PALÆOLITHS FROM GREAT PAN FARM, ISLE OF WIGHT

BY HUBERT F. POOLE.

During the year 1912 a new gravel pit was opened at Great Pan Farm, near Shide, Isle of Wight, immediately south of the Newport allotment gardens [6 inch O.S. Map (edition of 1909), Sheet 95, N.W.]. Its exact position may be found on this sheet directly under the "N" of Newport, where the railway line is marked "Isle of Wight Central Railway," the pit occupying approximately the line of the 25-foot contour east of the letters "GH" in Wight.

The contour line would appear to follow the base of the escarpment; if so, 25 feet would represent the base of the gravel, but I have not been able to verify this.

Until 1920 I had no opportunity of seriously working this section, but from April of that year until the present date I have had it under constant observation. At first my visits were without result, but, by taking type specimens and interesting the diggers in them, a palæolith was eventually found.

On the finding of this first implement, I took one of the diggers, Mr. C. H. Creighton, in hand, and taught him, to the best of my ability, what to look for, giving instructions as to the various levels and the necessity of retaining any matrix on the implements as a check to this. My immediate examination of each section after a find has also usually confirmed the level. With the exception of a few weeks, the only diggers have been Mr. C. H. Creighton and his brother, Mr. W. F. Creighton, which circumstance has been exceptionally fortunate, as, with their intelligent co-operation, it has been possible to zone the bulk of the finds, usually a difficult matter when the excavating is carried on from a commercial standpoint. Also the whole of the material found has passed through my hands, enabling me to get a clearer idea of the various types and levels. A few implements have been personal finds *in situ*.

GREAT PAN FARM.

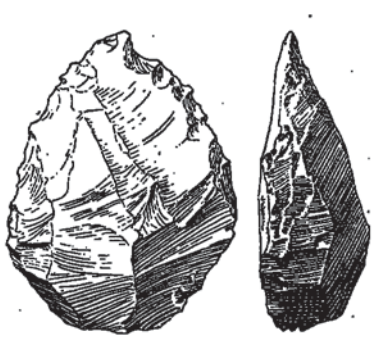


FIG. 1.

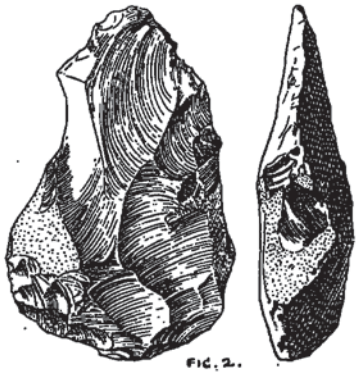


FIG. 2.

FIG. 3.

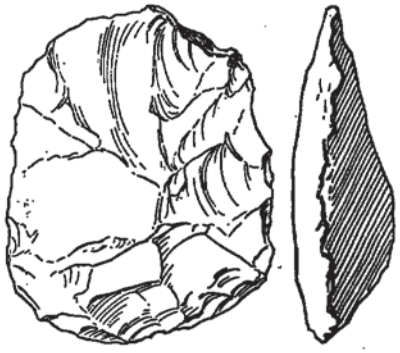


FIG. 4.

FIG. 5

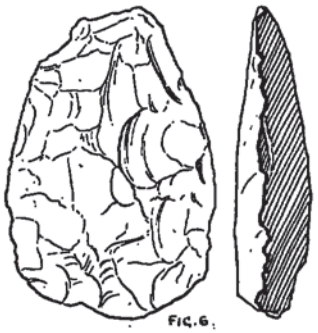


FIG. 6.

1, 2 from Bed I. 3 to 6 from Bed II. $\frac{1}{2}$

This deposit is an undoubted river or valley gravel, and occupies a bank traceable both north and south of the actual pit. It lies on the east side of the valley of the Medina river, now an insignificant stream and navigable only in its lower course, which is a tidal estuary. At the point of the deposit the present river, only about four yards in width, flows through the alluvium on the west side of the railway line, at about seventy yards from the line of the bank.

The river rises at Chale, in the south, and runs practically due north through the Island until it reaches the Solent at Cowes. It is of very limited extent, its total length being only about fourteen miles, though a succession of gravel terraces throughout its course, especially in the line of old tributaries, points to an extreme old age. It passes through an area of Lower Greensand, Gault, Upper Greensand and Chalk, and, at the point of the deposit at Pan, reaches the lower Tertiary Strata.

