb bones are flattening of the thigh bones, called *platymeria*, and the side-to-side flattening of the shin bones known as *platycnemia*. The femora are strongly bowed.

On the whole, the Cro-Magnon people were characterised by tall and robust bodies with long arms and shins. The head was provided with a massive braincase, with moderate brow ridges and elevated forehead. The high and narrow nose and well-developed chin gave the face of Cro-Magnon a beautiful look.

With the Cro-Magnons we reach the closing phase of the Palaeolithic period. There developed a close interrelation between developing culture and developing human forms. The impact of culture on human biology seems to have been very much effective in the life-patterns of this population group. The interactions between culture and biology brought forward a sort of selective pressure which favoured a better brain which, in turn, resulted in the possibilities of improved cultural adaptation. This cultural adaptation came to the direct help in the better survival of these people and also in the broader expansion of human populations. The cultural adaptation of the Cro-Magnon people became very much specialized and by dint of which they could adjust with the varieties of environmental conditions. Their invention of various tool making techniques to devise new tool technology of varied patterns instead of former all-purpose tools helped them directly to cope with the new surroundings during their exploration of the so far uninhabited areas of the earth.

Phylogenetic Position

The Cro-Magnon men did not die out in France with the end of the Quaternary Period and they continued to survive upto the present day through the Neolithic period. According to Dr. Collignon the descendants of Cro-Magnon still survive today in various parts of France. Quatrefages and Hamy also have observed the existence of the Cro-Magnon descendants in Dalecarlia, Southern Sweden, who, form a special group known as 'Dal Race'. This type has also been found in the different parts of Germany, viz., Westphalia and Lower Hessen. In various physical characters these people resemble the Cro-Magnon race.

Broca has also observed the Cro-Magnon characteristics among the Basques, the Kabyles and the Guanchos. Quatrefages and Hamy, and later on, Verneau, have declared that among the Guanchos of the Canary Islands, the Cro-Magnon characteristics are well preserved. Verneau has also seen the cultural parallels between the Cro-Magnons and the Canary Islanders. But Prof. Hooton has strongly opposed this view. According to him, the common cultural traits of the Cro-Magnon and the Canary Islanders are very few so to speak. The latter possess a stone industry far inferior to that of the Mousterians. The cranial disharmony—a characteristic feature of the Cro-Magnon—may be seen in many peoples all over the world. Lastly, Hooton has remarked that it is unwise to derive the Canary Islanders from the Cro-Magnon stem. He has also objected to the term *Cro-Magnon race*, because it has been seen that some of the Cro-Magnon specimens are of gigantic stature, whereas some show medium or short stature. Some are dolichocephal, and others are mesocephal and brachycephal also. These variations in physical features oppose strongly in establishing the Cro-Magnon race; as race means a group of people having some identical physical characters that are inherited from its common ancestors. On this ground, Hooton disagrees to the use of the term Cro-Magnon race.

Recently E. Fisher, with the help of Dr. D. J. Wolfel, has studied the relationship between the Cro-Magnon people of the Canary Islanders and has remarked that there is a clear evidence of the survival of the Cro-Magnon stock as a definite type. His experiments are based on various anatomical and genetical factors. As a result of comparative anthropometric studies based on twenty-seven skulls belonging to the Palaeolithic Europeans, G. M. Morant has come to the conclusion that these skulls resemble the modern dolichocephalic races of Western Europe and there is no doubt that the latter population are the descendants of the earlier.

Reference: R. M. Sankar