

EARLY MAN

THE PALAEOLITHIC AGE

THE examination of bone-caves in Devon during the past century is the main source of our knowledge of early man in the county. Devonshire has the distinction of at one time possessing at Oreston, Plymouth, a bone-cave in the Devonian limestone which was systematically explored as long ago as 1816, and of still having within its borders, in Kent's Cavern or Kent's Hole, the most important cave dwelling of primitive man known in the country.

ORESTON.—The quarries at Oreston, from which the stone was obtained for the construction of Plymouth breakwater, were opened in 1812 under the superintendence of Mr. Whidbey, who was requested by Sir Joseph Banks, then President of the Royal Society, to narrowly examine any caverns his workmen might break into for bones or fossil remains, and if such were found, steps were to be taken for their preservation and examination.

This request was responded to by Mr. Whidbey in an efficient manner, for he discovered several caverns and ossiferous fissures containing fossil bones, which were deposited in the Museum of the Royal College of Surgeons, and reported on by Mr. Clift, the curator.

Colonel Hamilton Smith¹ states that prior to 1833, and repeatedly since, caves have been opened at Oreston, near Plymouth, several of which had in them bones of extinct animals and abundant hyaena coprolite, denoting that they had been dens of carnivora. Among these remains the upper portion of a humerus of man was recognized. On this being pointed out to the possessor it was immediately thrown away. Colonel Hamilton Smith further states that this is not the only instance of the kind.

Shortly after the exploration of Oreston came the researches of Dean Buckland in the cave at Kirkdale, in Yorkshire, and the famous examination of Kent's Cavern, Torquay.

KENT'S CAVERN, WINDMILL HILL CAVERN.—Devonians may congratulate themselves that their county yielded not only the first-fruits of the systematic investigation of bone-caves and the antiquity of man in Britain, but the heaviest crop of all was garnered from Kent's Cavern by the Rev. J. McEnery, Mr. Godwin Austen, the Torquay Natural History Society, and a committee of the British Association, which from 1865 to 1880 persevered with a scientific and thorough investigation, mainly carried out and reported on by the late Mr. Pengelly, F.R.S., of Torquay.

Mr. Pengelly describes the cavern² as situated in a small wooded hill of Devonian limestone, which rises a little more than 200 ft. above sea level, and is about one mile east of Torquay Harbour. On the eastern side of the hill there is a small vertical cliff in which are the two apertures leading into the cavern. These are nearly on the same level, 54 ft. apart, about 190 ft. above the level of mean tide, and about 60 ft. to 70 ft. above the bottom of the valley in the same vertical plane. The cavern consists of two parallel divisions, an eastern and a western, each containing a series of chambers and passages, and throwing off lateral branches, some of which are of considerable length and very tortuous. The divisions are united near their northern and their southern ends. The connecting passage at the latter extremity is completely filled with various deposits, whilst the northern appears to have always been a comparatively lofty open chamber. The eastern division, into which the two apertures or entrances directly open, and which has been completely explored by the committee, is 285 ft. long, 90 ft. in greatest breadth, and, when measured from the bottom of the excavation made by the explorers, 22 ft. in maximum height. The western division is probably of greater length, and is at a considerably lower level than the eastern.

¹ *Natural History of the Human Species*, 95-96.

² *Trans. Plymouth Inst.*, i, 345-346.

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Kent's Cavern seems to have been known from time immemorial, and it has been resorted to by man from palaeolithic times to the present day. There are abundant indications that it was very much used during the Romano-British period, and it was frequented as late as the early part of the fifteenth century, probably as a place of refuge. It has been a well-known show place from the eighteenth century, and must have been visited long before that by the curious, for Mr. McEnery records inscriptions of the seventeenth century incised on the stalagmite, the earliest being 1615.

The earlier explorers clearly demonstrated the fact that rude stone implements fashioned by the hand of man were found in red loam under a covering of stalagmite blended with the bones of extinct cave mammalia, such as tichorhine (or woolly) rhinoceros, hippopotamus, cave-bear, etc. The inference was therefore drawn that man and such mammals must have been contemporaneous.

This pushed back the antiquity of man so far that grave doubts were raised by many, not as to the human origin of the implements, but rather as to their being contemporaneous with the remains of extinct mammalia.

The accidental discovery, however, in 1858, of Windmill Hill Cavern at Brixham, set these doubts at rest, and that the matter might be carefully investigated, the cavern was handed over to a committee appointed by the Royal and Geological Societies, under the superintendence of Mr. Pengelly. In twelve months this comparatively small cave was exhausted, and the result of the researches amply bore out the evidence obtained from Kent's Cavern by the earlier explorers, for flint tools were found unmistakably blended with the remains of extinct cave mammalia, and in such a manner as to preclude any of the objections previously raised.

The bone-bearing loam, of an ochreous red colour, was covered with stalagmite varying from 1 in. to 15 in. in thickness. No human bones were found, but flint implements were disinterred from the lowest part of the bone-bearing loam. Man resorted to the cavern before the whole of this loam was deposited, and evidently preceded the cave-bear, for in the upper part of the red loam the remains of bears and their cubs were numerous. After the stalagmite had begun to form, the cave was evidently still occasionally resorted to by beasts of prey and other animals, for the remains of bear, rhinoceros, and reindeer, were found in the floor of this material.

The most ancient deposit in Kent's Cavern was a dark red grit described as the breccia, containing rounded pieces of quartz, flint implements of palaeolithic type, fashioned from the nodule,

¹ The deposits in Kent's Cavern are as follows :—A, Limestone blocks fallen from the roof (1), in some parts leaving the black mould (2) exposed, floor of granular stalagmite (3), cave-earth (4) with limestone blocks and various remains. B, Roof of cavern (1), unoccupied (2), floor of crystalline stalagmite (3), unoccupied (4), floor of granular stalagmite (5), cave-earth (6), dark red breccia (7). C, Limestone blocks (1), black mould (2), floor of granular stalagmite (3), black band (4), cave-earth (5), crystalline stalagmite (6) 10 to 12 ft. thick with dark red breccia below.