The deposit most probably rests on the London Clay, though it has not been excavated deeply enough to show this.

The whole of the materials composing the gravel can be accounted for as originating in the drainage area of the Medina River. There are sands, shingles and ironstone fragments referable to the Lower Greensand, chert from the Upper Greensand, flints and characteristic fossils from the Chalk, and the sarsens have probably been moved but a little distance, and are derived from the denuded lower Tertiary Strata.

Undoubtedly much of the material has also been derived from earlier gravel deposits, at higher levels, in the same area.

The bedding varies continually as fresh sections are exposed, but the main characteristics have been sufficiently clear, during the period, to be constantly recognised.

The diagram (page 308) shows the principal divisions, and is compiled from twenty measured sections taken at various times as the pit has been excavated. At the north end of the pit the beds have been denuded, and the best sections are to be seen at the south end.

		MATERIALS AND FOSSILS.	VARIATION IN THICKNESS	AVERAGE THICKNESS	IMPLEMENTS
TOTAL DEPTH VARIES FROM 6′ TO 8′ 3″. AVERAGE OF 20 SECTIONS 6′ 10″.	VII.	SOIL.	6″ to 22″	15″	NIL.
	VI.	CLAYEY RAINWASH WITH SCATTERED FLINTS WATERWORN AND ANGULAR UNSTRATIFIED.	6″ to 20″	12½″	BRONZE PALSTAVE
	V.	WHITE GRAVEL WATERWORN AND ANGULAR	4″ to 12″	7″	THAMES PICK
	IV.	UPPER YELLOW GRAVEL WATERWORN AND SUB-ANGULAR, CURRENT BEDDED BLACK BAND AT TOP.	15″ to 23″	15½″	MOUSTERIAN ACHEULEAN II
	III.	GREENISH-GREY CLAYEY SAND. PLANT REMAINS.	1″ to 11″	5″	MOUSTERIAN ACHEULEAN II ? LA MICOQUE
	II.	LOWER YELLOW GRAVEL WATERWORN AND SUB-ANGULAR, CURRENT BEDDED WITH SHINGLY AND SANDY BANDS AND POCKETS. SARSENS.	18″ to 42″	29″	MOUSTERIAN ACHEULEAN II ACHEULEAN I LATE CHELLEAN ROLLED (DERIVED)
	I.	BLUISH SANDY CLAY WITH UNEVEN UPPER SURFACE. TEETH OF ELEPHAS ANTIQUUS AND CAST OF MOLLUSC. (? LIMNÆA).	HAS BEEN EXPOSED TO 13″	SELDOM EXPOSED	ACHEULEAN II

H.F.P.

DIAGRAM SHOWING THE PRINCIPAL FEATURES OF THE BEDS AT PAN PIT, SHIDE, ISLE OF WIGHT, COMPILED FROM 20 MEASURED SECTIONS.

Bed I (at the base of the deposit) is a dark bluish sandy-clay. The upper surface is uneven, rising here and there into rounded humps, and in these humps Elephant remains and implements have been found. A fine tooth is attributed by Dr. C. W. Andrews and Sir A. Smith Woodward to **Elephas antiquus**, and the flaked fragments of another are probably referable to the same species. On one of these fragments is a portion of the cast of a univalve shell (? Limnæa). Mr. A. S. Kennard says the shell is specifically indeterminable. These specimens are the only contemporary animal remains so far found.

This bed is seldom exposed, except when a hump protrudes itself into the gravel, when it is dug through for the purpose of levelling off. Three implements and a few flakes have been recovered from it. The implements are dealt with in their special section. The bed has not been excavated to its base, having no commercial value, but probably rests upon the denuded London Clay.

