ON SOME STONE IMPLEMENTS FROM HOSHANGABAD (CENTRAL PROVINCES)

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The stone implements, which form the subject of the present contribution, were collected by the author from the banks of the river Narbada and neighbouring ravines, near Hoshangabad in the Central Provinces. So far the implements collected from the Narbada Valley by various workers are mostly confined to collections made from certain areas round about Jubbulpore and the literature available is mostly a record of the find. The very first account of some discoveries of worked flints from near Jubbulpore was given by Evans¹ in 1853, followed by LeMesuriar,² Sweney,³ Carey,⁴ Blanford⁵ and Oakes.⁶ In the year 1873, Medlicott⁷ described a quartzite Celt found in situ by Hacket from Bhutra in the Narsingpur District in the Narbada Valley. This find is of exceptional importance as “Hacket himself dug it from where he found it lying flat and two-thirds buried, in a steep face of the stiff, reddish, mottled, unstratified clay about six feet above low water-level”⁸ and which is about the same horizon at which some of the implements, described here, have been found. Mention of some palæolithic and neolithic implements from near rock shelters about three miles from Hoshangabad town has also been made by Ghosh.⁹ The present contribution contains the description of four palæolithic and two neolithic stone implements, which are unquestionably of human manufacture and some of them have been found in situ in the same or about the same horizon in which the vertebrate fossils have been known to occur.

¹ Evans, 1853.
² LeMesuriar, 1861, pp. 81–85.
³ Swiney, 1869, pp. 17–18; 1865, pp. 77–79.
⁴ Carey, 1866, pp. 135–36.
⁵ Blanford, 1866, p. 230.
⁶ Oakes, 1869, pp. 51–53.
⁷ Medlicott, 1873, pp. 49–53.
⁸ Ibid., p. 49.
Some fossilised remains of vertebrate animals have also been collected by the author along with the implements and these have been handed over to Prof. D. K. Chakravarti of this University for study.

The area covered in collecting these implements is about 10 miles in length along the banks of the river Narbada running from about a mile to the east of Bandrabhan, a locality at the confluence of the Narbada with the Tawa, to about a mile to the west of the railway bridge over the Narbada near Hoshangabad town. Two other localities, a small sandstone hill containing some old red coloured paintings in the rock shelters, about 1½ miles to the south-east of the Hoshangabad town and a laterite quarry, at the village Tugaria about four miles to the south of the town, were also investigated but no implement was found.
The general stratigraphical succession of beds at the banks of the river in the area investigated is as follows in the descending order:—

<table>
<thead>
<tr>
<th>Beds</th>
<th>Approximate Thickness</th>
</tr>
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<tbody>
<tr>
<td>Regur</td>
<td>8 feet</td>
</tr>
<tr>
<td>Yellow alluvium</td>
<td>12 &quot;</td>
</tr>
<tr>
<td>Yellow alluvium with concretions</td>
<td>8 &quot;</td>
</tr>
<tr>
<td>Gravels at places containing boulders</td>
<td>5 &quot;</td>
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</tbody>
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The thickness of the various beds is not constant. The gravelly bed is conspicuous by constantly running along the banks forming a terrace. Due to the meanders of the river, this gravelly bed is, often, overlain and thus concealed by the recent deposits of sand. The yellow alluvium forms the thickest bed of the series. Just below Saddar Bazar in the Hoshangabad town all the beds are well exposed and attain a total thickness of about 35 to 40 feet.

As far the age of these deposits, the topmost bed is, no doubt, of recent time. The bottom bed (gravels) was considered, to be of Pliocene age by Falconer,\(^\text{10}\) while in the opinion of Medlicott\(^\text{11}\) "these old ossiferous alluvial deposits are not more ancient than the late Pleistocene". Both these views have been questioned by Das Gupta,\(^\text{12}\) who is of opinion that the Narbada ossiferous gravels are not older than middle Pleistocene.

The author takes this opportunity of conveying his grateful thanks to Mr. K. Sripada Rao, Central College, Bangalore, for lending his personal copies of the two papers of Prof. Sampat Iyengar. The author's sincere thanks are also due to Dr. Rajnath, Head of the Department of Geology, Benares Hindu University and to Prof. D. K. Chakravarti, of the same Department for facilities and help.