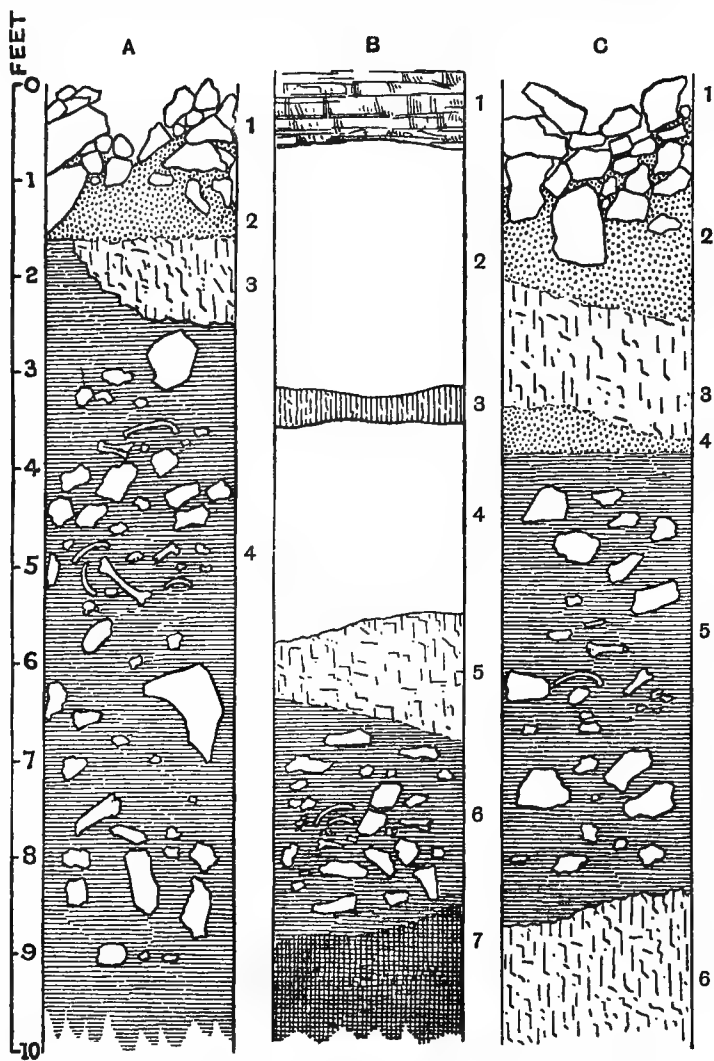


FIG. 1.—SECTIONS OF KENT'S CAVERN¹ FROM DIAGRAMS IN BRITISH MUSEUM

A, 1865 Report

B, 1872 Report

C, 1867 Report

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not flakes struck off from the same, and the animal remains found were exclusively those of the bear. This deposit was sealed up by an enormous floor of stalagmite (carbonate of lime) of crystalline texture, as much as 10 ft. or 12 ft. thick, which, like the breccia, contained remains of the bear. Resting on the top of this was the cave-earth of light red clay mixed up with fragments of limestone covered with films of stalagmite. This bed was not present in all parts of the cave explored, and its maximum thickness was 4 ft. Here the flint and chert implements were flakes struck off from the nodule or core, and exhibited a decided advance in manufacture compared with the more rudely shaped palaeoliths found in the deposit underneath. The cave-earth yielded a bone needle, spear-heads of bone or horn, hammer-stones, whet-stones, a perforated badger's tooth, and a hare's leg-bone with holes neatly drilled in it, suggesting its use as a whistle.

The top of the cave-earth was partially covered with wood charcoal about 4 in. thick, described as the black band, and on this, still ascending through the strata, was a granular floor of stalagmite varying from 1 in. to nearly 5 ft. in thickness.

Water containing carbonic acid derived from organic matter slowly dissolves limestone, and with this in solution it percolated through the roof and sides of the cavern. The dissolved limestone (carbonate of lime) either crystallized, or became deposited in the granular form. Even supposing an abundance of drip water extra charged with carbonic acid, in fact all the conditions favourable for speedy deposit, a very long period of time must have elapsed before such thickness of stalagmite could possibly be formed.

We have not yet done with the ascending strata, for resting on the granular stalagmitic floor was a layer of dark, decayed vegetable matter, 3 in. to 12 in. thick, which for the sake of distinction was described as the black mould.

In this were found remains of the Bronze Age, weapons and implements of bronze, a cake of smelted copper, succeeded by spindle-whorls, bone combs, and ornamented pottery of Early British down to Romano-British times, the bones of animals, and also those of man.

All these strata were finally covered with blocks of limestone, some small, others weighing scores of tons, which had from time to time become detached from the roof of the cavern. These were partially cemented by calcareous drip, and the whole formed a natural sarcophagus, underneath which lay buried the story of the primitive men of Devon.¹

Man was evidently living in or near Kent's Cavern during the formation of the breccia, preceding the hyaena.

It was noticed during Mr. Pengelly's exploration that while no animal relics were found below 7 ft. from the cave floor, three palaeolithic tools made from flint nodules were found in the eighth-foot level, and several flint chips, struck off in implement making, occurred in the ninth or lowest foot level. Man's handiwork was the oldest of all.

The history as revealed by the strata may be summed up as follows:—The palaeolithic breccia men had massive tools made of nodules of flint, roughly chipped and irregular in outline, but no delicate flakes, or implements of bone. They left no trace of fire behind them. The later men of the cave-earth possessed carefully chipped and symmetrically formed but unpolished flakes of flint; they had bone needles, could make a fire, and adorned their persons with necklaces or bracelets strung with the perforated teeth of mammals. They had no pottery, metal, or spindle-whorls. These were, however, possessed by the succeeding men of the black mould, who were advanced enough in civilization to smelt and alloy metals and wear amber beads.

