

## The excavation of Qafzeh Its contribution to knowledge of the Mousterian in the Levant

The excavation of the Qafzeh cave by René Neuville, while he was serving as the French Consul General in Jerusalem, began in earnest in 1934, after a test excavation conducted the year before revealed the extent of the importance of this site. For those who are familiar with Qafzeh as it stands now, it should be pointed out that when R. Neuville began his studies, sediment and Barbary figs almost completely concealed the entrance to the cave, which could not be entered standing up.

The cave opens onto the right wall of the Wadi el Hadj, or the Pilgrim's Wadi, in the flank of Precipice Mountain, so named because a legend, dating back at least to Crusader times, claims that the inhabitants of Nazareth led Jesus to the top of this hill to hurl him over the edge. This spot was known in the Middle Ages as the "Lord's leap". Indeed near the top of the hill there is a steep slope that forms a cliff. It is possible that this legendary tradition goes even further back since, on the other side of the wadi, and at the tip, traces can still be seen of a Byzantine structure which dominates the Esdremon plain. Today only the stones of a basement and two large cisterns dug into the rock remain. Records from the 1930s mention an altar also dug into the rock. Opposite the cave there was believed to be a church, built it is said by St. Helen.

The Byzantine presence on the site is attested in the cave itself by a paved floor which we have partially excavated and by the remains of a foundation wall which apparently closed off the passage to a second chamber. One of the blocs bears a Byzantine cross in relief.

The name was initially spelled Kafzeh, probably because the first news about the discoveries, published without the authorization of R. Neuville, was in German. The correct transcription is Qafzeh, or Qafzah, which means 'precipice'.

The location has thus been the focus of continuous religious attention and I was told that priests, after finding knapped flints, informed R. Neuville about the site. Note that France at that time was the official protector of the holy places and that the French consulate in Jerusalem maintained close ties with most of the religious establishments in Nazareth.

In 1934, R. Neuville was able to devote full attention to his excavations, thanks to a grant awarded by the *Institut de paléontologie humaine* de Paris, and the Prince Albert of Monaco Foundation. These excavations were conducted jointly with M. Stekelis, the future professor of prehistory at the Hebrew University of Jerusalem. They resulted in particular in the discovery of the remains of 5 individuals in the Mousterian levels, which was then called the Levallois-Mousterian.

Unfortunately, R. Neuville's diplomatic duties left him scant leisure to devote himself to Prehistory. He nevertheless succeeded in publishing his book on *Le paléolithique et le*

*mésolithique du désert de Judée* (Neuvville, 1951) in which he presented the stratigraphy of Qafzeh. The war prevented him from continuing his work, and when he returned to Jerusalem as the French Consul General, problems related to the founding of the State of Israel took up all of his time. He however remained in close touch with researchers from the Hebrew University of Jerusalem. Unfortunately, his untimely death left his publishing project on Qafzeh unfinished.

Affairs then remained as they had been left. The human remains were kept at the *Institut de paléontologie humaine* (IPH) de Paris, under the care of H.V. Vallois who had replaced M. Boule, and most of Neuvville's lithic series were kept at the Rockefeller Museum in Jerusalem.

Those who had the opportunity to see the human remains at the IPH were struck by the differences between them and the Neanderthals that are typically found in the Mousterian levels. However, the first person to link them both to the human remains exhumed in the Skhul cave by D. Garrod and the Cro-Magnons of the European Upper Paleolithic was F. Clark Howell in 1959. Nevertheless, his interpretation was hardly ever adopted, for three main reasons. The description of human bones was not published, and for this reason the necessary bases for interpretation were lacking. Secondly, some questioned the stratigraphy of the site. Finally, these remains were not dated, which left open the possibility of contradictory interpretations.

The situation began to change as of 1963 thanks to one encounter and two people. The encounter crossed the paths of J. Piveteau, then member of the Academy of Sciences, and Professor of Vertebrate Paleontology and Human Paleontology at the University of Paris 6, and the Israeli Ambassador in France, who suggested to him to send one of his students to work in Israel. The two people were J. Piveteau and J. Perrot. Both were in favor of a plan to conduct new excavations at Qafzeh and placed at my disposal all the means they had available to enable me to carry out this new program in optimal conditions. Without them, nothing could have been done. In particular, if J. Perrot had not availed me of the equipment and the assistance of technicians working with him, as well as his complete knowledge of Israel and the prehistory of this country, the Qafzeh excavation would certainly not have proceeded as it did. It is obvious as well that without the authorization of the Antiquities Department and the assistance of my Israeli colleagues the program could not have begun or expanded. I should also mention here in particular O. Bar Yosef who agreed, as of the first years to take on the direction of the studies with me, and his role both in the field and as regards laboratory research and publications was decisive.

The excavation began in July 1965 and ended in the summer of 1979. I will not retrace the history of these 15 years of excavations. I would simply like to stress what I believe to be the three main findings that we made and which have contributed to the prehistory of the Levant.

