

DARTMOOR STONE IMPLEMENTS AND WEAPONS.

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(Read at Kingsbridge, July, 1897.)

THE critical examination of a large number of the hut circles by the Dartmoor Exploration Committee has clearly demonstrated the fact that many of the dwellings are of great age, and were inhabited by a people who lived on Dartmoor during the Late Neolithic or Early Bronze Age. Up to the present no metallic objects have been discovered in the hut circles, and the whole surface of Dartmoor has yielded but very few implements or weapons made of bronze.

That a stone-using people existed on the moor is amply demonstrated—irrespective of the evidence obtained from the hut circles—from the fact that its surface, or sub-surface, has in all directions yielded large quantities of flint spalls, amongst which cores, flakes, implements, and weapons exist in considerable numbers.

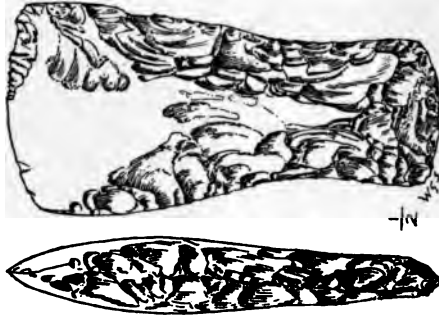
The present account deals principally with the finds made at Post Bridge, Brownberry, and Huccaby.

These places are sites of ancient tenements—farms which have for a long period been cultivated, owing to the more fertile character of the soil and the sheltered positions they occupy, and have been held either as customary freeholds or as copyholds for many centuries.

There is no doubt that in many of the fields of these farms hut circles formerly existed; in some traces of these primitive dwellings still exist, and in others they have been removed within recent recollection.

The flints are turned up in the process of cultivation, and some fields have yielded several thousand specimens, mostly spalls, with occasional finely-worked implements or weapons. The flints are from the chalk, with here and there specimens of chert. As a rule, the spalls have been struck from flint pebbles of no great size, but a few of the larger flakes and

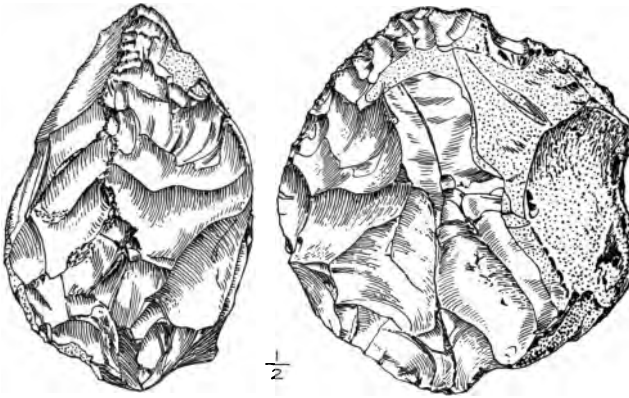
PLATE I.



No. 1.

CELT FROM FOOT OF COSDON BEACON.

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No. 2.

WORKED NODULE FROM LOWER MERRIPIT.

(Page 379.)

some of the finer implements have evidently been fabricated from nodules of flint of considerable dimensions. A specimen of the latter, which had never been worked, was found on making a hedge at Post Bridge some two years since.

The ancient workers in flint seem to have neglected the greensand deposit of Devon, and preferred to go further afield for their raw material. The superior chalk flint found east of Devon was imported into Dartmoor, and was almost exclusively used by its prehistoric folk. The labour involved in transport must have rendered this material of some value, which was further enhanced when, with great skill and industry, it was fashioned into implements and weapons.

Specimens of these which have been formed by chipping and flaking blocks, nodules, or pebbles of flint, are not so numerous as implements and weapons which have been fabricated from the flakes or splinters which have been struck from the nodules. In the former case the nodules, when suitably chipped and trimmed, became the object of manufacture; and in the latter the nodule was flaked and broken up, so that the fragments became the chief product, and the core, or portion from which no more flakes could be struck off, was thrown away.

