Palaeolithic-Mesolithic Day Meeting, British Museum, 17th March 1995

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It is perhaps strange, given the scale of the periods they consider, and the relative imprecision of their dating methods, that speakers on Lower and Middle Palaeolithic topics should have so much better a sense of timing than those speaking on such relative blips in hominid chronology as the Upper Palaeolithic and Mesolithic. Nevertheless, the speakers at the morning session of the latest Palaeo-Meso Day Meeting, devoted to the earlier Palaeolithic, stuck to their tight schedule admirably, while the afternoon session, dealing with the later periods, saw several speakers overrun their allotted time, with others forced to cram fifteen minute talks into a breakneck five or less.

Kickoff speaker for the day, appropriately as he had organised the first ever Day Meeting (attendance eighteen) ten years ago, was Derek Roe. Much of Lower and Middle Palaeolithic research is concerned, above all, with determining whether those knobbly bits of rock got to be that way because someone intentionally created them, and Roe's paper, together with the following two (Carol White and Sabine Gaudzinski) suggested that in the Orce Basin, Andalucia, they did; at the Grotte du Vallonet, southern France, they didn't; and at the Kärlich site in the Rheinland, a few did, but somewhere else, and they had arrived at the site from varying places and at different times along with thousands of volcanic geofacts. Carol White's talk neatly demonstrated how simple observation of the local geology could provide a more parsimonious explanation than human modification for the origin of some stone 'tools'; while Sabine Gaudzinski's was an exemplary study of how the critical analysis of all elements of the assemblage, and not just the lithics, could contribute to an understanding of the latter. Derek Roe, whose work was carried out in collaboration with, among others, the Institute's Norah Moloney, showed us a wonderful example of how intrusions might cause difficulties for future archaeologists. Many modern houses in the Orce Basin are constructed by digging into the now-raised former lake sediments, enabling, as his slide showed, an *in situ* tusk to form a decorative feature in the loo of one such building! Perhaps of greater significance is the weight that the findings here of hominid material, dating to somewhere between 900,000 and 1.7 million years ago, add to that accumulating from other sites for a hominid presence in Europe before 500,000 years ago. Roe concluded his paper with speculation regarding the timing and nature of possible successive waves of movement 'out of Africa', and the implications for early arrivals in northern Europe. A mixture of typological cultures or traditions might be expected, deriving from the descendants of pre- and post-handaxe migrations. This speculation was a gauntlet to be taken up and shaken, if not mauled, later in the morning.

When early Palaeolithic archaeologists are not trying to determine whether their artefacts are, or are not, they are generally trying to determine why they are where they are, and when they got there. Thus the next three papers focused on stratigraphy and dating. David Bowen sung the praises of amino acid racemisation studies ('cheap, effective and ubiquitous'), and was later backed up by David Bridgland, who emphasised their importance for correlating the often patchy terrestrial record, such as that of Britain,

with the long and detailed dating sequences available from marine and ice deposits. Jim Rose described the discovery of the Bytham River, which drained Midland England for a considerable part of the Pleistocene, and suggested that many of the artefact-bearing gravels were 500,000 years old, and a few were as old as 800,000 years. The absence of any good explanation for the failure of Thames gravels to yield equivalent evidence brought Rose to his 'outrageous conclusion' that the floodplain and bank of the river may have been used for an extended period as the route for early, and perhaps the earliest, humans to colonise the British land area.

The third triumvirate of the morning lacked the common theme of the two previous trios, and can instead be linked under the heading of the 'Three Macs': two of whom are well known in Palaeolithic circles, and two who are familiar figures within the Institute's walls. The final talk of the morning ('Swan-song of a Handaxe-Hunter') was given by R.J. ('Mac') MacRae, whose achievements of 81 years included finding around 300 handaxes and 4000 flakes; and, together with Norah Moloney, putting quartzite tools in their proper place. Though he was cheered by the certainty that there were more handaxes still under the ground than had yet been taken from it, the fact that 90 per cent of gravels had been gobbled up by aggregates companies did not bode well for future research. Recently, having given in to the conclusion that there were 'fifty old bones to every artefact', and to the persuasions of Kate Scott, he had taken an interest in the Stanton Harcourt site, which had revealed an oxygen isotope stage 7 interglacial channel which had been hitherto unsuspected. Preservation of both fauna and flora at the site is excellent, revealing the presence of several warm climate indicators alongside the mammoths for which the site is well known. Alas, the site may disappear before long beneath landfill, unless, Mac suggested, the Time Team were to descend and discover an even longer leg bone than at Boxgrove.

