## THE ROMANO-BRITISH PILE-DWELLING AT HEDSOR.

Explanation of the Plate. (From a Photograph by A. H. Cocks.)

A selection of the objects found at the Pile-Dwelling.
Top Row.-Two pieces of oak, showing mortises, from a depth of 7 feet 6 inches. (The white appearance of the example on the right side is the result of steeping in silicate of soda, as a preservative.)
Second Row (beginning at the left side). -Shoe leather ( 6 feet deep). ? Butt of spear-shaft in oak ( 6 feet). Bell ( 6 feet 8 inches). Two dises of oak, pierced ( 3 feet 6 inches). Portion of horse-shoe ( 5 feet 6 inches).
Third Row.-Metacarpals of a Corvus (rook or crow). Humerus and tibia of a Galline bird, perhaps pheasant ( 6 feet). Neck of a (Roman) pottery vessel (4 feet 7 inches). Lump of chalk (?) with straight cuts or cracks (?) (7 feet 6 inches). White Roman pottery. Scrap of Roman pottery with wavy raised ornamentation.
Воттом Row.-White fint flake ( 8 feet 6 inches). Blue flint flake (exact depth uncertain). Dark piece of (?) Celtic pottery ( 7 feet).
The following Report on the Hedsor Pile-Dwelling is reprinted, by kind permission of the Council of the Society of Antiquaries, from the Proceedings of that Society (2 Ser., XVI., 7), having been read at a meeting of the Society of Antiquaries, November 21, 1895.

The further exploration of this very interesting site has had to be postponed, owing to the heavy expense involved in the hire of a steam-pump, the use of which is absolutely necessary, owing to the depth to which the excavation must be carried, and the consequent flooding of the work. Hand-pumps were proved to be utterly useless; while the charge for a steam-pump would amount (including wages, coal, etc.) to probably over $£ 2$ a day; and therefore, $£ 50$ would, at least, be required in addition to the ordinary expense of labourers' wages.

Alfred Heneage Cocks.


A Selection from the Hedsor Pile-dwelling.
"Alfred Heneage Cocks, Esq., M.A., read the following notes on a Romano-British Pile-Dwelling at Hedsor, Bucks, and exhibited a number of the antiquities found:-
"In digging a cesspool in 1894, in connection with the Wharf House, Hedsor, near the north bank of the most northerly of the various branches into which the Thames is divided between Cookham and Cliveden, a flooring of rough timbers and brushwood was met with. Mr. James Rutland, F.G.S., the honorary secretary of the Maidenhead Field Club, was informed that ' after digging through 2 feet 6 inches of alluvial, and about 6 feet of peaty, soil, containing much decayed wood, leaves, etc., [the workmen] came upon an oak floor, about 4 inches in thickness, supported upon oaken and beechen piles, varying from 5 to 9 inches in diameter. The principal and larger piles were about 5 feet apart, the small thickly studded about between. One oak pile they drew up was pointed, having a long draft about 3 feet. . . . .' Sundry bones of reddeer, small ox, etc., were found. Also an iron spear-head $6 \frac{1}{10}$ inches long, with an open socket, and two rivet- or pinholes on each side; the neck between the blade and socket is ornamented with three transverse bands, representing the conventionalised string attach.


IRON SPEAR-HEAD FOUNDAT HEDSOR, bucks. ( $\frac{1}{2}$ linear.) ment to the shaft.
"On the initiative of Mr. John Parker, F.S.A., honorary secretary of the Bucks Archæological Society, Mr. R. E. Goolden obtained leave from Lord Boston, the owner of the land, to explore further ; and we wish to take this opportunity of thanking his lordship for kindly granting the necessary permission; also Mr. Montagu Hepworth, agent to Lord Boston, for much kindly assistance; and Mr. Aaron Williams, the tenant of the ground.
" Mr. S. Darby, F.C.S., F.C.I., the late Mr. H. See-
bohm, F.L.S., honorary secretary of the Royal Geographical Society, and the present writer were also associated with the exploration, and were joined a little later on by Mr. Rutland.
"The cesspool was dug 70 yards from the Thames, in a small orchard in the river valley, immediately to the north-west of the sharply rising ligh ground on which Hedsor Park, Cliveden, and Dropmore are situated. The site appears originally to have been part of the widely spreading bed of the 'Wycombe stream,' or 'the Wye.'* This little Bucks river at the present day takes a sudden turn when within some 200 yards of the Thames, so as to flow straight into it at Bourne End; but a little more than 200 yards from this sudden bend, and even more closely connected with it by a chain of watercress beds, a small stream, known as Blessing's Ditch, makes an abrupt start, and after a course of a short half-mile (washing the south-west side of the orchard on its way) falls into the Thames by the Wharf House. It seems evident that the highly domesticated little Blessing's Ditch shows the original direction of the lower end of the Wycombe river. The left (east) bank is still very much in evidence where the ground begins to rise, alongside the orchard on its north-east ; and the right bank is shown by an abrupt and very striking difference in level near the middle of the large meadow on the west of the orchard; while the underground evidence was even more conclusive of the former existence at this place of a fairsized watercourse.
"On 20th June, 1895 (after an abortive start on the 17th), two labourers commenced excavating an irregular oval, about twelve feet from north-west to south-east, by about eighteen feet broad, immediately north and northeast of the spot excavated in digging the cesspool, some 20 yards east of Blessing's Ditch, and close to the public footpath which divides the orchard from the Wharf House garden. The work was continued daily, until we were finally drowned out on July 13; and all subsequent

