## THE ACHEULIAN IN EAST ASIA: A CAUTIONARY NOTE

T.E.G. Reynolds, St Catharine's College, Cambridge.

Recent discoveries of handaxes in Korea (Bowen 1979; Hwang 1979) once again raise the question as to whether there was an "Acheulian" presence in East Asia. The Movius (1948) scheme has held firm for a very long time now, but it is perhaps too rigid a structure to be of current use. In this scheme, the Euro-African Acheulian was documented in Asia to as far east as India, and beyond this lay the exclusive realm of the chopper chopping-tool industries. There has been discussion as to why this should have occurred; explanations include the use of non-lithic raw materials for functions that were filled by the use of stone in the West (Solheim 1972), and the poor quality of available lithic material (Movius 1948).

However, previous discussions have overlooked one rather important point. The biface/handaxe is an arbitrary classificatory category and there exists a range of variability within it. Thus, bifaces which retain cortex on the butt and certain other handaxe forms may grade into chopping-tools. In addition, what appear to be soft hammer removals can often be produced by hard hammers too, so the form of scarring on a piece may not be diagnostic. There is, in fact, no hard and fast rule to determine which category is present, and the final decision will often depend upon the individual. If the Movius scheme is employed in an East Asian context it is likely that the individual will be biased towards a classification in favour of chopping-tools rather than biface/handaxes.

Another result of the Movius scheme has been to concentrate classificatory works towards the larger lithic elements. Whilst this was partly explicable as a result of preferential collection and selection by fieldworkers, a consideration of the processes involved in stone-working might have avoided this problem. It is quite possible that the choppers and chopping-tools collected are in fact cores, and that the 'business end' of the lithic assemblages lies in the small tools and flakes.

It is, however, always easy to criticise typological schemes, particularly when those schemes are dated. It should be remembered that the Movius scheme has been held valid for a considerable length of time and that it did recognise that East Asia was subject to a Palaeolithic history different from that of other regions. The scheme was developed to study an area that still remains very poorly explored and understood, that still has a paucity of well-excavated and published assemblages, and has only limited data concerning palaeoenvironments (Reynolds 1984).

Given all this, and its reliance upon selected material, the scheme made available on a broad scale the Palaeolithic record of East Asia in a form that was suited to general comparisons. Indeed, some recent works reviewing the Palaeolithic of part of the area can still only conclude that, in essence, the Movius scheme is out-dated (e.g. Yi and Clark 1983). No suitable replacement has yet been offered.

It is worth asking at this juncture, therefore, if a replacement is what is now required. The Movius scheme covers a vast geographical area including great ecological diversity and time-span. In addition, in being of wide coverage it masks regional diversity and specific adaptations, and encourages generalisations that are no closer in understanding the situation than the original scheme itself. When the scheme was originally proposed, broad typological comparison was an accepted means of coming to terms with the problems of inadequate dating and poor contextual data. However, a number of new methods of dating have subsequently been developed, and investigation of lithic assemblages need no longer concentrate on typology but can address questions of technology, function, spatial distribution and ecological context. In the Palaeolithic record so much information is already lost as a result of poor preservation and great age that to remain tied to a wide covering and general approach is to restrict artificially the potential of the archaeological record still further.

The behavioural studies of material linked to 'middle-range' theory (Binford 1977) form a very informative line of investigation, so far pursued only rarely in East Asia (an exception is Kobayashi 1975). Would it not, therefore, be of interest to concentrate some effort towards a development of more detailed, better documented local schemes that may be related to specific environmental variables? It is with this proposition in mind that the author now returns to the question of an East Asian Acheulian.