The first finding is anthropological. We were lucky enough to discover, as of 1965, new human remains in the Mousterian levels and were able to establish the necessary correlations between our stratigraphy and that of R. Neuvville, thanks to the presence on the site of M. Stekelis and L. Picard who were very familiar with his work. In 1965 and 1966, only fragmentary remains of a skeleton were exhumed, which had been practically entirely destroyed by water circulating in the layers at the end of the Mousterian. However in 1967 two almost complete skeletons were discovered - an adult and a child. It

was clear from the outset that we were dealing with individuals with modern morphologies. At that time, the dogma that the entire Mousterian was solely the work of Neanderthals was still adhered to by virtually all researchers. The announcement of the discovery of a modern man in the Mousterian environment was thus welcomed in diverse fashions, even though the idea was already being circulated. Some questioned the stratigraphy. Couldn't it have been possible that it was a grave dug from a more recent level into the Mousterian levels? However the depth of the grave in the Mousterian of the site and the fact that the Mousterian layers were 'sealed' at the end of this period by intense breaching (bréchification) proved that this could not have been the case. Others, like C. Arambourg, in an interview in *Le Monde*, argued that it was a hasty interpretation and that a detailed study would show that these fossils belonged to the Neanderthal line. However, this study and the numerous discoveries which followed only reinforced this first interpretation. For the first time at Qafzeh it was clearly proven that the Mousterian was the work of both Neanderthal and Modern man, at least in the Levant (Vandermeersch, 1981). This on the one hand forced researchers to reconsider the possible ties between these two groups, a problem that to this day has not received a satisfactory explanation. Second, the relationship between one human genus and another and between cultures, the relationships between the biological and the cultural had to be viewed in a different way. The problem of a possible correlation between 'levels' of biological development of taxons who preceded us and their degree of cultural 'maturation' is a recurrent one in all research in prehistory and anthropology. Without entering into current debate on this issue, it is worth pointing out that the Qafzeh discoveries showed that these correlations no longer hold when dealing with the relationships between Neanderthal and Modern man.

One problem however remained unresolved, that of the age of these fossil men with modern morphologies. Two totally incompatible explanations were put forward. Some researchers argued that the Qafzeh Mousterian occurred late (Jelinek, 1982), more recently than the one in Europe. Thus there would have been a disparity in cultural evolution between Europe and the Near East, with the latter region 'leading'. The Qafzeh men (and those of Skhul, associated with them) would have been more or less contemporary with the CroMagnons to whom they resembled as regards several features. The discontinuity was cultural. Others argued on the contrary that the Mousterian industries in both regions were contemporary and, on the contrary, the Qafzeh men were older, 'ahead', of the CroMagnon of Europe. These two hypotheses were totally irreconcilable, and in the absence of C-14 datings, all the arguments put forward for one thesis or the other were subject to debate.

It should however be pointed out that as early as 1972, G. Haas, in a study of the micro fauna of Qafzeh, showed that the site was older than the Mousterian micro fauna at Tabun, which could be interpreted as support for the relatively greater antiquity of the deposits in Qafzeh. Earlier, when L. Picard came to visit the site, he discussed stratigraphy extensively and had very explicitly mentioned that he felt that the Mousterian deposits at Qafzeh were among the oldest.

When the first conference on the Prehistory of Levant was held in 1980 in Lyon, O. Bar Yosef and I brought together all the information on the stratigraphy, the paleontology and the archeology of the Mousterian at Qafzeh, and we reached the conclusion that these levels were very archaic. We even estimated the age to be about

100,000 years. This presentation got a lukewarm reception, so tenacious was the idea that the modern men of the near east were too similar to the European CroMagnons to have been separated from them in time.

It was at the end of the 70s and the beginning of the 80s that methods of radioactive dating were developed that could be applied to the Qafzeh deposits. Thermoluminescence (TL) was the first method applied, by H. Valladas, from the Laboratoire des faibles radioactivités in Gif-sur-Yvette. A series of burned flints, from several Mousterian levels representative of most of the deposits of this period were analyzed. The findings, published in 1988 in *Nature* yielded an age of 92,000 +/- 5,000 years (Valladas et al, 1988). These findings gave rise to a spurt of commentaries and were reported in a large number of journals and magazines, both scientific and for the general public. Very quickly, ESR datings confirmed this extreme antiquity (Schwartz et al, 1988). It was the first time that the extreme antiquity of a modern population had been clearly demonstrated.

It should also be stressed that there was not only one dating, but rather a series, and that the results were perfectly coherent with those obtained by 'traditional' methods of comparative stratigraphy and paleontology. Nothing, in all the works carried out on the Qafzeh site, has contradicted these findings. Currently, the individuals with their modern morphology at this site are clearly among all the archaic fossils of this type, those which are the best defined anthropologically, thanks to their number and their state of preservation, and the best dated, thanks to the multiplicity of methods used and the coherency of the results.

Soon afterwards, the ESR method was used on mammal teeth from old excavations in the Skhul cave (Stringer *et al*, 1989). The findings indicated an age of 100,000 years roughly for the series of modern men on this site, confirming both the importance of this group and its date.