[^0]efforts to pump out the water failing, the exploration was then most reluctantly abandoned.
"The orchard, which is rather more than 40 yards square, is 2 feet 6 inches higher than the adjoining land from north to south-west ; to the east, as already mentioned, the ground rises, and on the south and south-east the higher level continues across the footpath, and declines gradually towards the Thames, as the lawn of the Wharf House.
"The upper stratum contained many pieces of roofing tiles, which suggest that the ground had been made up with builders' rubbish and the earth moved in digging' the foundations of the house, at a date, of course, subsequent to the diversion of the Wye.
" Omitting in what follows the 30 inches of recent surface soil, and reckoning the depth from the natural level, there came first a layer of flints about 3 inches thick, followed by reddish clay for 1 foot. Then came a sticky clay, so adhesive that nearly every spit had to be scraped, instead of thrown, off the shovels. This was 2 feet in thickness, and was followed by a thin layer of ferruginous sand, averaging 2 inches in thickness; then at 3 feet 5 inches* came characteristically-smelling riveror rather pond-mud. This was for the most part almost black, with small patches or streaks, here and there, of bluish-green. Samples of this colouring, chemically tested by Mr. Darby, proved to be caused by the presence of ferrous phosphate, or vivianite, which may be readily accounted for by the presence of bones, and an occasional fragment of iron sandstone, as well as small nodules of concrete ferruginous oxide, resulting probably from decomposed iron pyrites.
"This mud, over the greater part of the excavation, ended at a depth of 4 feet $6 \frac{1}{2}$ inches, giving a thickness of 1 foot $1 \frac{1}{2}$ inch. It was followed by peat, the bottom of which we never reached. The peat was of a dull red or chocolate colour when brought to light, but within from one to two minutes after exposure turned quite