Foremost in importance of objects resulting from the chipping and flaking of the nodule is the celt, which served the purpose of hatchet, adze, and chisel. Thus far these are of rare occurrence on Dartmoor. Two have been found near Walkham Head in turf-ties—highly-finished, polished grey flint—and another at the foot of Cosdon Beacon, opposite Belstone. The latter is the finest recorded specimen of a flint implement yet found on Dartmoor. One side is much patinated, whilst the other has preserved the lustrous character of the chalk flint. The curves towards the cutting edge have been rubbed down smooth, whilst the body of the celt shows the subsidiary flaking. It is thus a combination of both processes, and is interesting as a specimen of the intermediate stage between the earlier Neolithic, consisting entirely of an implement prepared by flaking and chipping, and the later specimens, which have a wholly smooth surface produced by rubbing and grinding. (See Plate I., No. 1.¹)

Last year (1896) the writer obtained a large worked nodule of flint from Lower Merripit, Post Bridge. (Plate I., No. 2.) It is so flaked that it possesses a slightly circular blunt edge, which is somewhat bruised as if by use. It weighs 1 pound 4½ ounces, and displays a good deal of the original crust of

¹ The illustrations represent full size, unless indicated otherwise.

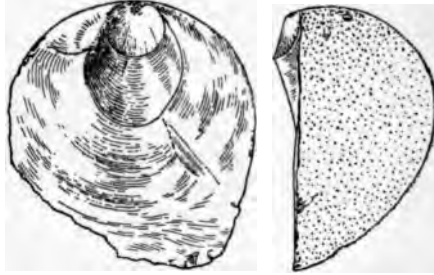
the chalk flint. It can be conveniently grasped in the hand, or hafted, when it would become a most formidable skull-cracker. It is difficult to suggest the original use of this object. A similarly-shaped and worked stone, but weighing only 7 ounces, was found in the same neighbourhood. Its semicircular blunt edge has also been bruised by use; it is more conveniently grasped than the larger stone, but, like this, its purpose is not easily understood.

These very few examples exhaust the list of large implements produced by shaping the nodule itself which has come under the notice of the writer—an indication of their comparative scarcity.

There are, however, implements and weapons in abundance which have been struck from the nodule until the latter has been almost quite used up in their production down to the core, which has then been thrown away as being unsuitable for further flaking. As a rule, these implements are small, but many of them are finely worked, and disclose a large amount of skill in their production. To understand the *modus operandi* in the production of flint implements by prehistoric man on Dartmoor, one must study the habits and customs of modern savages. Catlin² minutely studied the production of flint arrow-heads by the Apaches. These Indians are described as using a chisel or fabricator, made from an incisor of the sperm whale, which is struck by a mallet of hard wood, and thus chipping or flaking the flint to the required shape and degree of finish. The Dartmoor arrow-heads were no doubt fashioned much in the same manner. Hard schorlaceous pebbles, in handles of all, would form the hammer for breaking up the flint nodules; the chisel might have been an incisor of some large carnivorous animal, the point of an antler or a fabricator of flint, and the mallet of oak. Long chisel-shaped implements of flint are occasionally met with. One was found by Mr. Francis Brent on the southern slope of Yes Tor, and another on Saddleborough Moor. The writer also found an example at Huccaby, and another at Post Bridge. When a violent blow is delivered at right angles on the flat surface of a flint nodule, what is known as the cone of percussion is produced; but if the blow be administered near the edge of the flat surface an imperfect cone is formed, and this is termed the bulb of percussion. When these characteristics are present in fragments of flint it is fairly safe to assume

² *Indians of the Rocky Mountains and the Andes.* London, 1868.

PLATE II.



No. 1.

SMALL NODULE WITH CONE OF PERCUSSION.

(Page 381.)

No. 2.



No. 3.



No. 4.



No. 6.



No. 5.

ARROW-HEADS.

(Pages 381, 382.)

that they have been produced by human agency; for in hardly any instances of natural fracture does the surface of the splinter show any trace of its having been produced by a blow; the only probable exception to this being that formed by the violent impact of one stone upon another, as, for instance, a fall from a cliff, or other similar natural causes. Flints found on the surface of Dartmoor possessing bulbs or cones of percussion may generally with safety be ascribed to the primitive workers in stone, even if they possess no secondary chipping. For illustration of the cone of percussion see Plate II., No. 1.

