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The excavation of Gorham's cave and its relation to the prehistory of southern Spain

The excavation of Gorham's cave, though not yet completed, has thrown additional light not only on the prehistory of Gibraltar but to some extent on that of southern Spain.

Before the work at Gorham's began in 1948 (1) the only site in Gibraltar which had produced prehistoric implements *in situ* was the Devil's Tower Cave excavated in 1927-28 by Professor Garrod. This cave only contained one archaeological period, namely Mousterian, a rather rough industry made mostly of quartzite, and with few well made tools, but in addition the skull of a child of undoubted Neanderthal type. On faunal evidence this material was dated as late Mousterian, largely owing to the absence of the larger forms such as Elephant and Rhinoceros.

Gorham's cave which lies at the base of the cliffs on the eastern side of Gibraltar contains a deposit a little over 17 metres thick, composed almost entirely of wind blown sand. So far the excavations have only reached a depth of under 6 metres below the cave floor, but this has yielded material of considerable interest. The highest level contained pottery dating from Punic and Roman, with beads, scarabs, etc. Below this was a thin stalagmite floor with a few pieces of hand made incised pottery at the top.

(1) J. d'A. WAECHTER: "Excavations at Gorham's Cave, Gibraltar", Paper n.º 3 reprinted from the Proceedings of the Prehistoric Society for 1951.

No clear stratigraphical distinction was possible in this upper layer as it was to a large extent disturbed. The stalagmite floor extended over the whole excavated area and was fairly uniform in thickness. It is clear that during the formation of this floor, which must have taken a considerable time, the cave was not only unoccupied but little or no sand was being blown in from outside.

Underneath the stalagmite floor was a layer of yellow sand with traces of charcoal but no clearly defined hearths, and below this a dark sand with abundant hearth debris. Unfortunately the quantity of material from both these layers was small, but the broad character of the industries is clear. The upper yellow sand contains an industry of small end-scrapers and small backed blades; the bone tools are few and rather rough, but one single bevelled bone point bears a strong resemblance to those from Professor Pericot's excavations at Parpalló. The lower darker layer also contains a blade industry, but there is not enough material to draw a useful comparison with that above material, but what there was was similar in character to the material above, though there appears to be less microlithic. These upper industries are separated from the Mousterian by a thin sterile layer.

So far four Mousterian layers have been found, though only the upper has been excavated over a large area. This yielded a rough Mousterian industry similar to that from the Devil's Tower. The greater part of it is quartzite, though some of the better made pieces are made of chert or jasper: the number of finished implements was small and rough utilised flakes appear to have been the main tool. In this upper level there was a marked tendency towards rough blades and there were also a few simple burins.

The three Mousterian layers below this have so far only been found in small soundings, and there is insufficient material for comparison with the one above, but there does not seem to be any major difference between them. The faunal remains from all the layers was quite extensive, but it has not been studied in detail, though there does not appear to be any pachyderms.

The position of the cave in relation to the sea makes it possible to draw some conclusions as to chronology because of the effect of the fluctuating sea level on the formation of the cave deposit. It is obvious that the whole of the present deposit must ante-date the 8 metre Monasterian II beach of the last inter glacial, and

that any later rise in sea level would make it impossible to reach the cave, as well as stopping the accumulation of the wind-blown sand.

It was possible for Professor Zeuner of the Institute of Archaeology of London to visit the cave during the last week of the 1951 season and to obtain a series of full samples from all the layers then exposed. His examination of the samples suggests that there were two periods when the sea level was relatively high, one between the first two Mousterian layers, an one above the latest Mousterian layer. Until the entire section is exposed it is not possible to draw any definite chronological conclusions, but the whole deposit started forming during the Last Glaciation and that during this period there were fluctuations in sea level which probably accounts for the breaks in the archaeological sequence.

In evaluating the results so far obtained from this excavation it is obvious that comparisons must be made as far as possible with southern Spain. So far not a great deal of work has been done in Andalucia, but Pericot's excavations at Parpalló and Jordá's at Cova Negra are two obvious sites for comparison. There are certain features in the material from Cova Negra, particularly level B, which suggests that the upper Mousterian layer of Gorham's Cave and possibly the Devil's Tower belong to the same phase. It is not yet possible to compare the lower Mousterian from Gorham's Cave with Cova Negra C, D, and E as there is insufficient material.

The obvious comparison for the later layers is with Parpalló, though again the amount of material from Gibraltar is small. The single bevelled bone point is strikingly like those from Parpalló, though the Gibraltar specimen has no lines engraved on the base. The flint implements from the lower of these levels also bear a strong resemblance to the Magdelinian of Parpalló, but there were no drawings or paintings, but there were several flat stones stained with Haematite and in the same layer there were small pieces of graphite.

To attempt to fit the Gibraltar material in the general Spanish sequence is a little premature, but some tentative suggestions seem possible. It appears probable that the picture presented by the sites in eastern Spain may be well extend in broad outline to the south coast, certainly from the Mousterian onwards. If this proves to be the case then the establishment of a fixed chronology for the Gi-

braltar material, provided that this material can be linked typologically with Spain, will be of the greatest importance, particularly for relating eastern and southern Spain with the Franco-cantabrique region.

It would not be out of place here to consider the connections, if any, between Spain and North Africa during the period covered by the Gorham's cave deposits. In North Africa there appears to be both a Mousterian and a Levalloise, though in many cases they are obviously mixed. This duality appears to decrease as we proceed eastward along the African coast, the Levalloise element increasing and the Mousterian diminishing. It was for this reason that McBurney referred to his material from Cyrenaica as Levalloiso-Mousterian and Miss Caton-Thompson to drop the term Mousterian altogether for Kharga and Egypt. This suggests that the Mousterian of North Africa may well be due to influence from Spain.

It is extremely unfortunate that the excavations at Gorham's do not throw any light on the Aterian-Solutrian problems as no material of this period was found, the possible explanation being that the sea level was high at this time, though the negative evidence is insufficient, and a similar explanation might well be evoked for the absence of the earlier Upper Palaeolithic industries.

The relations between the Aterian and the Solutrian are still a matter of controversy, but it is not essential for there to have been contact between them to explain their similarity as the basic elements of the two industries are very dissimilar.

The development towards microlithic implements in the latest industry at Gorham's is interesting because it seems to follow the pattern for Eastern Spain, certainly there is no trace of Capsian influence either in Gibraltar or further north, and in both areas the Upper Palaeolithic appears to become microlithic without there being a break in the development.

The Mousterian from Gorham's ante-dates the last inter glacial and appears to survive through one change of sea level, which suggests that it continued into Wurm II, and may well have taken the place of the Chatelperron in this area. To attempt to fit the later material into the time scale is at present unwise, but a Wurm III date for the later material, based on the last sea level change, is very tempting.