[^1]black, and was thenceforwards not distinguishable in the sides of the cutting from the mud above it.
"At a general depth of 4 feet 6 inches (or in most parts very slightly above the level of the peat) the platform was reached, but before attempting to describe it certain superincumbent matter must be detailed. Portions of the orchard had been trenched for irrigation purposes, and on these fresh surfaces lay sundry scraps of dark grey Roman pottery, and four or five flint-flakes, which were evidently not in situ, but brought here with the rest of the material when the surface was raised; and in the course of the excavation, towards the bottom of the reddish clay (or about 1 foot below the modern material), a similar scrap of Roman pottery was met with, and sundry horse-bones. Some more of the latter were in the sticky clay, 4 and 8 inches lower, and probably all belonged to an animal that had been drowned, and accidentally sunk at this spot. From about the top of the sticky clay down to the flooring, oyster-shells were in considerable abundance, and two were respectively 3 and 8 inches below the surface of the floor ; these had no doubt found interstices in the brushwood, through which to sink so far. From finding these two specimens well below the top of the flooring, one is led to infer that all the others may have sunk in the then soft river-bed to some considerable depth below that at which they were thrown in ; and, if so, that heavier objects, such as pottery and bone, would sink even more readily.
" Besides a few fragments of bone, a nearly complete pig's humerus occurred at 2 feet 3 inches, and at 2 feet 10 inches was a small piece of stick. Its presence was perhaps purely accidental, and it had no necessary connection with the pile-dwelling; but 4 inches lower, and less than a couple of feet to one side, were several sticks about 30 inches in length, lying parallel to each other, so as to cover a width of about 9 inches, and it seems not unlikely that they had formed some small part of a hut erected on the platform.
"A short upright, not much exceeding 2 feet in length, at the opposite side of our opening, or nearly in the north-east corner, reached to about 2 inches below the level of these parallel sticks. A hole had been dug at that spot in recent times (for what purpose we could
not discover) which reached just to the top of this upright, and it is quite possible that some inches had then been knocked off it.
"At a depth of abont 3 feet, at a point where the sand succeeded the sticky clay, higher than the normal level, was a red-deer bone. Six inches lower, in the mud, were others, and part of a sheep's jaw ; also several scraps of dark (Roman) pottery ; and under several small bits of wood were two oblong discs of oak of uncertain use. One that is perfect measures $3 \frac{11}{1} \times 1 \frac{13}{1} \frac{3}{6}$ inches, by about $\frac{1}{10}$ inch in thickness; both extremities are bevelled from the same surface to a chisel-edge, and in the centre a circular hole is bored (by an auger ?) $\frac{1}{5}$ inch diameter. The imperfect example would be about the same size, but the central hole is only about $\frac{3}{8}$ inch diameter.
" At 4 feet depth were a swall branch (of oak ?), part of a red-deer's jaw, some scraps of dark (Roman) pottery, and a semi-lunar piece of flint, $4 \frac{7}{8}$ inches long, which having (accidentally) a sharp edge all round, was perhaps brought here to be used as a cutting instrument.
"The tops of four more uprights reached to between 3 feet 6 inches and 4 feet in depth, on the western side ; two of them, having each a small satellite close to it, were about a foot on either side of the parallel sticks, 10 inches higher.
"At a depth of about 4 feet 2 inches were some scraps of dark (Roman) pottery, a scrap of red pottery, and some small pieces of wood.
"At 4 feet $6 \frac{1}{2}$ inches (as already stated) the pond-mud gave place to peat, and from half an inch or so above it, but in part sloping down some six inches lower, came the Hooring of the 'pile-dwelling.'
"This consisted of masses of brushwood, which at this level was especially thick and conspicuous in the northwest quarter; while throughout, roughly speaking, the central third (between east and west), it was less conspicuous, and increasingly so from north to south; and was possibly entirely absent for the last foot or so in this width, at the southern boundary of the excavation, where the peat was somewhat drier and brighter coloured.
"The brushwood varied in size, from the smallest twigs up to tolerably large branches or small stems of
oaks and beeches ; the size being probably limited by the weight two men could conveniently carry. Not one of the larger sized sticks occurred at this level in this central third of the opening. There were about a score of upright stakes or piles at this level (including those already mentioned which reached to a few inches higher, and also including some which were quite small, three of them placed close together for mutual support, and two or three others acting as 'satellites' to larger posts). They were dispersed quite irregularly, but all within either the western or eastern third of the excavation; and, while the half-dozen uprights found at lower levels ( 5 feet 6 inches to 7 feet 9 inches), were all (in both the eastern and western third) on the inner or central side of the upper piles, yet not one was in the central third*; although at a depth of from 6 feet 6 inches to 7 feet 6 inches there were several tolerably large horizontal logs in it.
"The interesting account of the Glastonbury Lake Village by Mr. A. Bulleid (published by the Glastonbury Antiquarian Society) does not enable me to understand the arrangement of these piles; possibly, however, an excavation on a larger scale would explain much that is now obscure.
"At 7 feet depth was a piece of blackish pottery, which appears to be of Celtic character, and a very small fragment at 8 feet 3 inches seems also to be pre-Roman.
"At about 7 feet 6 inches depth were two pieces of oak with mortises cut in them, but no corresponding tenons were noticed.
" Some few of the larger timbers lay roughly at right angles to other timbers, with the end of one resting on another, but I feel sure that this was in each case accidental, and that wood, little and big, was merely thrown into the morass at hap-hazard, or at best into some particular spot which might specially require solidifying, as that part of the floor sank into the yielding peat. The largest logs were oak and beech, the bark of the latter feeling hard as iron when a tool came in contact with it, in marked contrast to the cheese-like consistency of all the other kinds of wood. The smaller sticks