The middle talk of this session was given by Frances McLaren (*not* known as Mac), who has been carrying out research, based in part at the Institute, on chemical signatures of various food plant remains. She discussed the application of these methods to charred *Prunus* endocarps from Mousterian levels at Douara Cave, Syria. Thousands of tiny fragments had been recovered from a section of hearth removed in its entirety for detailed analysis. Identifications made by the Institute's Gordon Hillman, based on morphology of the fragments, had suggested that they came from the complex group of species from which is derived the modern domestic plum - the *domestica-divaricata* complex. Infra-red analyses were able to narrow down the identification of the majority of the fragments to *P. divaricata*. The presence of so many small fragments of shell in the hearth, and the apparent absence of whole endocarps, suggested that the shells may have been smashed to obtain access to the oily kernels. Both fruit and kernel, however, contain at least low levels of toxic cyanogenic glycosides. If the cave occupants were routinely consuming *P. divaricata*, and their diet did not include adequate amounts of certain other foods, then either their food tolerances may have been significantly different from those of modern humans, or some form of detoxification must have been undertaken. Biochemical and ethnographic studies suggest a variety of possible means of detoxification, including dehydration, fermentation and the application of heat, raising intriguing questions about the technical capabilities of early hominids, and the antiquity of such techniques.

John ('Mac') McNabb, started this session, on a topic which will come as no surprise to those who know him - the question of the validity of the Clactonian as a

cultural and temporal entity. Until now the best evidence against McNabb's crusade against the Clactonian has been the Barnfield pit at Swanscombe, the contents of whose lowest layers appeared to be purely Clactonian with no trace of bifaces or waste derived from them. However, a re-examination of the data relating to Marston's excavations of the 1930s suggested that he had misinterpreted the nature of the deposits, inventing a channel through the gravels where one had never been, largely because of his own paradigmatic belief in a biface-less Clactonian. The channel, labelled by Mac 'a complete and utter myth', was a 'genuine and honest mistake' of misinterpretation, necessary to explain the presence of bifaces in the lowest gravels of the section. Examination of section drawings indicated no evidence of any features capable of eroding a channel, and historical researches had uncovered a letter which revealed that Marston himself had admitted that he had never seen any evidence of a channel. The inevitable conclusion was that, for the first time in over a century of research, Acheulean material could be demonstrated to be present in Clactonian gravels. This talk provoked considerable pre-lunch discussion, with Mac vigorously defending his attempt to demonstrate that a cultural agenda had got into the works. Despite much disagreement, the concluding statement of the morning, perhaps significantly, went to Mark Roberts (of the Field Unit, and Boxgrove fame), reading from an about-to-be published book, and advocating the abandonment of both the Acheulean and the Clactonian as culturally- and temporally-relevant terms. No doubt the debate continued as heatedly over lunch.

First talk of the afternoon was by Justin Morris, a third year undergraduate at the Institute, discussing his reanalysis, using up-to-date techniques, of quartz microliths from Sri Lanka. Their maximum dimension of 30mm and their transparency required their examination under microscopy with non-standard lighting. The peculiar difficulties presented by quartz both for knapping and analysis suggested the need for experimental work and the development of metrical methods of analysis, both of which are planned aspects of Morris' research. Statistical methods should be preferable to applying Eurocentric typological categories, and may enable the development of a universal descriptive system.

Steve Mithen next described a fortuitous find last September, as part of the Southern Hebrides Mesolithic Project, of a large feature 4m wide and 20-50cm deep, containing large quantities of charred hazel nutshells, as well as 'limpet hammers' (nutcrackers?), that may provide some of the best evidence yet recovered from the period of intensive plant-food processing. Although only coarsely wet-sieved samples have so far been examined flotation of much of the deposit is planned in the near future, and should reveal more.

Penny Spikins and Chantel Conneller described work at March Hill in the Pennines where GIS (Geographical Information Systems) modelling of site location has been successfully tested in the field. All finds have been plotted in three dimensions using satellite-based points, and a hearth has been removed in its entirety from one location for 'micro-excavation' enabling specialists not present on-site to work on the deposit *in situ*.

Martin Street described new findings in the Magdalenian of the Rhineland, where both new dates and his analysis of the fauna support a pre-Bølling rather than late Bølling occupation; while Ruth Charles discussed recent work in the Late Glacial of the Ardennes, where careful selection of faunal elements for a new dating program is beginning to clear up some of the anomalies of earlier work.

After a rather hurried tea Sabrina Dumont described the insights derived from

knapping experiments into lithics from Avington VI; while Roger Jacobi provided us with a lightning tour of Cresswellian find spots in Britain; and Nick Barton an even more rapid introduction to recent work undertaken by the Wye Valley Caves Project, in an area described as a 'Gruyere cheese full of caves'.

Though there was much of interest throughout the day, perhaps it is time for the organisers of these events to consider whether it is really possible to cram two million years plus into one meeting every year or so. This reviewer's concentration was certainly flagging by the end; and though some of the audience of around 175 certainly stayed for the whole day, their was a distinct demographic shift from a packed morning auditorium to a sparser afternoon audience - either reflecting a universal fascination with the vast stretches of early human history and its imponderables, or a great fondness of those who study it for long afternoon stretches in the pub.