THE TORBRYAN CAVES NEAR DENBURY.—These are variously described as caves, rock shelters, tunnels, or fissures in the limestone at Torbryan. They were mostly explored by the unaided efforts of Mr. J. L. Widger, and were reported on by the late Mr. J. L. Lee.² They contained a bone bed with the usual cave fauna, including teeth of hyaena, bear, and rhinoceros. A flint implement described as of the older type was found under two thick floors of stalagmite. The cave was evidently also occupied by a neolithic race, for it yielded implements of that period and much charcoal.

HAPPAWAY CAVERN, TORQUAY.—This was explored by Mr. Pengelly and his son with their own hands, and to avoid any possibility of mistakes, or worse, the entrance was blocked and a door inserted. When the explorers were not in the cavern the door was kept locked, and the key remained in the possession of the careful and indefatigable explorer.

The general character of the zoological remains was that of a recent fauna, but a decided air of antiquity was imparted by the discovery of a few relics of the hyaena and rhinoceros. It seemed apparently not improbable that the cavern was more or less filled in palaeolithic times, was subsequently almost emptied (by water), and then was nearly completely refilled in times long subsequent to the British hyaena and his extinct contemporaries. The absence of a separating floor of stalagmite allowed the occasional commingling of the new deposits with the old, and thus deprived the cavern of anthropological value, and caused the enthusiastic labour bestowed on it to become of but little value.

¹ See Section C for sequence of strata. N.B.—Breccia not shown.

² *Proc. Soc. Antiq.* (ser. 2), viii, 247.

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THE CATTEDOWN BONE-CAVE.—Mr. McEnery found human bones in Kent's Cavern beneath the stalagmite, but under such circumstances as to lead him to form the opinion that they had been placed there after the remains of extinct mammalia had been deposited. As we have previously noticed, on the authority of Colonel Hamilton Smith, human bones were observed, and disregarded in one of the Oreston Caves, some fifty-seven years since. In the first instance we are compelled to accept the doubt of Mr. McEnery, and the second is open to criticism, apparently for want of confirmation; we must therefore admit that up to 1886 there existed no reliable evidence that the bones of man and extinct mammalia had been found in any of the Devonshire bone-caves in undoubted original association.

In the autumn of the above-mentioned year this uncertainty disappeared, for bones of the cave-men of Devonshire were discovered at Cattedown, Plymouth, in juxtaposition with the remains of the cave hyaena. The Cattedown Bone-Cave was accidentally discovered by some workmen who were employed by Messrs. Burnard & Alger to remove limestone from an old quarry at Cattedown for the purpose of providing stone for quay extension on the northern shore of the Cattewater. It was situated—for it is now destroyed—about 150 yds. north of the old shore of the Cattewater, in a line with No. 7 warehouse, and Messrs. Burnard & Alger's office.

This old quarry had been excavated many years since down to some 60 ft. below the cliff surface, and the old upper floor of a portion of the excavation was being worked down to a lower level when a fissure was broken into. This was seen to be filled with soil and small stones, the debris of the former workers of the quarry, and on clearing it out a few ox bones were observed which, from their condition, were indicative of considerable antiquity. Recognizing the possibility of more finds being made underneath, Messrs. Burnard & Alger bore the cost of an exploration which extended over several months, and placed its conduct in the hands of the late Mr. R. N. Worth, F.G.S., his son, Mr. R. Hansford Worth, C.E., and the writer.

Before briefly dealing with the contents of the cavern, it may be stated that it consisted of a gallery 54 ft. long, pointing north and south in the direction of a natural jointing of the rock. This gallery was only 4 to 5 ft. in width, but expanded into a chamber at each end. Both these chambers had a length of 20 ft. That of the south end was about 5 ft. wide and descended to a depth of 9 ft. below the recent quarry level.

The greatest width of the northern chamber was 8 ft., with a depth of 13 ft.—deep enough to admit the tide at high water. The gallery connecting the chambers did not descend more than 2 ft., so that the lowest depths of these chambers were separated by nearly 20 ft. of rock (see Fig. 2).

The original height of the cavern, or whether it led into other fissures, is unknown, for the rock above it was removed many years ago. It is probable that the cave was the nethermost of a series of caverns, for the limestone at Cattedown is honeycombed with cavities and fissures of varying dimensions. Where these cavities occurred in the operations of quarrying they formed convenient receptacles for 'spoil,' and the modern filling of the Cattedown Bone-Cave may be thus accounted for. This 'spoil' could be easily distinguished from the natural deposits on which it rested, and when it was removed the strata of stalagmitic floor, breccia, granular stalagmite and cave-earth were clearly distinct. In the northern chamber the total depth of material excavated was 27 ft., and of this 20 ft. was more or less ossiferous.

The bones in the stalagmitic breccia represented the remains of man, hyaena, wolf and deer, the latter predominating. Portions of skeletons were found more or less complete, and indicated that when deposited they were clothed with flesh, and that there had been no subsequent disturbance. The lowest human skull was found at 7 ft. below the stalagmitic breccia, but human bones and teeth occurred at the lowest point reached. The feature of the concrete floor was that it contained a great many remains of the hog, whilst the most important finds in the cave-earth were humeri and teeth of the cave-lion, a radius and vertebra of rhinoceros, associated with teeth and bones of man.

Compared with the breccia the remains in the cave-earth were neither so numerous nor so complete in partial skeleton form, and suggested a more gradual accumulation.

The concrete floor and cave-earth were probably produced slowly by the drainage of water into the cave, and this may also have been the vehicle for the introduction of the fragmentary animal remains. The stalagmitic breccia, on the other hand, suggests that its component parts mixed up with the bodies of human beings and animals were deposited by some sudden and violent rushing of water into the cave. This apparent connexion, either with the recesses of other then existing caverns or the surface, suggests some cataclysm which swept the bodies in a confused mass into the cave, and piled them up at the very end of the fissure. This disaster must have affected a considerable local area, for it collected human beings, hyaenas, wolves and deer, and buried them pell-mell in a common grave, deep in the recesses of the limestone.