The finds of finely-finished flint arrow-heads are few and far between on Dartmoor, the writer's collection containing less than a score of these weapons. Sharp triangular flakes are, however, found in greater numbers, and these may have been used as arrow-tips. Some appear to be suitable for this purpose, and seem desirable, for their preparation could not have involved the large amount of skill and labour which must have been bestowed on the highly-finished examples. One of the most beautiful of these was found by Mrs. O. L. Munday, in the summer of 1892, in Greyhound Marsh, Post Bridge. (Plate II., No. 2.) It was found on what was evidently the site of a place where flint implements were made, for within the area of a few feet the writer and his family have found many hundreds of flakes and tiny chips, the latter so small that there is no doubt that they represent the *débris* produced by the fashioning of flint implements and weapons. This beautiful arrow-head is almost perfect, a small piece of the tang only being broken off. The point and edges are as sharp now as when first produced, and if looked at under a magnifying glass, the delicacy of the flaking to produce these stands revealed. The flint has been so trimmed down that this tiny specimen weighs only thirteen grains. Placed as a tip to a suitable arrow-stick, and shot from a bow, it becomes a deadly missile. With similar arrows Catlin has seen the Blackfoot Indians slaughter whole herds of buffaloes; in some instances the flint-tipped arrows have been known to penetrate clean through the carcass of one of these ponderous beasts, an illustration of the force and penetration capable of being produced by the employment of such apparently fragile and delicate-looking objects.

No. 3, Plate II., represents an example which was found at Lower Merripit, Post Bridge. It is perfect as made—the imperfect barb being due to an error in manufacture. The

weight of this arrow-head is twenty-seven grains, or a little over double that of the previously-described specimen. They may together be taken as fine examples of Dartmoor arrow-heads of the tanged and barbed variety.

Nos. 4 and 5 are specimens of the triangular variety, and were found at Brownberry and Greyhound Marsh respectively. The former has the front face (visible in illustration) finely chipped and worked, but the back is simply the flat surface of the original flake, with a little secondary working at the edges only. It weighs twenty-six grains, and is imperfect through breakage, as the illustration suggests. The example from Greyhound Marsh was picked up close to the place where No. 2 was found; it is worked on both faces, is almost perfect, and weighs nearly forty-eight grains.

No. 3, Plate V., is somewhat uncertain. It may be either a portion of a large arrow-head, as suggested by the dotted lines of the drawing, or it may be a small example complete in itself, with a single long barb, similar to a form which is common on the Derbyshire moors.³

Thus far the occurrence of leaf-shaped arrow-heads on Dartmoor has been uncommon. The writer has only one broken specimen in his collection, and another in the same condition possessing a tang but no barbs.

The larger kind of arrow-heads were probably used as tips to short stabbing spears, or, attached to light sticks, they might have been used as javelins. No. 6, Plate II., is of this kind. It is from Brownberry, is closely worked on one side, whilst on the other is the rounded smooth surface of the flake, with a strongly-pronounced bulb of percussion at the base, where it is about three-eighths of an inch thick. It weighs nearly half an ounce.

Nos. 1 and 2, Plate III., though not quite perfect, are more shapely examples; the former is from Huccaby and the latter from Brownberry.

No. 1, Plate IV., is a broken object of uncertain use. It might be a lance-head, although the sharpness of the base does not seem to favour this assumption; or it might have been used as a knife like No. 3—a thin, sharp, but imperfect tool. No. 2 on the same Plate may be a rudimentary spear-head.

Borers are not uncommon. No. 2, Plate V., is a good specimen from Huccaby. No. 1, Plate V., is a tool of uncertain use. The edges are not sharp enough to have been

³ EVANS'S *Ancient Stone Implements of Great Britain*, p. 351.

used as a knife, and the point is too blunt to be effective as a small spear-point; it might perhaps be best described as a pointed scraper.

Specimens of flakes which have evidently been used as knives are numerous, but flakes with secondary trimming, so as to produce a knife-edge, are by no means common. One of the best I have yet seen was found in a hut circle at Smallacombe Rocks, near Hay Tor. The base, unfortunately, is broken.⁴ No. 2, Plate VI., is evidently more suitable for stabbing than cutting, the point being still sharp and effective. Mounted in a short stick or bone, it would be formidable as a dagger. No. 1 on same plate is a knife of the more abundant type.