The term "Acheulian" was originally given to those assemblages from France that were amongst the first to be recognised as of great antiquity. It is now recognised by the presences of handaxes and backed knives, although the frequency of either can be extremely variable. In Europe very low percentages of these forms permit classification of an assemblage as Acheulian, but in Africa more than 40% of the total tool assemblage should be handaxes for such a classification (Stiles 1981). In terms of its spatial-chronological boundaries the Acheulian is a very widespread and persistant phenomenon. It is seen in Africa from the Southern Cape to the Mediterranean (although absent from the tropical rainforest and the Kalahari areas in typical form). In Europe, the Acheulian occurs as far north as Britain and Germany, and is also found in the Mediterranean littoral zone. The Near and Middle East have both yielded handaxe industries and so have parts of India.

In terms of chronology, the Acheulian appears in middle Bed II at Olduvai, estimated to be approximately 1.2 - 1.3 million years B.P. (Leakey 1975, 1979). Its first appearance in Europe is uncertain, but would seem to be post-700,000 B.P. Its latest dates concentrate in the Last Interglacial from a number of sites; however, as Bordes (1977) notes, a strict distinction between the Acheulian and some of the Middle Palaeolithic industries is not possible in Europe. It appears that there is a continuity in tradition and technology with a gradual trend towards greater concentration on flake tools. The Mousterian of Acheulian Tradition of southwest France is believed to be a late Mousterian industry (Mellars 1969) and retains both the index fossils of the Acheulian (Bordes 1961).

With such a distribution in time and space, the Acheulian becomes something of a problem. It is difficult to see it as a specific adaptation to given environmental stimuli, and it may represent a deliberately selected and generalised phenomenon designed to cope with a variety of situations, and sufficiently adaptable to deal with the environmental fluctuations that took place during its use. There have been a number of suggestions as to the functions of handaxes; these range from noting an association with non-animal food (Binford 1972:142), meat-knives and butchering tools (Keeley 1980), projectiles (O'Brien 1981), general purpose tools (Leakey 1979), and also use for scraping, cutting and chopping (Bordaz 1970). Certain associations between frequencies of handaxes and faunal remains have been noted (Binford 1972), as have relative frequencies of handaxes and small flake tools (Clark and Haynes 1970). It is extremely difficult to develop a relatively simple understanding of the Acheulian, and it is also difficult to envisage the Acheulian as a 'culture' representing people on the ground, maintaining communications and relations over such large distances.

Given that the Acheulian as an entity does actually exist, there also arises the problem of its relationship to other non-Acheulian industries. The debate in Britain on the relationship between the Clactonian and the Acheulian continues (Ohel 1977; Roe 1975, 1976; Wymer 1974), as does that on the relationship between the Developed Oldowan and the Acheulian in Africa (Binford 1972; Leakey 1979; Stiles 1981). Indeed, in the African case, the debate has further questioned the nature of the Acheulian, for it is not simply the presence of handaxes and backed knives that defines the industry, but the frequency and technology of these forms.

This brief review of the status of the Acheulian may be summed up thus; the labelling of an industry as Acheulian may simply be taken as another way of saying that the industry contains handaxes and/or backed knives. Without further contextual information the label says little, if anything, of either chronology or external relationships. It is time to move the theoretical stance of

Palaeolithic research away from labelling by type-fossils towards the study of more detailed patterning both within and between Acheulian assemblages. Further, with improved methodology one may now begin to attempt a functional and ecological understanding of these assemblages. A long time has passed since some of these ideas were originally proposed (Binford 1972), but as yet the literature still reflects a rather stagnant outlook.

The finding of handaxes in East Asia and the labelling of these finds as Acheulian will not add significantly to our knowledge. The East Asian industries are interesting their own right and context, and much would be lost were they to be subsumed within a greater Acheulian techno-complex. With Late Pleistocene edge-grinding in Japan (Blundell and Bleed 1974) and Australia (Mulvaney 1975), and dates of 20,000 years B.P. for handaxes without edge-grinding at Kokubudai in Japan, much information will clearly be yielded from a more locally-based research strategy. The author has aimed to promote a discussion of the methodological and theoretical bases for a more careful examination of the true utility of labelling and typological research.