A few fragments of charcoal were found in the breccia, and fewer still in the concrete floor, and traces were observed in the cave-earth. There occurred in the cave-earth of the northern chamber a natural flint pebble $4\frac{1}{8}$ in. long and $2\frac{3}{4}$ in. wide, of which a portion had been broken off

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longitudinally, and one end removed in a slanting direction. With the exception of this flint nodule, which may have been a hammer-stone, and a few fragments of slate, all the stone contents of the cave were immediately local. The cave yielded a few gnawed bones, a little coprolite, and the lower jaw of a very young hyaena with its first set of teeth incomplete. It is possible that the cave, remote as it was in recesses of the rock, was resorted to by human beings at one period, and by hyaenas at another, before it was partially filled, but the slight evidence of human occupation is obscured by the theory of the sudden rush of water into the cave carrying with it the sweepings of

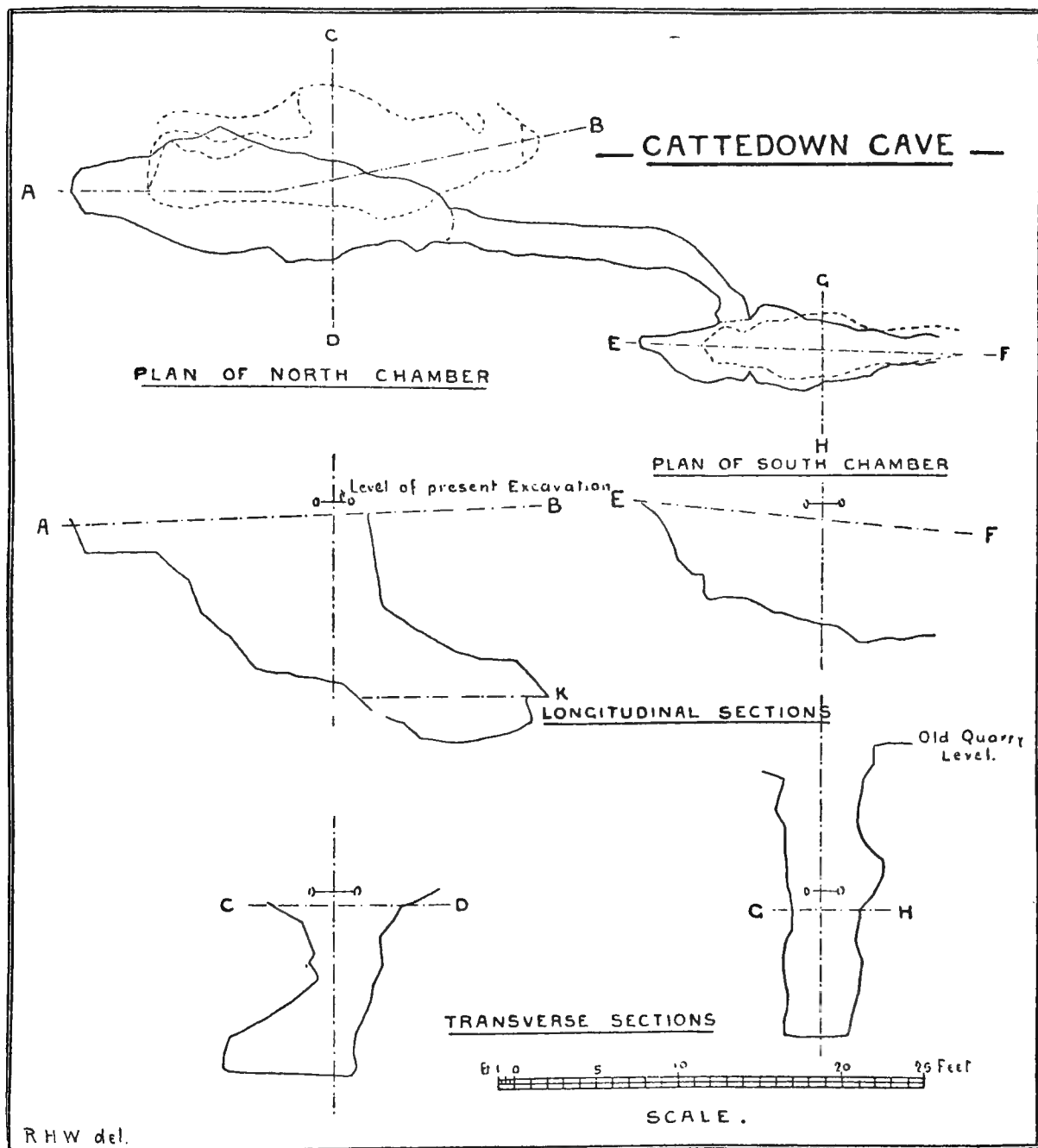


FIG. 2.—PLAN AND SECTIONS, CATTEDOWN CAVE

other caverns which may have communicated with the surface. Avoiding all speculation, one fact stands out clear and distinct, and that is, that human beings and hyaenas lived in the flesh at one and the same time in the neighbourhood of Cattedown. This alone invests the human remains with an extraordinary amount of interest, for their discovery presents an opportunity of actually studying the physical characteristics of men who were certainly contemporary with these long-extinct animals, and probably also (with) the rhinoceros and cave-lion. The human bones represent the remains of some

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fifteen or sixteen individuals of both sexes ranging from childhood to old age. Two facially perfect skulls are represented in the accompanying illustration (see Fig. 3), and from the measurements calculated from these portions Mr. R. N. Worth reported that they appeared to him to be orthocephalic in type, i.e. midway between the long head and the round. They are orthognathous, and some of the powerful lower jaws discovered have prominent chins. Some of the skulls were exceptionally thick, and others again very thin. The teeth generally are massive, and however much worn show but little traces of decay. One of the humeri is perforated, and the tibiae are distinctly platyknemic. The race was a short one, various calculations making the average slightly over five feet.