[^2]included birch, hazel, thorn, yew, holly, and an occasional small bit with much pith. The bark of all the wood when first unearthed, and the axe or billhook cuts, were as fresh as when the wood had been thrown into the morass, but within some two minutes' exposure to the atmosphere the wood had turned quite black, and shrivelled like charcoal.
"Throughout the dark peat occurred white matter, sometimes in large masses, the first of which was at once identified by one of the labourers as suds from the sink of the period. This Mr. Darby ascertained to be decayed Sphagnum, and as it gave an iron reaction, evidently showed the presence of a phosphate of iron, probably the sesquiphosphate compound.
"For a thickness of 4 feet the wood floor is practically continuous; small intervals here and there did not prove general; for instance, in the spot at the south previously mentioned, where the wood seemed to come to an end at the upper level of the floor, much small wood existed 20 inches lower down, and so with other places. It seemed possible, however, that the depth of 5 feet 6 inches may show a somewhat more general addition to, or renovation of, the platform ; and so in an even less marked degree, with two other levels, each about a foot lower. In the only place where a greater depth than that was reached before the water hid everything, the wood ceased at 8 feet 7 inches, but began again at 9 feet 6 inches.
"Three or four short pieces of board or split wood (under and over one foot in length, and a few inches broad), having one end squared and the other pointed, could hardly have been any part of the flooring, but perhaps had some use in the huts which we may assume this flooring supported. (? Roofing shingles.)
"Bones, scraps of pottery, etc., were found at nearly all depths throughout the material of the floor, suggesting its gradual raising by continual addition of fresh wood. These finds are detailed under their respective depths, at the end of these notes. 'Jhe various 'long' bones were in nearly every case (including horses') split for the marrow; the majority of the bones had been gnawed by dogs, and several show knife cuts.
"The only certainly wild mammal represented was
the red-deer, whose bones are fairly numerous. The most numerous bones were those of pig, probably domestic, nearly all immature and small, and principally quite young 'suckers.' Those of ox (about the size of the modern Chillingham race, and others smaller, but none of the tiny breed, the type of the so-called Bos longifrons), sheep (of apparently at least two small breeds), and horse (small) were also common, while of goat four bones represent probably one individual ; of dog a single canine tooth was found, but the marks of other teeth of the species are, as already said, abundant on a large proportion of the bones. Of bird bones, only the few following were found : the metacarpals of a crow, or rook (Corvus corone, or frugilegus); a humerus and tibia, about which Professor A. Newton, F.R.S., kindly wrote me: ' Most likely a domestic fowl; but Dr. Gadow refers them to a pheasant . . . but there is so little that is distinctive inter se in the long bones of the two birds that I could hardly accept this as positive evidence of the pheasant being in England when this pile-dwelling was in use, though I have long believed it was introduced by the Romans. It would be highly interesting if Dr. Gadow were right, but I think it safest to be content with " Galline." ..." Of undoubted domestic fowl, a single tarso-metatarsal was found, $3 \frac{7}{8}$ inches long, with a spur $\frac{7}{8}$ inch long. Human bones were limited to two small fragments of a remarkably thin skull, doubtless a child's, at 7 feet 6 inches depth.
"The only manufactured objects found, besides the discs, etc., already mentioned, were :
" 1 . A small handbell of iron, washed over with yellow-metal, $2 \frac{5}{8}$ inches high, or including the loophandle, $3 \frac{7}{8}$ inches, found at 6 feet 8 inches depth. It is of the ordinary riveted, cow-bell form ; the only peculiar points about it are, that in addition to the usual handle running on through the crown of the bell, to form the crown-staple in the interior ; a second, narrower ribbon of metal overlies the usual one, and bending suddenly outwards near the bottom on either side, passes through the (oval) crown, nearer its extremities than the principal band, and protrudes a short distance down the interior of the bell, in a rounded form (like wire), the yellow-metal doubtless brazing it in place. Also, the
clapper is merely a flat piece of iron without ball, and was loose, the loop at the upper end not being hooked over the crown-staple; and the fact that it is too small to admit of being so hooked on, shows that in this example a baldrick, or intermediate link (? of leather), was employed.
" 2. Part of a small worn-out horse-shoe, at 5 feet 6 inches depth.
"3. A small cone of oak (cut transversely to the grain), $2 \frac{1}{2}$ inches high; $2 \frac{1}{2}$ inches broad at the base in one direction, by $1 \frac{1}{4}$ inch the other way, but is apparently slightly shrunk. It is perforated throughout its height, the hole being $\frac{{ }_{4}^{4}}{4}$ inch wide in the broadest plane of the cone, and less in the narrow plane, owing, I think, to the shrinkage of the wood, and not to the hole having always been an ellipse. Through the centre of the broad side, a wooden pin (still remaining) has held some contained object in place. Found at 6 feet depth. Though differing in size, it otherwise closely resembles two butt-ends of spear-shafts figured in Dr. Munro's work on Lake Dwellings.
"4. Part of the leather sole of a small-sized boot or shoe, showing the holes where it was sewn; about 6 feet deep.
"Here and there, round the bases of a few of the piles, lay lumps of chalk and flints, as if they had been dropped there with a view to steadying the foundations; one of these lumps of chalk, measuring some $3 \frac{1}{2}$ inches each way, has four conspicuous slits, like knife-cuts; two of them are $2 \frac{3}{4}$ inches in length, the others about $1 \frac{1}{4}$ and $1 \frac{1}{8}$ inch respectively; in depth they run from $\frac{3}{4}$ inch downwards.
"Besides the flint-flakes already mentioned, and two recovered by Mr. Darby from the soil thrown out, probably from a depth of several feet, one was found in a hole cut for drainage, at 8 feet 6 inches depth.
"Shells occurred of the following common land and water snails: Helix aspersa, H. nemoralis, Limnoea palustris (?), Planorbis marginatus, P. corneus, Succinea putris, and Cyclas (?). Two or three elytra of a waterbeetle were also found; other small objects were nutshells and spines from a thorn tree.
"The following shows, in a concise form, the depths
at which the various objects were found, reckoning from the natural level, but omitting such bones, etc., as appeared to have sunk to various depths in more or less recent times. (The mention of an animal will be understood to mean in most cases merely a single bone, or at the most a small handful of bones, belonging to the species named.) 2 feet 3 inches, pig. 2 feet 10 inches, wood. 3 feet, red-deer. 3 feet 2 inches, parallel pieces of wood. 3 feet 4 inches, upright. 3 feet 6 inches, upright, wooden door-buttons (?), dark pottery, reddeer, sheep. 4 feet, upright, small branch, dark pottery, sharp flint, red-deer. 4 feet 2 and 3 inches, dark and red pottery, pieces small wood. 4 feet 6 inches, flooring: began, several uprights. 4 feet 7 inches, slate-grey pottery (including neck), (modern ?) nail, red-deer, sheep. 4 feet 8 inches, black pottery, large wood ashes, horseteeth, etc. 5 feet, black pottery. 5 feet 2 inches, upright, scrap smooth pottery jar. 5 feet 6 inches, iron horse-shoe, ox, nut-shells. 5 feet 8 inches, pottery. 5 feet 10 inches, sheep. 6 feet, oak spear-butt (?), dog's canine, crow or rook, domestic fowl or pheasant. 6 feet 6 inches, (?) fresh layer brushwood ; at E. corner brushwood ended; pig, horse, red-deer, sheep. 6 feet 8 inches, ox, horse, lamb, iron bell. 6 feet 10 inches, wood began N.W.; horse's skull. 7 feet, wood at S., black Celtic (?) pottery, red-deer. 7 feet 4 inches, flooring of small wood S.E. 7 feet 6 inches, human skull, red-deer, sheep, pig, domestic fowl, pottery, nutshell, lump of chalk with (?) knife-cuts. 7 feet 8 inches, flooring of small wood begins again N. 7 feet 10 inches, horseskull. 8 feet, horse. 8 feet 3 inches, pottery Celtic (?). 8 feet 4 inches, horse. 8 feet 6 inches, horse, flint-flake. 8 feet 7 inches, brushwood floor at S. centre, ends. 9 feet 6 inches, brushwood begins again at S . centre, red-deer.
"Half a mile lower down the Thames is Cookham Lock, in an artificial cutting ; and in excavating here about three years ago,* during alterations to the lock, piles were found, some of which were obtained by Mr. R. E. Goolden, and presented to the Reading Museum, together with the skull and other bones of a small horse,