The scraper is probably the most ancient implement of any craft in the world, and may be described as a broad flake trimmed to a circular or semicircular shape with a bevelled edge. They vary in shape and size—from the large horse-shoe form to the small circular thumb scraper—and are by far the most numerous form of implement found on Dartmoor.

The great majority of these tools were doubtless used for skin-dressing; some, however, might have been used as planes.

Amongst savage people of to-day the women are the skin-dressers; and the skill they display in this avocation, with the subsequent preparation of the garments, is most striking.

That the prehistoric women of Dartmoor were industrious in this direction is amply demonstrated by the abundance of scrapers found in and near the sites of ancient settlements; in fact, their share in the advancement of primitive culture must have been a large one, for there is some reason to believe that the women were also the potters, from certain indications on some of the rude hand-made pottery which has been unearthed from some of the hut circles.

In the preparation of skins the scrapers were used for removing the fat from the fleshy side, the hair or fur being taken off by "sweating," *i.e.* rolling up the skins when damp, thus opening the pores, and rendering the unhairing process easy.

Or it is quite possible that these industrious creatures had discovered the depilatory action of the lye produced by moistening their wood ashes with water.

⁴ See Illustration in Dartmoor Exploration Committee's Report, No. IV.

Nos. 1 and 2, Plate VII., from Merripit and Huccaby respectively, are good types of the horse-shoe variety.

There are also scrapers of a conical type, not nearly so common nor apparently so effective, for they are not so conveniently handled. This, and the inference that the conical shape was premeditated, have led to the suggestion that these tools were not intended for use as scrapers, but were applied to some unknown purpose. They are included as scrapers, for they approximate more nearly to this implement than to any other.⁵

No. 4, Plate VII., is another somewhat uncommon variety from Brownberry. It is a curved flake more or less trimmed all round, and forming a combination of a scraper and knife.

The thumb scrapers, which are fairly numerous, are represented by No. 3. Other types of scrapers are simple flakes with bevelled points, and some of these are so small that it is very difficult to imagine what their possible usefulness could have been.

The remaining type to be described is shown on Plate VIII., and is known as the notched or hollow variety, and was evidently intended to scrape cylindrical objects, such as arrow-sticks and bone needles.

There is another form of implement found in many of the hut circles for which no definite use can be suggested. They are usually pebbles of red grit or fine-grained elvan, such as may be found in the river-beds of the Dartmoor streams near the borders of the moor. They usually have one or more of their surfaces ground down to a flat edge, or their surfaces scored with fine longitudinal furrows, as if some small objects, such as bone needles, had been sharpened on them. Two or three have deep cuts in them, as if to sharpen some larger implement or weapon. (See Plate IX.)

These suggest the probability of their use for sharpening bronze, if this alloy was ever sharpened by grinding, and not exclusively by hammering. Such deep cuts in the grit pebbles would, however, be produced by grinding down flint objects, but such fine-worked and polished tools are seldom found on Dartmoor. None of them appear to have been used as whetstones or "barkers." Various surmises have been made as to the use of the pebbles with the edges

⁵ *L'Anthropologie*, vol. viii. No. 2, contains an account of the exploration of the Grotte du Pape, in which precisely similar scrapers were found, and are regarded as characteristic of the strata of the lower valleys of the Pyrénées.

PLATE III.