AXMINSTER.—Although the principal evidence of the existence of palaeolithic man in Devonshire is rendered by certain of its caverns, we have in the valley of the Axe a deposit of river drift implements. These have been found in a ballast pit at Broom, near Axminster, and close to the River Axe. Some of the implements are of large size and of chert, some water-worn, and others

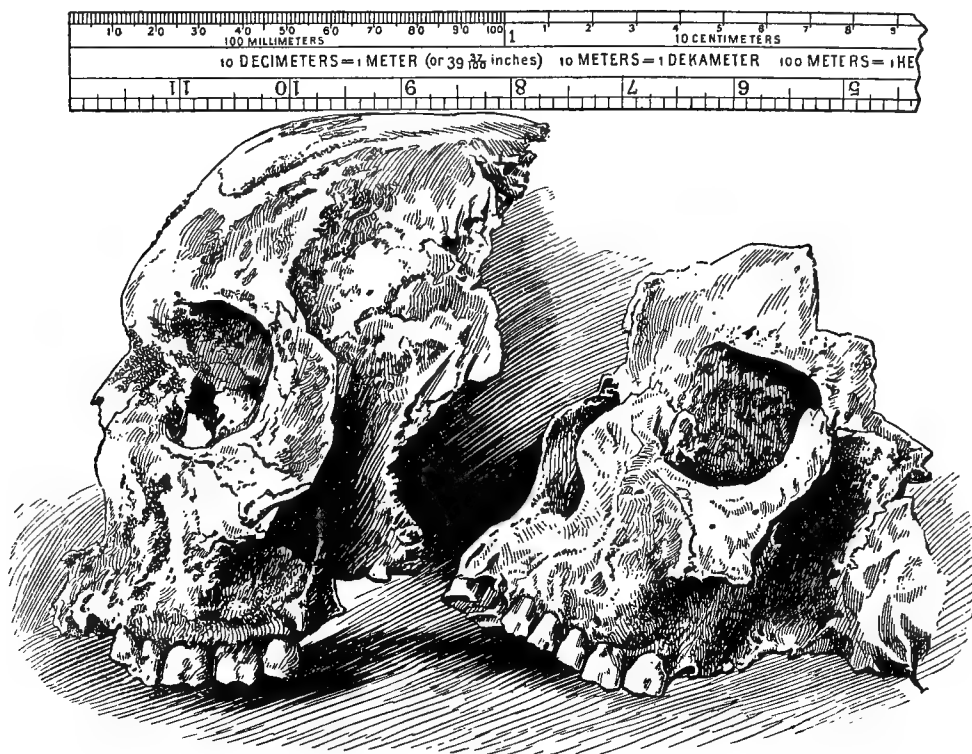


FIG. 3.—SKULLS FROM CATTEDOWN CAVE

again quite sharp and uninjured. The ovate type seems to predominate,¹ but the pointed forms are not scarce. There is a fine series of palaeolithic implements from Broom at the Albert Memorial Museum at Exeter.

THE NEOLITHIC AGE

The records of primitive man in Devonshire, as revealed by the exploration of Kent's Cavern, are plain and distinct. The formation of the breccia and the infilling of the cave with red earth, both containing relics of human handiwork, must have taken a long period of time. During this, as we have previously realized, man and predaceous animals, in turn, were at least visitors if not actual occupants of the cave. Over this again was the black band, where charcoal, the débris of ancient fires, indicated a more continuous human occupation. Above all was the floor of thick stalagmite, and this also must have taken, measured by years, a very long time to form. This stalag-

¹ For a typical example figured see Evans, *Stone Imp.* 638.

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mite contained but few remains, human or otherwise, and it is surmised that these few may have fallen in from higher levels during the formation of the deposit. There is thus apparently a great break of unknown dimensions represented by the interposition of this stalagmitic floor between the earlier forms of animal life and implements below, and the later forms and more advanced tools above. Beneath are all the phases of the Palaeolithic Age, and above we are suddenly brought face to face with a superior culture and the incoming of existing forms of mammalian life. There is no transition stage recorded in the annals of the cavern. Whether generally there was an absolute and lengthened break between the disappearance of the cave-men and the arrival of the new-comers is at present unknown. Such breach of continuity may have been local, for whilst the bulk of the cave-men followed the retreating reindeer north, it is not unreasonable to conjecture that some remained behind and became amalgamated with the new race which had migrated from the East into Britain. Evidence may yet be forthcoming, especially from the Continent, that there was an actual transitional period, but up to the present nothing is furnished by Devonshire. Between the disappearance of the cave-men and the advent of these human beings of more advanced culture great changes had come over the face of Western Europe. The climate had become more temperate, and there was a greater rainfall; Great Britain had become an island, and Devonshire possessed a coast line. The waters of this coast line are often found to cover submerged forests, as at Torbay; Blackpool, nr. Dartmouth; Bigbury, and Northam, nr. Bideford. At Torbay there are considerable accumulations of vegetable matter, with remains of trees projecting from a bluish clay, and there is reason to believe that this extends beyond the five-fathom line. In this, and in similar deposits in other localities in Devonshire, the bones of the red deer, horse, hog, and long-fronted ox have been found. In addition to these some fishermen dredged up the tooth of a mammoth, about 1860, some four miles out in Torbay, and in 1842 a piercing tool, fashioned from a red deer antler by the hands of man, was found in the sub-aërial portion of the forest in Tor Abbey Sands, twelve feet under the surface, during extensive drainage-excavations.¹ These objects were found in varying circumstances, and too far apart to establish contemporaneity between man and the mammoth, but they illustrate the great antiquity of some of the submerged forests of Devonshire.