*Specimen No. N/19 (B. H. U.)*

Plate XIV, Fig. 1

The specimen is fashioned out of brownish looking fine-grained Vindhyan quartzite with a predominant yellowish tinge. It is almond shaped, mostly symmetrical, and has not been retouched. The 'surface d'accommodation' is like an inverted U, with diverging arms. The two points, at which these diverging arms end, mark the greatest width of the specimen. From beyond these two points, the specimen begins to narrow.

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\(^{10}\) Medlicott, 1873, Pt. 3, p. 49.

\(^{11}\) Ibid., p. 54.

\(^{12}\) Das Gupta, 1923, p. 22.
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down towards the 'surface d'utilisation', where it finally ends in a small semicircular edge about \( \frac{1}{2} \)" in width. A somewhat blunt edge all round the specimen forms the periphery which is undulating and contains a number of marks of chipping. One of the two main faces of the implement is made convex by three main bold strokes, the axis of convexity running along its greatest width. Two strokes, one on each side of the axis of convexity, have produced two surfaces. One of these two surfaces slopes towards the 'surface d'utilisation' and the other towards the 'surface d'accommodation'. The line along which these two surfaces meet forms a ridge which runs more or less along the greatest width of the specimen and coincides with the axis of convexity on this face. The third stroke not as bold as the other two is near about the middle of the right edge of the specimen and it has produced a third surface, small and triangular in shape, sloping towards the edge. This side shows some signs of retouching. The surface on the reverse side is also convex, but the axis of convexity here is along the length of the specimen and runs from the 'surface d'accommodation' to the 'surface d'utilisation'. From along this axis the specimen slopes mainly in two opposite directions towards the right and towards the left. Only one, roughly pentagonal surface, produced perhaps by only one bold stroke, forms the whole of the right-hand face. It is bounded by two edges and three ridges which are formed by conjunction of differently sloping surfaces. Two four-sided surfaces, comprise the left-hand face. These faces slope towards the edge from the main ridge. There is a small triangular area at the 'surface d'accommodation' bound by two ridges and one edge. The main ridge of the specimen coincides with the axis of the convexity and slightly bulges towards the left.

The specimen weighs 7 oz. Its greatest length from 'surface d'accommodation' to the 'surface d'utilisation' is 3.9", the greatest width 3.2" and the greatest thickness 1.05".

The specimen bears a very close resemblance, in practically all the details, to a boucher from the Cuddapah District of the Madras Presidency figured by Coggin Brown.\(^{13}\) It also resembles K. Sripada Rao's specimen No. Z 6/441.\(^{14}\) The only main point of difference between these two is that the present specimen is marked by the absence of notches, and this negatives the idea of the present specimen having ever been used with a handle. On the other hand, the smooth and convenient grasp at the 'surface d'accommodation' and its close resemblance to Coggin Brown's

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\(^{13}\) Coggin Brown, 1917, pl. I, fig. 1.

\(^{14}\) Sripada Rao, 1930, pl. VI, figs. 1, 2, 3.
boucher point strongly towards this specimen being designed for a hand-grasp, and used as a hand axe.

The specimen was found in situ and was extracted from the steep face on the left bank of the river Narbada near Hoshangabad. It was found embedded just below a gravelly bed containing vertebrate fossils, about 6 to 8 feet above the lowest water-level.

The bold and rough design of the implement and a smooth and comfortable hand-grasp indicate that the implement probably belongs to Chelean Culture, but appears to be more primitive either to Hacket's find\textsuperscript{15} or to that of Wynne.\textsuperscript{16}

