



An Acheulian haematite pebble with striations

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During a recent visit of the Department of Archaeology at Deccan College, Pune (India), I studied a series of Palaeolithic art, or art-related, objects. Among them were some small nodules of iron minerals which I examined at the request of their excavator, K. Paddayya. They had been recovered from an in situ occupation deposit belonging to the Hunsgi site complex, located near Gulbarga, Karnataka, southern India.

The occurrence of ochre nodules in the Acheulian of Hunsgi was first reported by Sankalia (1976: 3-4). They are associated with a typical Acheulian stone tool industry. U/Th dates from the travertine deposit suggest an antiquity of about 200 000 to 300 000 years for the occupation.

One of the 'ochre' pebbles, measuring only about 20 mm and slightly tapered at one end, immediately caught my attention. It bears a 7 or 8 mm-long facet extending from the vaguely pointed end which is entirely covered by striations. The marks are just barely visible to the unaided eye, but under magnification they provide important information. They consist of several, less than 1 mm wide, 'bundles' or sets of very fine, irregularly spaced but perfectly parallel striations. The direction of these sets varies by a few degrees, but it is consistent overall.

The abrasion marks are clearly not recent. The entire specimen is enveloped in a cutaneous zone of alteration (presumably dehydration) which is considerably darker than the pebble's interior, and this skin covers the striations. Nevertheless, the marks are extraordinarily well preserved. Their distinct restriction to the one facet seems to rule out the possibility that they are the result of sedimentary movement in which clastics may have rubbed against the pebble. Moreover, the abrasion occurred in several successive episodes, evidenced by the slight variation in direction among individual sets, which renders a natural cause extremely unlikely. Striations have previously been observed on Acheulian ochre from Bečov, Czechoslovakia, by Marshack (1981).

The pebble consists of ferric oxide minerals among which haematite appears to dominate, but hydrohaematite and

anhydrous hydrated forms must also be present. Such pebbles occur naturally in many parts of India, and are especially conspicuous on deflated or eroded surfaces. Similarly, the Acheulian is well represented in this country (e.g. Cockburn 1888; Pant 1964; Singh 1965: 66-79; Sharma 1973; Sankalia 1974; Misra 1977), with tool types such as 'hand axes', cleavers, scrapers and large utilised flakes, which at the sites I have examined were most commonly made from coarse brown quartzites.

In view of the superb preservation state of the striations on the specimen introduced here I have suggested to Professor Paddayya that replication experiments would be most profitable. I consider it possible to determine the type of rock which caused the abrasions. Professor Paddayya has agreed to conduct such studies shortly, and will prepare a full report of this discovery for *RAR*. The dominant rock in the find area is granite, and if this stone's replicative striations were to match those on the Acheulian pebble, they would provide tentative evidence that the pebble was either rubbed on the rock surface, or that a granite slab was rubbed against it. The former interpretation is far more likely to be valid. In my view, such evidence would suggest that Acheulian people of India engaged in colouring or marking rock surfaces, using small haematite or 'ochre' pebbles in the fashion of crayons.

From the position of the striated facet, from the pebble's shape and from the oblique direction of the striations we can perhaps infer that the most likely direction in which it was moved over the surface being marked was from the upper left to the lower right. This movement is more comfortably made with the right arm rather than the left, which would suggest that the artist was right-handed. This speculation is of course based on the assumption that the pebble was held in the way it can be best gripped to produce the striations on it. Other deductions seem possible, for example the amount of use could be reconstructed from replicative experiments, providing us with an estimate of how many metres of line may have been drawn with the artefact. However, such details can only be examined in the course of an intensive study.

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Robert G. Bednarik, Editor

REFERENCES

- COCKBURN, J. 1888. On the Palaeolithic implements from the drift gravels of the Singrauli Basin, south Mirzapur. *Journal of the Royal Anthropological Institute* 17: 57-65.
- MARSHACK, A. 1981. On Paleolithic ochre and the early uses of color and symbol. *Current Anthropology* 22: 188-91.
- MISRA, V. D. 1977. *Some aspects of Indian archaeology*. Prabhat Prakashan, Allahabad.
- PANT, P. C. 1964. Some lithic tool industries of Banda. *Bharati* 7(1-2): 117-20.
- SANKALIA, H. D. 1974. *Prehistory and Protohistory of India and Pakistan*. Deccan College, Pune.
- SANKALIA, H. D. 1976. *Prehistoric art of India*. New Delhi.
- SHARMA, G. R. 1973. Stone Age of the Vindhya and the Ganga valley. In D. P. Agrawal and A. Ghosh (eds), *Radiocarbon and Indian archaeology*, pp. 110-6. Bombay.
- SINGH, R. 1965. Palaeolithic industries of northern Bundelkhand. Unpubl. Ph.D. thesis, Deccan College Library, Pune.