The better-equipped man possessed domestic animals, cultivated cereals, and had learnt the art of weaving, and of making rude vessels of pottery. His implements and weapons were often hafted and of greater variety of form and effectiveness. His stone axe-heads were sometimes ground and polished, and he brought down his quarry with bow and arrow-sticks tipped with heads of flint. He practised inhumation, and later on cremation, in the disposal of the dead, placing the carnal remains in stone chambers covered with long barrows. The cremated remains are mostly found in round barrows. Although there is a sharp and well-defined break of apparently long duration between the palaeolithic and the later periods of human culture, such is not the case between what we term the neolithic and bronze periods (convenient terms for indicating an age of stone and an age of bronze), for the former overlaps the latter, and both actually run into that period when iron first

¹ *Trans. Devon. Assoc.* (1865), pt. iv.

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appears in Britain. Not only is this the case with implements of stone and of metal, but the same overlapping may be observed in the study of pottery.

With all this overlapping of periods it is difficult to separate the purely neolithic in Devonshire, and all the more so because there are no known long barrows in the county. These may have existed in the low lands near the neolithic clearings, and have been ploughed down during many centuries of agricultural operations, but this does not account for their absence on some of the great uplands of Devonshire—vast stretches of uncultivated moorland.

Neolithic men visited Dartmoor, for they have left their tools and weapons behind them as silent witnesses of the fact, but there are no traces of their houses or their graves, with perhaps one possible exception, for the nearest approach to a grave of the Neolithic Age is the only Devonshire dolmen in the parish of Drewsteignton, on the borders of the Moor. This was a family or tribal ossuary in use during the Stone Age, and even probably continued down to the time of the early use of bronze. It lies two miles west of the village of Drewsteignton, in a field adjoining Shilstone Farmhouse. It is locally known as the Spinster's Rock. Three vertical stones about 6 ft. high carry the cap or quoit, which is 12 ft. long, 9 ft. wide in the broadest part, and just 2 ft. thick, and weighs about 16 tons. It unfortunately fell on 31 January, 1862, but was replaced by the late Mrs. Bragg, of Furlong, some ten months after.

Close to the dolmen there formerly existed remains of stone circles and stone rows (avenues). Some of these were noticed by Polwhele in 1793, and others mapped by Mr. Grey in 1832. One stone row led towards the dolmen, just as we find in other districts that these often lead to a kistvaen, which is but a later type of dolmen on a smaller scale. Although this is the only dolmen now standing in Devonshire, there is reason to believe that formerly others stood in various parts of the county, for the oft-occurring name of Shilstone, or Shelfstone, is indicative of their existence.

Polished implements, such as celts or perforated axes, some of which may belong to a later age,¹ have been found near the head of the Walkham. One each has been reported from nr. Princetown, Tavistock, Cosdon Beacon, Bere Alston, North Bovey, Berry Cross nr. Great Torrington, Brentor, Ashbury, Holsworthy, Runnage nr. Post Bridge, Withycombe Raleigh, Hope's Nose, and Chelson, near Torquay, Houndiscombe and Compton Gifford, Plymouth.

There is thus evidence of the presence of neolithic man over considerable portions of the area of Devonshire. He evidently lived in Kent's Cavern and Torbryan, but all traces of his dwellings or places of burial elsewhere, excepting the dolmen grave at Drewsteignton, have disappeared. We have, therefore, no opportunity of examining the physical characteristics of neolithic skeletons in Devonshire, but we may take it, from investigations in other counties, that they were long-headed, in contradistinction to the short or round heads of the Bronze Age.

THE BRONZE AGE

We fortunately possess abundance of evidence of the existence of a late stone and early metal-using people in Devonshire. Few counties possess such

¹ These probably belong to the Bronze Age.

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open and large tracts of uncultivated land, and Dartmoor is unique. The surface of much of this moorland area has never been disturbed by the plough—it has remained a purely pastoral grazing district from time immemorial.

The aspect of the heights and slopes of Dartmoor during the prehistoric period was much as it is now, but many of the valleys we should hardly recognize. Some of these were marshes studded with bulrushes, a good example of which is Broad Marsh on the East Dart running up to the foot of Cut Hill. This was drained by the 'old men,' i.e. the ancient tanners, who dug through solid rock and lowered the bed of the river to such an extent that the marsh was relieved of the water, thus enabling them to stream the surface for tin. It still remains boggy, and bulrushes may yet be seen in the wettest portions.

Other valleys again were densely wooded thickets, containing oak, alder, hazel, and furze. Gawler Bottom near Post Bridge is a type of the once wooded valley, and Wistmans Wood is an example of an existing specimen. Gawler Bottom, now a bog, was apparently formed by the Gawler Brook becoming choked in the lower end of the valley, and the resulting formation of the peat killed the trees. When the turf-cutters are at work, remains of black oak and even hedge-nuts may be seen lying deep in the bog four to five feet under the surface. Without multiplying instances we can easily imagine the thickets in some of the valleys and the marshes in others—the former harboured the wolf and the latter teemed with wild fowl.

The slopes sweeping up to the tors were generally bare as they are now, and studding these, in favoured positions, were the dwellings of a primitive pastoral people. Sometimes these occurred in clusters, and were surrounded by a massive wall—in other cases the villages were encircled by a less substantial wall which seems not to have been erected for defensive purposes, but more for the purpose of corralling cattle—in others again the villages were quite open with corrals attached to the huts and forming quite a network of enclosures.

In addition to these villages there are hut circles scattered over the dry and best favoured areas of the moor. The foundations of these circular huts are composed of such massive granite blocks that they have withstood the ravages of time in a remarkable manner, and many of them stand to-day much as they must have been soon after they ceased to serve as habitations for the particular people who used them. They are to be found in hundreds, and must have formerly existed in even greater numbers, for a great number have been destroyed by the newtake wall builder and the road-mender.