\textit{Specimen No. N/20 (B. H. U.)}

Plate XIV, Fig. 2

The specimen is fashioned out of hard, compact, brownish looking ferruginous Vindhyan sandstone, which is found in abundance round about the locality where it was found. It is evidently an almond-shaped side-scraper with semicircular 'surface d'utilisation'. The 'surface d'accommodation' is thick and convenient for a hand-grasp. The bulb of percussion is well developed by a bold stroke at the 'surface d'accommodation' on one of the two main faces. Two deep scars or 'eraillures' can be very clearly seen on the bulb of percussion. One of these is along the edge of the 'surface d'accommodation' and the other one, which is slightly curved, is at right angles to the first. Excepting these two scars and the well-developed bulb of percussion, the specimen does not show any other major signs of chipping. Few small chips have been taken out along some portions of the 'surface d'utilisation'. The other corresponding opposite face of the specimen presents enough marks to show that the implement has been fashioned mostly on this side. This face shows three main surfaces sloping in different directions towards the edges from a common point. These faces have been produced in the attempt to get a sharp edge and convenient hand-grasp. The semicircular working edge shows all along a number of marks of chipping. On both the sides the specimen has a general slope from the 'surface d'accommodation' to the 'surface d'utilisation'.

The implement measures 3.75" along its greatest length and 3.0" along its greatest width. Its greatest thickness at the 'surface d'accommodation' is 0.75". The specimen weighs 4.7 oz. It bears a very close resemblance to one side-scraper from Pilt-down gravels so prominently figured by

\textsuperscript{15} Medlicott, 1873, p. 49.

\textsuperscript{16} Oldham, 1868, p. 65.
Boule, Osborn and Sollas. The specimen was found embedded, rather loosely, in a sort of boulder or gravelly bed which projects into the bed of the river near Hoshangabad town. The spot from where it was extracted lies about 6 to 8 feet above the low water-level of the river.

As for the age of the implement nothing very definite can be said as the specimen has not been found truly in situ. The fact that it is worked on one side only and that it is a side-scraper with a bulb of percussion which is a characteristic of the Mousterian industry, leads one to believe that the implement belongs to the Mousterian age. But the consideration that the implement was found embedded, though loosely, near about the same horizon as that of N/19, described in this paper, and which is of Chellean Culture, negatives the idea of its being of Mousterian age. The view that the implement belongs to Mousterian time further loses support when it is considered that “although flints worked on one side only were formerly regarded as characteristic of Mousterian civilisation, they are very often, sometimes to the exclusion of the other forms, found also in the Chellean,” and also that “the form of the chipped implements is not always a sure criterion of the particular cultural stage which is represented by it.” Therefore, the present author feels inclined to believe that the age of this implement is Chellean rather than Mousterian.

**Specimen No. N/21 (B. H. U.)**

Plate XV, Fig. 3

The specimen is made out of hard, fine-grained, compact, brownish looking dark Vindhyan sandstone. It is roughly almond-shaped, crudely fashioned and unretouched. One side the bulb of percussion is sufficiently well developed with shallow, thin, “eraillure”. The face containing the bulb of percussion, further shows a few other marks of chipping at the ‘surface d’accommodation’ as well as at the ‘surface d’utilisation’. These chips were evidently taken out in order to provide a comfortable hand-grasp and a sharp working edge. The opposite corresponding face shows one prominently triangular surface, and two other surfaces the boundaries of which are not clearly defined. The periphery is undulating and all along the edge marks of chippings are evident, but towards the working face they become more prominent.

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17 Boule, 1923, fig. 94.
18 Osborn, 1927, p. 127, fig. 60, 1 and 1 a.
19 Sollas, 1924, p. 191, fig. 81.
21 Das Gupta, 1923, p. 4.
The implement measures along its greatest length, from 'surface d'utilisation' to 'surface d'accommodation' 4·25" and 3·2" along its greatest width. It assumes greatest thickness of 1" at the bulb of percussion. The specimen weighs 7 oz.

In appearance and by the presence of the bulb of percussion the implement appears to be a side-scraper. But the edge just opposite to the bulb of percussion is very blunt and thick. This side is 0·5" thick and consequently does not provide in anyway, a working edge for the implement, so that it may be used as a side-scraper. The real 'surface d'utilisation' is provided by a a V-shaped edge. One arm of this V ends in the bulb of percussion and the other in the blunt edge, opposite to the bulb of percussion. The number of marks of chippings at this V edge proves that this obviously has been done only to provide a sharp working edge more convenient for chopping. This being the 'surface d'utilisation', the surface opposite to this automatically becomes the 'surface d'accommodation' and this provides a very convenient and comfortable hand-grasp along with two dents for the fingers at the side. Hence this implement is more likely to be a coupe-de-poing than a side-scraper. It may have been originally designed to serve as a side-scraper but afterwards probably, either intentionally or accidentally was transformed into a hand axe.