Bed II is sharply defined from the underlying bluish clay, and usually so from the greenish-grey sand above. It consists of reddish and yellow-stained water-worn chalk flints, with fragments of chert from the Upper Greensand, Quartz and other pebbles and shingle apparently derived from the Lower Greensand and sharp sand. The gravel is in an uncemented matrix of coarse to fine ochreous sand. From this bed also come two grey sarsens of compact sandstone from the Tertiary deposits, one measuring about 12in. square and the other about 25in. by 16½in. by 7½in. The bedding shows a considerable amount of intermittent denudation during the period of its formation, being in places planed down, and interrupted with restricted shingly and sandy bands and pockets, particularly in its lower part. There is usually a band of very heavily-stained flints, in a harder matrix, at about 1 foot from the top of this bed, and a number of implements have been traced to this band. From the base come three implements attributable to the late Chellean. One of these is considerably rolled, and the other two slightly so, pointing to their derivation from an older gravel. Very few implements other than these show signs of more than slight abrasion, and many are quite unabraded. The other implement types are St. Acheul I and II and Le Moustier.

Bed III.—This is a very distinct bed, averaging about 5in. in depth, fairly constant, though it may be absent in various sections for a few yards, or may be replaced by ferruginous sand enclosing occasional seams and pockets of the clayey-sand. Its position, however, can usually be traced quite easily. Typically, it occurs as a greenish-grey clayey-sand, enclosing plant remains lying in all directions, gravel-stones and implements of Acheulean and Mousterian forms.

The finest ovate specimens have come from here, and there is also a fine specimen closely approximating to the La Micoque

type. The enclosed flints are of various shades, some being of black lustrous flint with a white crust. All seem to have acquired their colour and patination before deposition in the sand, and to have been preserved in exactly the same state. Two implements found between Beds III and IV have a patination differing on each side.

Specimens of the plants have been kindly examined by Dr. Rendle, M.A., F.R.S., at the British Museum, who has replied that "in its present condition it is not possible to say what wood it actually is. Judging, however, from its situation and age, it is most probably oak; but this is only an assumption." Treatment of the sand in various ways and washing has failed, so far, to produce seeds or remains of molluscs. It consists of about two-thirds very fine sand and one-third muddy sediment. This bed would have been laid down under altered and more tranquil conditions, probably in shallow water, and may also represent a break in time, some new forms of implements appearing in the bed immediately above.

Beds IV, V and VI.—These three beds merge imperceptibly one into the other, and are often difficult to distinguish. They show their different characters best in a weathered section in dry weather. Taken as a whole, they may be described as gravel, ochreous below, merging to white at the top, the flints at the same time becoming more scattered in the matrix, those below being water-worn, angular flints increasing towards the top.

Bed IV consists of ochreous gravel, becoming slightly paler towards the top, water-worn and sub-angular in a matrix of ochreous clayey-sand and fine shingle, with occasional patches of clay. A pale brownish clay is sometimes prominent at the junction with the underlying bed, but is totally distinct in colour and composition, and contains no plant remains. A black band occurs fairly frequently at the top, black-coated flints and shingle being sometimes conglomerated in a thin band. Similar black bands, elsewhere, have been taken to indicate a land surface, and it may be so here, as the implement types of this bed, St. Acheul II and Le Moustier, cease at its level. Implements and flakes with patches of the black coating are found. Where the black band occurs it usually forms the dividing line between this and Bed V.

Bed V consists of whitish and white-crusted flints, water-worn, sub-angular, and a few unabraded, with a number of stained water-worn flints. These are in a matrix of brown to grey earthy clay with fine shingle. A Thames Pick came from the upper half of this bed and a very few rough (?) implements and flakes, which are not referable to any particular period. The white, bleached condition of the gravel suggests that it may have been for some time exposed on the surface before being covered by the rainwash.

Bed VI has the appearance of a rainwash, being clayey with

the flints more sparsely scattered than in Bed V. A large proportion are angular and unworn, and the remainder are a mixture of the stones recorded for the beds below. From a pot-hole or artificial hollow in the surface of this bed came a plain Bronze Age looped Palstave. Stone implements have not been found here.

Bed VII.—The soil contains flints both angular and worn, and, being under cultivation, has an occasional piece of modern pottery or china ploughed in. Its distinctly darker colour separates it sharply from the rainwash. No implements or flakes have yet been found.

THE IMPLEMENTS.

The total number of implements found to date, 1st February, 1924, is 140, excluding the very rough or indefinite specimens, whilst simple and slightly re-touched flakes amount to over 500. There have also been found a number of rough cores and flints, from which one or more flakes have been detached. As the pit was being worked for eight years before I began my investigations, it is probable that even larger numbers of implements have been crushed into our local roads with the gravel.