Like the other stone monuments of Dartmoor the hut circles have furnished abundant material for conjecture of a haphazard character, and to settle this the investigation of these remarkable relics was systematically and scientifically undertaken in 1893 by the Rev. S. Baring Gould and the writer, with whom some other gentlemen were afterwards associated.¹

BROADUN RING AND BROADUN POST BRIDGE.—The evidence yielded by the diggings disclosed a stone-using people, and the explorers were under the impression that the finds indicated a very primitive people living in a purely neolithic condition; but in the light of subsequent and numerous explorations in similar ruins of circular dwellings in other parts of Dartmoor they are now of opinion that

¹ Dartmoor Exploration Com. Devon. Assoc.

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probably the great bulk of the hut-circle occupation of the moor was during a period when stone implements and weapons were still in general use, but bronze was known and employed to a limited extent. So far this alloy has only been found in the graves. It is not to be wondered at that it is wanting in the hut circles, for it was at this period a precious commodity, and was only placed in the graves as an offering to the honoured dead in a sparing manner.

GRIMSPOUND.—This is the best example of a protected village with a very substantial defensive wall and a unique example of a prehistoric settlement. It presented exceptional advantages for examination, for there had been no pillaging of the wall nor of the hut circles, and it was taken in hand by the Dartmoor Exploration Committee in the spring of 1894. The wall encloses about four acres, and within this are the ruins of twenty-four hut circles, half of which had evidently been human habitations, for these had fire-holes or hearths, and the floors were strewn with charcoal. The manner of the construction of these circular huts seems to have been as follows:—Slabs of granite were collected and set up in a more or less perfect ring, such slabs when erected being about three feet high. As these slabs often terminate in a point at the top they give the extreme height of the original walls, and they agree within an inch or so of the height of the upper surface of the capstones of the doorways. If slabs which would stand vertically were scarce, smaller stones were laid in horizontal courses, small stones were used as fillers, and the wall was then backed up outside with earth and turf. The doorways, which were generally two and a half to three feet high, were formed of two jambs of granite with a lintel on the top. The entrances were generally paved, and sometimes protected with curving walls so as to cut off the prevailing winds. The huts usually faced south-west.

It was ascertained that the roofs could not have been of stone constructed in bee-hive form, but were probably of rush-thatch laid on poles wigwam fashion; it would have required several cartloads of stone to have domed one of these huts, but in no single instance has enough been found on the spot sufficient for the purpose. In nine out of twenty huts examined there were stone platforms which were raised from eight inches to a foot above the floor of the hut. These platforms are not common in the hut circles, for thus far they have only been observed at Broadun, Langstone Moor, Shapley Common, with traces at Crapp's Ring near Post Bridge, near Ger Tor Tavy Cleave, and Har Tor near Princetown.

The floors of the huts were of the 'calm' or clay sub-soil beaten hard, with paving-stones in places. On the floor in some cases was a hearth-stone and in others a fire-hole.

The objects found in the huts were a few flint implements, a rubber stone, a few fragments of rude pottery, and some 'cooking' stones—i.e. pebble stones which were heated in a fire and then placed hot in pits or pots so as to cook meat or boil water after the manner of existing savage races.

By referring to the plan of Grimspound (fig. 4) it will be observed that there are now three entrances, but that labelled as such is the original entry into the pound. The other two on the east and west sides are comparatively modern, and are due to a trackway leading from Headland Warren in the direction of Widecombe. The original entrance is paved, and is 7 ft. wide, and the wall at this point is 14 ft. thick. This paving of the entrance to Grimspound was a matter of necessity to the occupants, for the gateway faces the steep slope of Hameldon, and without it the soil would be speedily worked into an impassable slough by the passage of cattle into and out of the enclosure. As the descent is rapid, the paving is on the slope.

The enclosing wall of Grimspound is in a condition of sad, and, at first sight, inexplicable ruin; but the wrecked condition of the wall presents some significant and instructive features. In several places two faces, one outer, the other inner, remain comparatively perfect, showing that the wall originally did not consist of a congeries of stones piled together at random, but was composed, like the hut walls, of stones some set on edge and others laid in courses.

Twenty-five yards north of the western exit of the track which runs through the pound the wall has both faces perfect. The width is here 9 ft. from face to face. The outer face is still $4\frac{1}{2}$ ft. high, the inner $1\frac{1}{2}$ ft. A little further on the wall is 10 ft. thick. The wall by hut No. vii is $9\frac{1}{2}$ ft. thick. The inner face is there 4 ft. 4 in. high. From this examination, and the condition of the walls, it is difficult to account for the height of the wall being originally more than 5 ft. It seems absurd that a wall of huge stones 10 ft. thick should be only 5 ft. high; but if the wall was solid, and of this width, it is clear that there were not enough stones to account for even this height, and as there are no newtake walls near, it is certain that there has been no pillaging of stone to provide for their construction. The complete state of ruin of the wall is quite inexplicable if it was constructed solid.

It is observable that very generally the wall faces have collapsed towards each other, and that between them are to be found either large slabs tilted inwards or else confused masses of small stones. On a scrutiny of the wall on the NW. side, it was made abundantly clear that here there had been a double wall with a space between. Each wall is 3 ft. wide at the top and about 3 ft. 6 in. at the bottom. The space between them is about 3 ft. wide at the bottom and 3 ft. 6 in. at the