The specimen was found lying loose at a distance of about 50 yards from where the specimen No. N/20 was extracted. It seems to belong to earlier Palaeolithic Culture more probably Chellean.

Specimen No. N/22 (B. H. U.)
Plate XV, Fig. 4

The implement is fashioned out of hard, brownish, ferruginous, compact Vindhyan sandstone. It is massive and heavier than the other implements described here. The implement is roughly circular in shape and double convex in appearance. It is thick at the 'surface d'accommodation' and slopes gradually towards other directions till it thins out at the periphery and forms a semicircular edge. The edge is quite sharp and the periphery is undulating specially along the working edge. The working face shows more marks of chipping on one side of the implement than on the other. Out of the two main faces of the implement, one shows gradual bulging from the 'surface d'utilisation' and becomes very prominent towards the 'surface d'accommodation' where the specimen becomes very thick. This face is marked by having a few radial striæ which make this still more undulating towards the 'surface d'utilisation'. Towards the 'surface d'accommodation' this face has one more surface which is inclined to it. This surface is triangular in shape with rounded corners and
sides bulging out. The whole side shows marks of prominent chippings along the edge. The corresponding face on the reverse side shows a tendency towards flatness, but no doubt, it too shows a very gradual rise from the edges towards the ‘surface d’accommodation’, where the specimen possesses a prominent but depressed bulb of percussion with two very clear eraillures on each side of the origin of the bulb. The bulb of percussion has lost its prominence due to the thickness and the massiveness of the specimen. The face shows some concentric striæ which of course start from the bulb of percussion and are seen even up to the ‘surface d’utilisation’. They are shallow and flat and not at all prominent. Like the reverse face, this face too, possesses a triangular surface, with rounded corners and the sides bulging outside, at the ‘surface d’accommodation’. This face also contains marks of chippings which are very prominent at the ‘surface d’utilisation’.

The specimen weighs 17 oz. It measures 5.2” along its greatest length, and 4.45” along its greatest width. It is 1.5” thick at the butt end. The implement was found near the confluence of the river Narbada with the Tawa about six miles at the east of the Hoshangabad town. It was picked up from the bed of a ravine in the land between the two rivers, which shows no outcrop of any sandstone.

This implement, without doubt, was intended to be a scraper with a semicircular face. But looking to its size and weight it becomes doubtful if it was used as such. The hand which wielded it must have been powerful and big to have a convenient grasp to use it as a scraper. With an average modern hand it can very well be used as a hand axe, for the purpose of chopping or cutting. The specimen, with its size and weight must have afforded an unique implement for cutting the branches of the trees. As for the age, the implement seems to belong to Mousterian Culture. It bears a very close resemblance to a Mousterian side-scraper figured by Schmucker. It also resembles in shape to a flake No. 2436 figured by R. B. Foote.

Specimen No. N/23 (B. H. U.)

Plate XVI, Fig 5.

Fashioned out of fine-grained, brownish looking ferruginous Vindhyan sandstone, elongated with pointed butt and curved edges, this celt or hatchet falls in groups 4 and 10 given by Coggin Brown. The specimen