The diggers estimate the proportion as being one implement to 200 tons of gravel. This is substantiated by comparing the average number of implements per month with the average quantity of gravel excavated during the same period, as estimated by Messrs. Duke, the contractors.

There is not the slightest evidence of a working floor, both implements and flakes being scattered. No re-assembly of flakes or cores has been possible, no two having yet been found to fit together. The unabraded condition of the bulk of the specimens, however, suggests that the working site was not far removed. In dealing with the implements illustrated—a selection kindly made by Mr. Reginald A. Smith, B.A., F.S.A.—I have thought it best to take them by levels instead of by types. They are of special interest, as showing the principal types associated in the various zones. Reference to the diagram will show that late Chelles and St. Acheul I are represented only from Bed II; they are few in number, and most probably derived.

St. Acheul II ranges from Beds I to IV, and Le Moustier from Beds II to IV.

BED I.

Blue sandy-clay. Three implements only have been traced to this bed.

Fig. 1.—" St. Acheul II, ovate " (R.A.S.). Length, $3\frac{1}{8}$in.; unabraded, unstained flint, one face flatter than the other, found at about one yard from the fragmentary Elephant tooth. A second specimen of similar form, length $3\frac{1}{2}$in., has the point curved in the opposite direction; it is ochreous and slightly worn on the flaking angles.

GREAT PAN FARM.

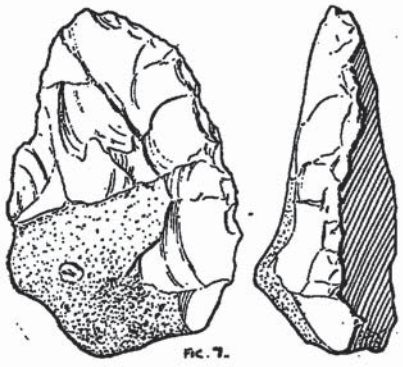
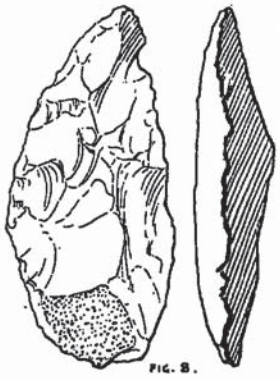


FIG. 7.



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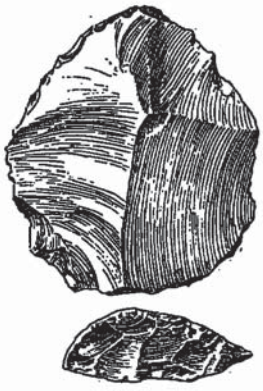


FIG. 9.

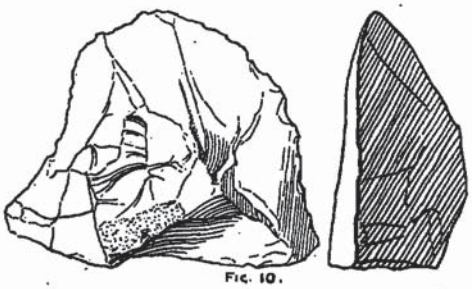


FIG. 10.

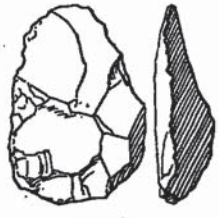


FIG. 11.

FIG. 12.

All from Bed II. $\frac{1}{2}$

Fig. 2.—" Sub-triangular (? late drift) " (R.A.S.). Length, $3\frac{3}{4}$in. ; unabraded, unstained flint ; one of my own finds.

BED II.

(Lower yellow gravel.)

Fig. 3.—" Sub-triangular, with basil point, St. Acheul I ? " (R.A.S.). Length, $4\frac{1}{2}$in. ; well made, ochreous, slightly water-worn on one side, more so on the other. A second specimen of this type, length $4\frac{1}{2}$in., is of darker staining and more water-worn.

Fig. 4.—" St. Acheul, ovate, alternate work, used as a borer " (R.A.S.). Length, $3\frac{9}{16}$in. ; ochreous, slightly abraded, the edges slightly curved.

Fig. 5.—" Rather triangular for St. Acheul II " (R.A.S.). Length, $3\frac{1}{2}$in. ; faintly ochreous, very slightly water-worn, worked to an edge all round. There is a second similar, triangular, implement, worked all round, but it is flatter on one side and more convex on the other. The flat side is unstained and unabraded, the other ochreous and slightly worn.