[^3]and a scrap of Celtic pottery. Mr. Rutland informs me that when an excavation was made at Amerden, Bucks, in connection with the new Bray Lock (about $3 \frac{1}{2}$ miles below Cookham Lock), several piles with pointed ends were found, also the (complete) skeleton of a horse, and a tree, probably ash, fully 2 feet 6 inches diameter. The peat there began about 3 feet from the surface, and was only 4 feet in thickness, with gravel below.
" With apologies for the imperfections of this report, I need, perhaps, only add that there is unquestionably some, and probably a large proportion, of this platform, or pile-dwelling, still underground at Hedsor awaiting excavation. A practical difficulty, however, presents itself; the spot is immediately under very much higher ground, and the exploration having to be made at a tolerable depth, the water is not long before it intrudes, and we were beaten back by volumes on which no handpumps could make an impression, and we were not prepared to hire steam power."


[^0]:    * Mr. E. J. Payne informs me that he can find no earlier use of the name Wye for this river than the present century; and tbat Wycombe is not from the Celtic word for water, but from the early Anglo-Saxon word (Widu) meaning forest.

[^1]:    * This was the depth over the greater part of our excavation ; it varied, however, from 5 feet 6 inches from the present surface at the north, to 6 feet 1 inch at the south, but against this must be set a slight unevenness in the surface.

[^2]:    * I.e., upwards of 6 feet space divided the western from the eastern group, if groups they can be called.

[^3]:    * I.e., about 1892.