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22 Schmucker, 1925, p. 79, fig. 25.
23 Foote, 1916, pl. XII.
is tapering towards the butt end along its length. The butt end is bluntly pointed. The specimen shows three faces, two main ones, opposite to each other and the third at one of the sides. The side face is more or less an elongated hexagonal area, the elongation being along the length of the specimen. There is a small bulb of percussion on this surface with a prominent, elongated "eraillure" and few marks of mild strokes for retouching the bulb of percussion. Out of the two main faces, one shows a convexity, the axis of the curve being along the width of the specimen and near about its central part. This face is devoid of any marks of fashioning, except a slight dent towards the left. The whole face looks like a trapezium with rounded corners and bevelled edges, the butt end being its shortest side. The corresponding opposite face, includes one small triangular area at the butt end. This area is inclined to the main face. At the union of these two faces there is a ridge. This triangular area seems to be the result of chipping off a small flake with one bold stroke in order to provide a convenient accommodation surface. The main face, though flat, slopes gently towards the left till, at the union with the corresponding opposite faces, it forms an edge. Towards the 'surface d'utilisation' the specimen shows a number of marks of chipping. These marks are of mild strokes used evidently to obtain a sharp edge. The utilisation edge is adze-shaped, curved and sharp. The specimen seen as a whole is smooth and it appears that this has been achieved by grinding. Though the 'surface d'accommodation' gives a very convenient hand-grasp, it is very likely that the implement may have been mainly used with a haft.

The specimen measures 5.1" from the 'surface d'utilisation' to the butt end, 3.4" along its utilisation edge and 1.80" near the butt end. The thickness of the specimen at one of the lateral sides is 1.1" while the other side is a mere edge. It weighs 12.7 oz.

The specimen is a neolithic celt. It closely resembles the celt from Burma described and figured by Theobald and also to one figured by Schmucker.

The specimen was found loosely embedded, about half out, in yellow alluvium about 2 ft. below its junction with black cotton soil. The spot from where it was extracted is near the mouth of a nala near the Railway bridge on the right bank of the river. It probably belongs to Campignian Culture.

25 Theobald, 1874, pt. 2, pl. III, figs. 1 a and 1 b.
26 Schmucker, 1923, p. 90, fig. 32.
This implement is obviously a crudely made hatchet and is fashioned out of olivine Basalt. It is thickest at the butt end and thinnest at the ‘surface d’utilisation’ with the result that it has got a tapering appearance. The two side-faces are triangular in shape, while the other three remaining faces are oblong. Except for one bold stroke at the butt end and one near an edge which shows a slight depression, the specimen shows no signs of chipping. All the different planes of the faces are tilted. This causes the specimen to appear like a solid trapezium. The edge, utilised for the cutting purposes, is slightly curved and the two end corners have been rounded. One side of this edge shows some indications of its having been ground just like a chisel.

The specimen shows uniformity in length and breadth but not in thickness. The length from the ‘surface d’utilisation’ to the butt end is 4·65” and the width is 2·2”. The greatest thickness is 1·5” at the butt end and reduces itself merely to an edge at the ‘surface d’utilisation’. The specimen weighs 14 oz.

It was found near the Railway bridge about three miles from the Hoshangabad town lying loose in the bed of a small nala on the left bank of the river Narbada. The specimen is fashioned out of olivine Basalt which does not occur near about the locality. The interesting feature of the specimen is in the presence of three marks of slightly brownish colour which appear to be originally due to grease or fat, and which are yet preserved in the implement. These marks point definitely that this implement has been fitted into a cloven handle and lashed with gut or stripes of wet hide or strong vegetable, the fat or grease of which has left these marks. If a haft is attached to this implement it will appear like a stone axe figured by W. J. Sollas.²⁷ Though this implement has not been found in situ, yet from the mode of its fashioning and the way in which it was used with a haft indicate clearly to this celt belonging to later Neolithic age perhaps Campignian or even Housian.

REFERENCES


²⁷ Sollas, 1924, p. 269.
Fig. 1. Specimen No. N/19 $\times \frac{1}{4}$

Fig. 2. Specimen No. N/20 $\times \frac{1}{4}$
Fig. 3. Specimen No. N/21 × \frac{1}{4}

Fig. 4. Specimen No. N/22 × \frac{1}{4}
**Fig. 5.** Specimen No. N/23  \( \times \frac{1}{4} \)

**Fig. 6.** Specimen No. N/24  \( \times \frac{1}{4} \)


11. Medlicott, H. B.  .. "Note on a celt found by Mr. Hacket in the ossiferous deposits of the Narbada Valley (Pliocene of Falconer)," Rec. Geo. Surv. Ind., 1873, 6, 49-54.