The confirmation of the age of modern men in the Levant prompted me to drop the term "proto-Cro-Magnon" which had been applied to them and which implies close kinship. Whereas the morphological resemblance with European fossils is considerable, the distance of 4,000 km and the 70,000 years separating the two groups makes direct lineage improbable and for the time being we have no geographical or chronological intermediary.

The Qafzeh findings, and the dates, played a decisive role in the now unanimously accepted view of the age of our subspecies. They broke with the idea of a Neanderthal-Mousterian-Modern Man-Upper Paleolithic succession, and replaced it with a more complex schema involving both partial overlap in time of the two groups, the absence of phylogenetic relationships between them, and a lack of relationship between their physical features (biological) and their techno-cultural abilities. The latter point is extremely important since up to then, many people defended the idea that if the Neanderthals had disappeared it was because they were somehow 'inferior' to modern men.

Another area in which the Qafzeh site played a major role was that of burial practices. Most of the Mousterian graves were excavated in the early part of the twentieth century and the data made available concerning them was both succinct and imprecise. We were lucky enough to excavate two exceptional Mousterian graves. The first, found in 1969, was a double grave, containing the skeleton of an adult, probably a young woman, and

the skeleton of a young child. This is the only double grave discovered for this period. Unfortunately we have not been able to show any familial connection between these two individuals. The second, found in 1971, is the grave of an adolescent buried in a pit dug in the bed rock. The skeleton was lying on his back, with the legs bent to the side, and both hands placed on either side of the neck, and in his hands, the Mousterians had placed the antlers of a large deer. It is clearly the most significant grave with intentional deposits of all the middle Paleolithic (Bar Yosef and Vandermeersch, 1991).

There are other areas in which the contribution of the Qafzeh excavations has been of great importance. It is impossible to cite them all, but I would however like to mention the discovery, unique in a middle Paleolithic site, of a small series of pierced sea shells. These artifacts are currently being studied.

However the abundance of data collected and the importance of the changes in our views have prompted other questions. Without mentioning them all, these include the problem of relationships, in the Levant, between Neanderthal and Modern man, the problem of the origin and the evolution of the Mousterian, modes of emergence of the upper Paleolithic and the vanishing of the Neanderthals. To attempt to respond to these questions, O. Bar Yosef, L. Meignen and I launched a research program on the 'evolution of groups and cultures in the Levant, from the end of the lower Paleolithic to the start of the upper Paleolithic'. This program involved numerous French and Israeli researchers and those from other countries. The fieldwork phase ended in 2000 after the excavation of the Kebara and Hayonim sites. A recapitulatory volume has already appeared and other books are in progress.

All this could only have been achieved through constant backing from the French Ministry of Foreign Affairs, the CNRS, the NSF and the Hebrew University of Jerusalem and Tel Aviv and Haifa Universities. The findings that I briefly presented above could never have been conducted without the steadfast friendship of our Israeli prehistory and anthropology colleagues. I take this opportunity to express my gratitude to them.

#### Bibliography

Bar Yosef, O et Vandermeersch, B., 1981, "Note concerning the possible age of the Mousterian layers in Qafzeh cave", in: J. Cauvin et P. Sanlaville (eds.): *Préhistoire du Levant*. Paris, C.N.R.S., 281-285.

Bar Yosef, O et Vandermeersch, B., 1991, "Premiers hommes modernes et Néandertaliens au Proche-Orient : chronologie et culture", in: J.J. Hublin et A.M. Tillier (eds.): *Aux origines d'Homo sapiens*, Paris, P.U.F., 217-250.

Clark Howell, F., 1959, "Upper Pleistocene Stratigraphy and early man in the Levant", *Proceedings of the American Philosophical Society*, 103, 1, 1-65.

Haas, G., 1972, "The Microfauna of Djebel Qafze Cave", *Palaeovertebrata*, 5, 5, 261-270.

Jelinek, A., 1982, "The Tabun cave and the Palaeolithic man in the Levant", *Science*, vol. 216, 4553, 1369-1375.

Neuville, R., 1951, *Le Paléolithique et le Mésolithique dans le désert de Judée.*, Arch. de l'Inst. de Paléont. Hum., Paris, Masson, 270.

*The excavation of Qafzeh*

---

Schwarcz H., Grün R., Vandermeersch B., Bar Yosef O., Valladas H., Tchernov E. 1988. "ESR dates for the hominid burial site of Qafzeh in Israel." *Journal of Human Evolution*, 17, 8, 733-738.

Stringer C. B., Grün R., Schwarcz H., Goldberg P., 1989, "ESR dates for hominid burial site of Es Skhul in Israel", *Nature*, 756-757.

Valladas H., Reyss J.L., Joron J.L., Valladas G., Bar Yosef O., Vandermeersch B., 1988, "Thermoluminescence dates for the Mousterian Proto-Cro-Magnons from Qafzeh Cave (Israel)", *Nature*, 331, 614-616.

Vandermeersch, B, 1981, *Les Hommes Fossiles de Qafzeh (Israël)*. Paris, C.N.R.S., 319.

Bernard Vandermeersch  
Professeur, Université de Bordeaux