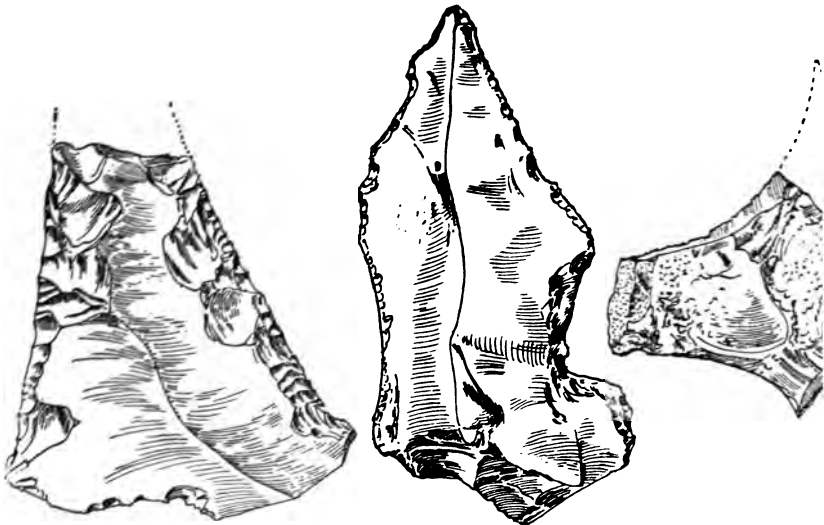
No. 1.

No. 2.

LARGE TYPES OF ARROW-HEADS.

(Page 382.)

PLATE IV.



No. 1.

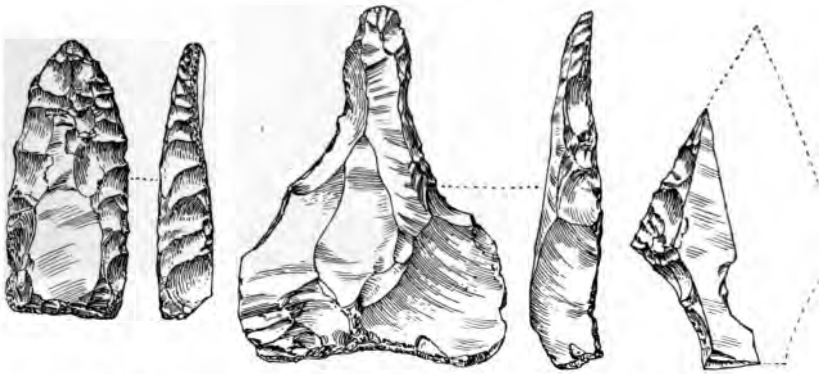
No. 2.

No. 3.

IMPLEMENTS OF UNCERTAIN USE.

(Page 382.)

PLATE V.



No. 1.

No. 2.

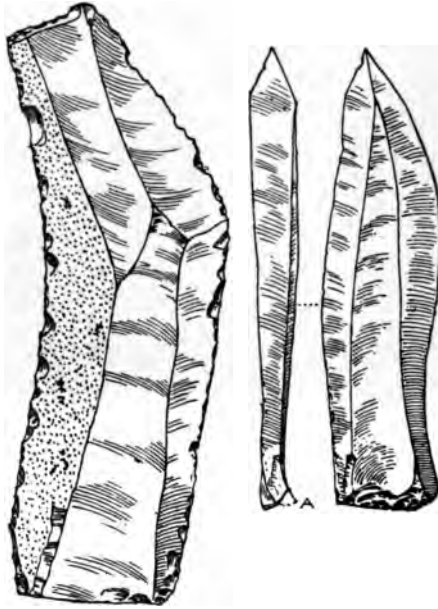
No. 3.

POINTED SCRAPER, BORER, AND ARROW-HEAD.

(Nos. 1 and 2. Pages 382, 383.)

(No. 3. Page 382.)

PLATE VI.



No 1.

No 2.

KNIFE AND SMALL DAGGER.

(Page 383.)

PLATE VII.



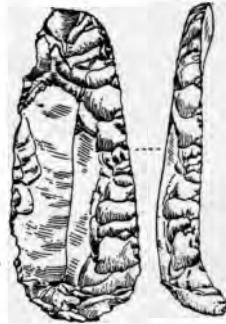
No. 1.



No. 2.



No. 3.