## ACKNOWLEDGEMENT

Written whilst funded by a grant from the Science and Engineering Research Council,  $U_{\bullet}K_{\bullet}$ 

## REFERENCES

- Binford, L.R. 1972. Contemporary model building: paradigms and the current state of Palaeolithic research. In Models in Archaeology, (ed. D.L. Clarke) pp. 109-166. London: Methuen.
- Binford, L.R. 1977. For theory building in archaeology. London:
  Academic.
- Blundell, V.M. & Bleed, P. 1974. Ground-stone artifacts from Late Pleistocene and Early Holocene Japan. Archaeology and Physical Anthropology in Oceania. 9:120-133.
- Bordaz, J. 1970. Tools of the Old and New Stone Age. Newton Abbot: David and Charles.
- Bordes, F.H. 1961. <u>Typologie du Paléolithique ancien et moyen</u>. Bordeaux: Delmas.
- Bordes, F.H. 1977. Time and space limits of the Mousterian. In Stone tools as cultural markers, (ed. R.V.S. Wright) pp. 37-39. Canberra: Institute of Aboriginal Studies.

- Bowen, G. 1979. Report on stone tools from Chongok-ni. Chindan Hakbo. 46/47:48-55.
- Clark, J.D. & Haynes, C.V. 1970. An elephant butchery site at Mwanganda's village, Karonga, Malawi, and its relevance for Palaeolithic archaeology. World Archaeology. 1:390-411.
- Hwang, Y-H. 1979. Brief survey of newly discovered Jon'gok handaxe culture. Korea Journal. 19:35-40.
- Keeley, L.H. 1980. Experimental determination of stone tool uses. Chicago: Chicago University Press.
- Kobayashi, H. 1975. The experimental study of bipolar flakes. In Lithic technology; making and using stone tools, (ed. E. Swanson). pp. 115-127 The Hague: Mouton.
- Leakey, M.D. 1975. Cultural patterns in the Olduvai sequence. In After the Australopithecines, (eds. K.W. Butzer and G.L. Isaac). pp. 447-493. The Hague: Mouton.
- Leakey, M.D. 1979. Oldavai Gorge: my search for early man. London: Collins.
- Mellars, P.A. 1969. The chronology of Mousterian industries in the Perigord region. Proceedings of the Prehistoric Society.
- Movius, H.L. 1948. The Lower Palaeolithic cultures of Southern and Eastern Asia. Transactions of the American Philosophical 38:329-420.
- Mulvaney, D.J. 1975. The prehistory of Australia. Harmondsworth: Penguin (2nd edition).
- O'Brien, E.M. 1981. The projectile capabilities of an Acheulian handaxe from Olorgesailie. Current Anthropology. 22:76-79.
- Ohel, M.Y. 1979. The Clactonian: an independent complex or an integral part of the Acheulian? Current Anthropology. 20:685-726.
- Reynolds, T.E.G. 1984. Review of F. Ikawa Smith (ed.), Early
  Palaeolithic in South and East Asia. In Archaeological
  Reviews from Cambridge, Vol. 3.1.
- Roe, D.A. 1975. Some Hampshire and Dorset handaxes and the question of "Early Acheulian" in Britain. Proceedings of the Prehistoric Society. 42:1-8.

- Roe, D.A. 1976. Typology and the trouble with hand-axes. In Problems in social and economic archaeology, (eds.Sieveking, G.de G; Longworth, I. and Wilson K.) pp. 61-70. London:

  Duckworth.
- Solheim, W.G.II. 1972. An earlier agricultural revolution. Scientific American. 226:34-41.
- Stiles, D. 1981. On Developed Oldowan and the Acheulian: problems in lithic taxonomy. Current Anthropology. 22:185-188.
- Wymer, J.J. 1974. Clactonian and Acheulian industries in Britain: their chronology and significance. Proceedings of the Geologists Association. 85:391-421.
- Yi, S. and Clark, G.A. 1983. Observations on the Lower Palaeolithic of North-east Asia. Current Anthropology. 24:181-202.