Fig. 6.—" Ovate, St. Acheul II " (R.A.S.). Length, $3\frac{1}{4}$in. ; pale ochreous flint, practically unabraded, convex on both faces. There are three other similar ovate specimens, lengths $2\frac{3}{4}$in., $3\frac{7}{8}$in. and $4\frac{3}{8}$in., all three unabraded.

Fig. 7.—" St. Acheul, S twist " (R.A.S.). Length, $3\frac{3}{4}$in. ; unstained and unabraded on the worked surface, the crust stained ochreous. The crust extends over the base and part way up the opposite side to that figured, and would have given a good smooth surface for the palm of the hand.

Fig. 8.—" Racloir of High Lodge, Le Moustier date " (R.A.S.), Length, $3\frac{7}{8}$in. ; ochreous and unabraded. One surface flat, the other convex.

Fig. 9.—" Worked flake with facetted butt and bulb removed (? late drift), from tortoise core " (R.A.S.). Length, $2\frac{7}{8}$in. ; pale ochreous and unabraded. The facetted base, shown in the plate, makes it a particularly good, non-slipping, hold for the hand.

Fig. 10.—" One faced tea-cosy (segmental) " (R.A.S.). Height, $2\frac{1}{2}$in. ; unaltered and unabraded flint. There is a second specimen of similar form. In each case they have, opposite the working end, a flat base suitable for fitting the palm of the hand. The edges of the base have been battered for greater ease in handling. There are also several rougher implements approximating in general form to the above.

Fig. 11.—(" ? Le Moustier, or latest drift ") (R.A.S.). Length, $2\frac{1}{16}$in. ; slightly yellow-stained and unabraded. This charming miniature implement is the smallest found. It is well worked on both faces and the edges are practically straight.

Fig. 12.—" Waisted ovate St. Acheul " (R.A.S.). Length. $3\frac{9}{16}$in. ; stained reddish-brown on one face, yellowish on the other. It came from the heavily-stained band, in this case

occurring in the lower third of the bed. It probably lay with one face in contact with this heavily-stained band, and the other with the lighter-stained gravel. The two worked hollows on opposite edges suggest the possibility that it may have been hafted.

Not Figured.—Other types traced to this bed are :—" Rolled late Chelles or St. Acheul I, derived " (R.A.S.). A narrow, pointed implement with rounded crust-covered base. Length, 4¼in. ; maximum width, 2⅜in.

" (?) Chelles, derived " (R.A.S.). A wide, roughly-made implement. Length, 4¼in. ; maximum width, 3½in.

" Chopper, late drift " (R.A.S.). Length, 3¼in. ; width, 2⅝in. It has a wide patch of crust on one side for the palm and a projection which admirably fits the thumb.

Four small ovates, made from flakes, the secondary working being all on the face opposite the bulb..

Cores . (? Tortoise cores) two. Flakes used on the sides, several.

BED III.

(Greenish-grey clayey-sand.)

Fig. 13.—" St. Acheul II " (R.A.S.). Length, 4¼in. Flatter on one side than the other. The flat side is stained a dull blackish-grey, and the other pale ochreous with a blackish-grey point and the patch of crust whitish. I was present in the pit when this specimen was found, and, though it was immediately picked up, its impression remained in the lower surface of the sand. There are three other closely similar forms from this bed. The blackish-grey patination is characteristic.

Fig. 14.—" St. Acheul, approach to Le Moustier " (R.A.S.). Length, 3⅜in ; grey unabraded flint, practically flat on one side, the other, convex, has a patch of crust running across the implement towards the base.

A second specimen of this form is similar in length, but is a trifle wider, and the flat surface is stained ochreous. A third, rather more ovate, length 3⅜in., is of black lustrous flint, water-worn on the flaking angles.

Fig. 15.—" Side-scraper (*racloir*), Le Moustier style " (R.A.S.). Length, 3¼in. ; grey and brown flint, sharp and unabraded.

Fig. 16.—" St. Acheul approaching to Le Moustier " (R.A.S.). Length, 2⅜in. ; unstained flint, sharp and unabraded. There are a number of other flakes retouched at the edges, but nothing else approaching the finish of this specimen.