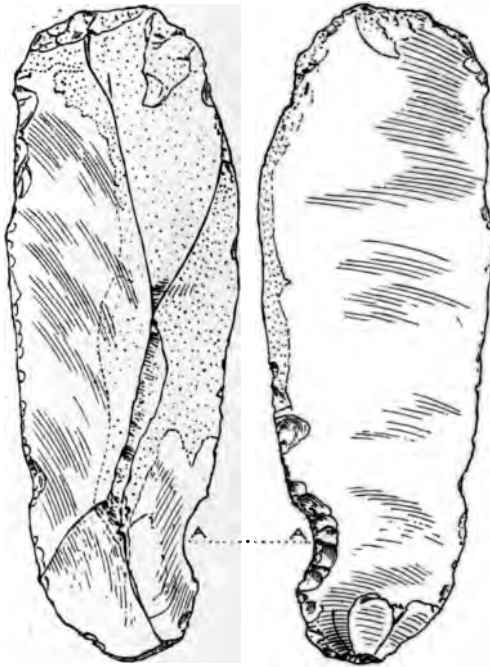
No. 4.

SCRAPERS.

(Pages 383, 384.)

1

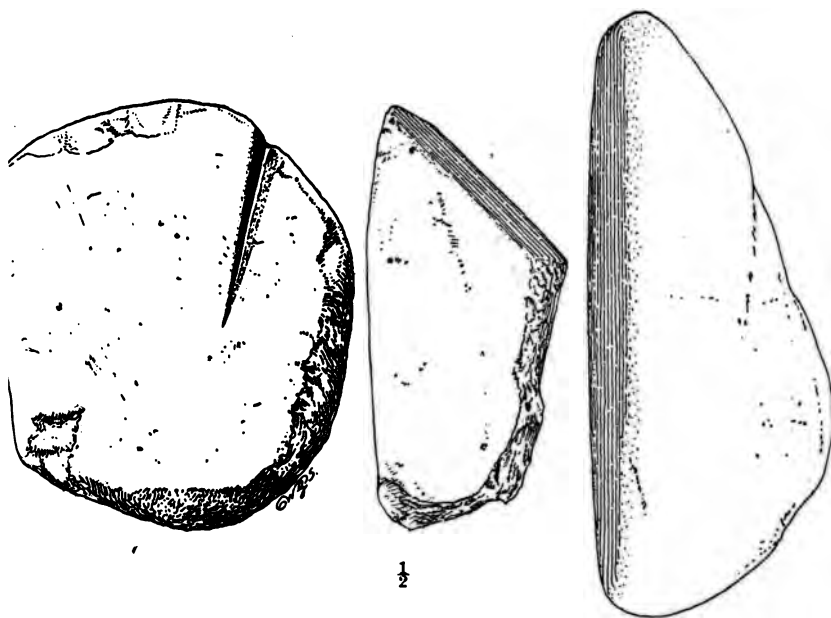
PLATE VIII.



FLAKE WITH NOTCH FOR SCRAPING ARROW-STICKS.

(Page 354.)

PLATE IX.



GROOVED STONE AND RUBBERS.

(Page 384.)

flattened down by grinding—they might have been used in the preparation of the skins by rubbing them, as do the Eskimo women of to-day with pumice-stone, in the pressing down of the seams of garments, in the tempering of the clay for the potter, in grinding down pigments, or in the fashioning of the pottery when in a plastic condition.

These are suggestions only, for these objects are at present as puzzling to the antiquaries at the British Museum as they are to local archæologists. They persistently turn up in the exploration of hut circles, and it is possible that some light may in future be thrown on their use.

One of the striking peculiarities of the examination of the hut circles is the almost entire absence in them of means for grinding grain. One hut circle on Whiten Ridge yielded a muller, oval in shape, and with a grinding surface of twelve inches by nine inches, and a greatest thickness of four and a half inches. One or two more have been observed near King's Oven,⁶ and one was found deeply buried in the peat by Prebendary Wolfe, at Leighon, near Manaton, and is now in the Torquay Natural History Museum.

Cooking stones, *i.e.* rounded, river-worn pebbles, which have been used after being heated in a fire for baking or boiling, are numerous in some of the hut circles—one at Broadun yielded no less than sixty.

Discs of slate, evidently used as covers to pots, have been unearthed in hut circles at Har Tor, Blackslade, Smallacombe Rocks, and other places; and clay spindle-whorls have been found so far only in the settlement at Legis Tor, whilst one of micaceous slate was discovered a few years since by Mr. Alexander on the summit of Leedon Tor.

⁶ These are doubtful, and may be modern, for they were observed lying on the surface of the ground.