Not Figured.—The remaining types are " late St. Acheul disc " (R.A.S.), a small disc 2⅜in. in width.

"Disc made from flake (? Le Moustier date)" (R.A.S.). Length, 2⅛in.

"La Micoque type (? latest St. Acheul)" (R.A.S.). Length, 4⅜in.; a lanceolate implement with crust at the base. Finely flaked, the blade is thin with the line of parting between the two sides to the left of the middle line, left side steeper.

BED IV.

(Upper yellow gravel.)

Fig. 17.—"Le Moustier, rough flake implement" (R.A.S.). Length, 5¼in.; the under surface is unworked, with the exception of the partial removal of the bulb, very slightly abraded. A patch of crust at the base facilitates handling. Colour, greyish-yellow on one face, slightly ochreous on the other, crust white.

Fig. 18.—"Late St. Acheul, one face flat" (R.A.S.). Length, 3½in.; unabraded. A rather clumsy-looking implement of the so-called shoe-shape. The flat surface ochreous, the other grey, crust pale ochreous.

Fig. 19.—"Proto-celt" (R.A.S.). Length, 2⅞in.; deeply ochreous, unabraded. A thin specimen, the maximum thickness being ½in. It is finely shaped and flaked all over, both faces. The base and sides are all worked to a fine edge. The base of the triangle showing more signs of wear would appear to be the business end, and the point must accordingly be regarded as the base. This would suggest hafting in the manner of a Neolithic celt, to which this specimen approaches in form.

Fig. 20.—"Tortoise core, struck, Le Moustier date, Northfleet type" (R.A.S.). Breadth of base, 3in. by 3⅜in.

The flat surface has been flaked in various directions from the circumference, and handling suggests its use as a plane or heavy scraper. Colour, pale-ochreous, the patch of crust slightly yellow-stained. Very slightly abraded.

Fig. 21.—"Le Moustier point" (R.A.S.). Length, 3⅞in.; ochreous, very slightly abraded. The surface opposite to that illustrated is the plain unworked flake. There is a second Le Moustier point from this bed, also made from a flake.

Fig. 22.—"End-scraper, latest drift (?)" (R.A.S.). Length, 2½in.; unstained and unabraded flint. Made from a flake, from which the bulb of percussion has been removed.

Not Figured.—Other types from this bed are:—"St. Acheul ovate (? Le Moustier date)" (R.A.S.). Two specimens come under this head; one length, 2⅜in., the other length, 2¼in.

A small end-scraper on blade, one face of which is elaborately worked. Length, 2½in.; width, ⅝in.

A segmental tea-cosy, width, 2¾in., height, 2⅛in., completes the forms.

GREAT PAN FARM.

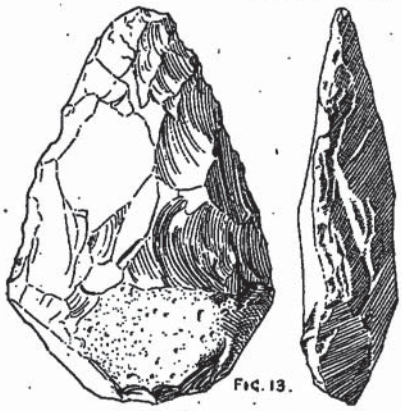
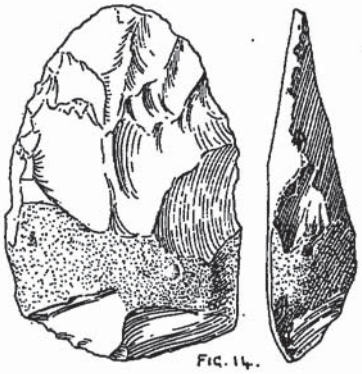


FIG. 13.



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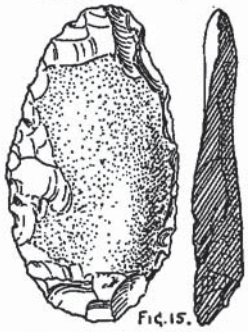
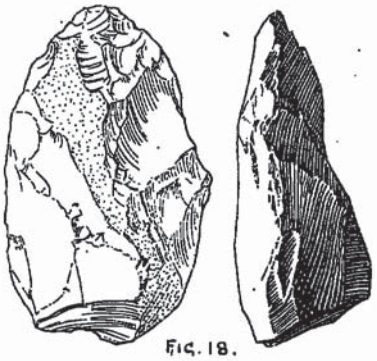


FIG. 15.



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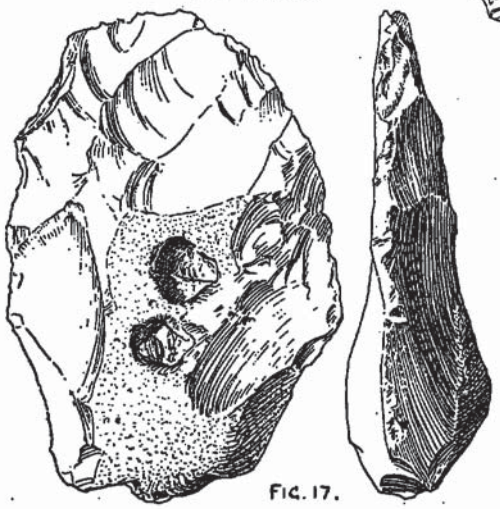

FIG. 17.

FIG. 16.

13 to 16 from Bed III. 17, 18 from Bed IV. $\frac{1}{2}$

BED V.

(White gravel.)

Fig. 23.—" Thames Pick, but not quite typical " (R.A.S.). Length, 5⅞in. ; width, 2in. Creamy white, bleached, the figured side slightly lustrous, the opposite side dull and unpatinated. Unabraded. The cutting edge is sharp and symmetrical, and has been formed by the intersection of two facets, each produced by the removal of a single flake. In this respect it resembles the workmanship of the tranchets of the Danish shell mounds. The body would appear to have been made subsequently. It is, undoubtedly, the most interesting implement of the series, as it helps to bridge a gap in the evolution of the celt. Whilst not quite a typical specimen of a Thames Pick, it belongs to the same family. It was found by Mr. C. H. Creighton on September 1st, 1923, and immediately brought to me. I was on the spot within an hour of its finding and took a measured section, marking in its horizon. It was at 25in. below the surface, the section, reading from the top, being :—Soil, 6in. ; rainwash, 15in. ; white gravel, 9in. The implement was 4in. down in the latter.

It is, of course, quite possible that the implement may belong to the rainwash, Bed VI, as Beds V and VI merge almost imperceptibly into one another, and there was, no doubt, some disturbance of the surface of the lower bed during the rainwash period.

The bed I call " White Gravel," from the larger number of pale flints contained in it, is, however, usually to be detected as a distinct gravel in a matrix of brown to grey earthy-clay, and at the section was quite distinct ; whereas the rainwash is a pale brown to putty-coloured earthy-clay, with comparatively few flints scattered through it.

Not Zoned.

The implements not zoned fall in with the cultures recorded for Beds I to IV. A single ovate. Length, 3⅛in ; brown-stained, and placed by Mr. Reginald A. Smith to St. Acheul II, is interesting as being the only specimen made from chert. The flaking is poor, owing to the material, but the form is well produced.

Bronze Palstave.

Whilst not exactly within the scope of this paper, it is well to add that a bronze-looped palstave, unornamented, length 6½in., nicely patinated and in a fair state of preservation, was found at 19in. from the surface in a pocket, or artificial hollow, filled with the clayey rainwash.

GREAT PAN FARM.

FIG. 19.

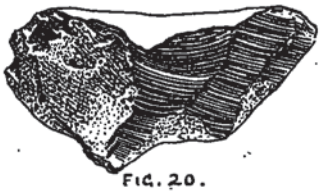

FIG. 20.

FIG. 21.

FIG. 22.

FIG. 23.

19 to 22 from Bed IV. 23 from Bed V. $\frac{1}{2}$

I was on the spot about two hours after the find, and the hole from which it had been extracted was still to be seen, and contained a few grains of corroded bronze. I excavated a fair area myself, and left instructions as to care in future work, but it was an isolated find. The field next to that in which the pit is situated is called " Blood Field," a name that may have been given in connection with some previous similar find.

In conclusion, I must express my thanks to Mr. Reginald A. Smith, B.A., F.S.A., for his kindness in examining the specimens ; also to Messrs. Duke, the contractors, and Messrs. W. A. and G. O. Morris, the owners of the pit, for permission to visit it as often as I wished, and to take away what stones I required.