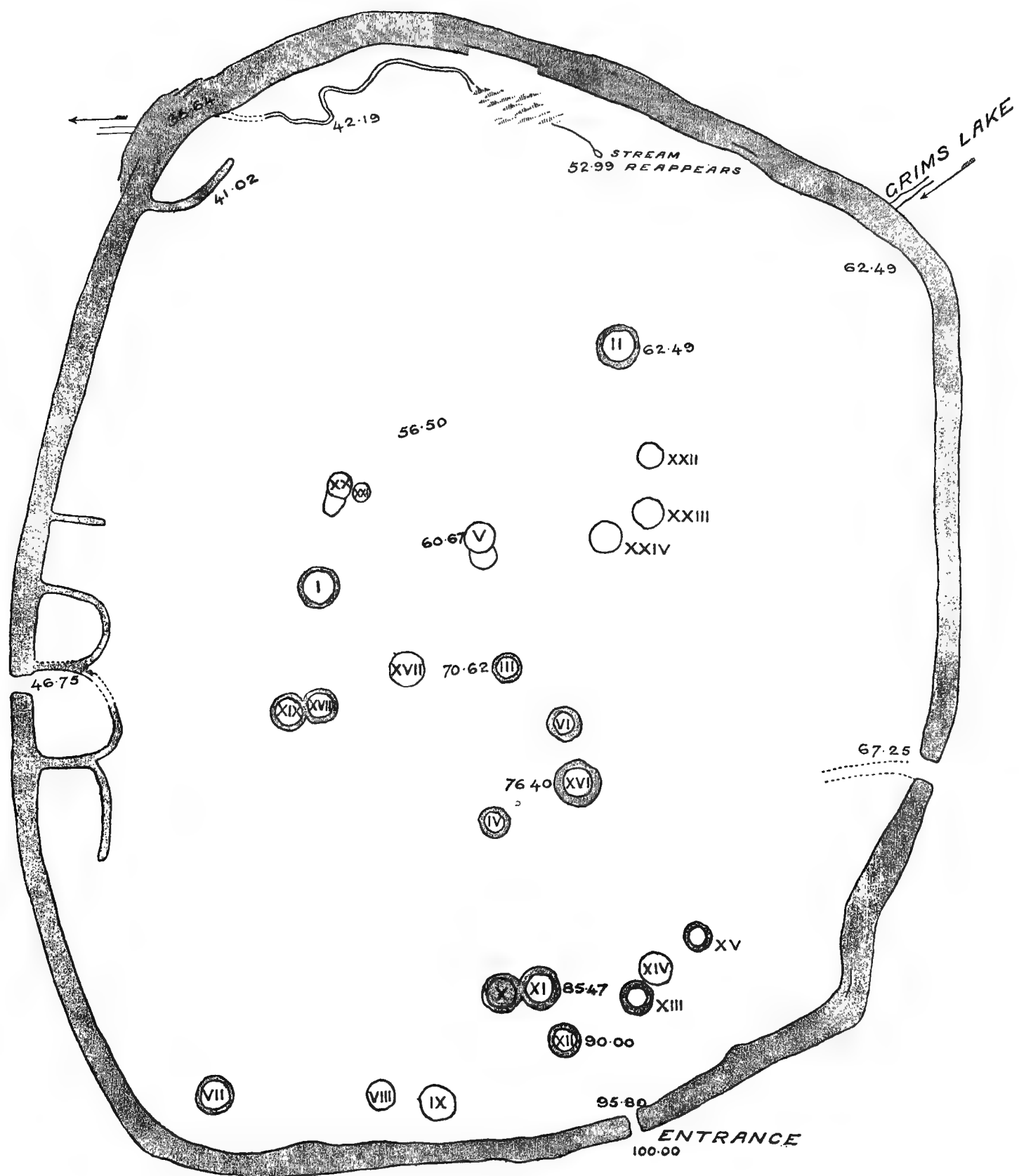


FIG. 4.—PLAN OF GRIMSPOND

H. Mansford Walsby

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top. When the stones were removed from this space and replaced on the walls, it was apparent that these latter had never been more than 5 ft. high or $5\frac{1}{2}$ ft. at the very outside.

We thus have a double wall with a space between. This space, it would seem, is too narrow to serve any useful purpose. There is apparently an entrance into it from the interior of the pound on the NW. side, but with one most doubtful exception no others were observed. The balance of evidence is rather against this presumed entrance being a work of design. It is clear that the wall has never been built solid throughout, except at the flanks of the gateway; a vacant zone of irregular width being everywhere else left between the inner and outer facings, which are of very varying thickness. The most reasonable supposition is that this space between the two facing walls was to have been filled with a core of earth which in its turn might have carried a wooden fence or palisade. But there is no trace of such earth-filling, and if it ever existed it could not have utterly disappeared. It could not possibly have been washed away, for the walls would have retained it, and vegetation would have grown up and held it fast. It seems not unlikely that the work was never finished, for it is impossible to conceive that the builders should have spent immense labour, and rested content on raising a double wall with a space between and a total thickness of some 10 ft. and height of only about 5 ft.—too low to keep out either a hungry wolf or active human assailants. A single solid wall carried to a greater height, with a banquette, would have been more easily erected and much more effective. The unfinished character of the wall is strongly supported by Mr. C. W. Dymond, F.S.A., who subjected it to a rigorous examination at the request of the writer.

We are not familiar with the conditions of warfare existing at the time when Grimspond was designed and built, but it strikes one at once, on viewing the site, that it is commanded on all sides but one by the fire of archers and slingers, and that the entrance is so placed that it is in the most favourable position for a rush of assailants down the slope of Hameldon.

However unsuitable the position may appear to us to-day in a strategic sense, we must not conclude that this cyclopean defence was erected with no object other than to be a fence to fold cattle. Some of the stones employed in the wall are of great size. On the west is a huge slab set on edge measuring 10 ft. by 5 ft. and 9 in. to 1 ft. in thickness, and weighing from 3 to 4 tons. Other stones laid in courses, if not so long, are not of less weight. Such a wall was not erected by the occupants of a dozen huts and for the protection or convenience of a limited number of persons.

Presumably Grimspond was not a fortified village any more than it was merely a cattle pound, but was more probably the unfinished *oppidum*, the place of refuge for the scattered population in the neighbourhood, and the dozen householders were the *oppidani*, the caretakers or guardians. The lunette arrangements on the western side were probably cattle-pens.

Grimslake, a small stream that dries up in very hot summers only, flows through the enclosure at its northern extremity. It passes under the wall, flows through it for some way, and then emerges three-quarters of the way down. It has been confidently asserted that the stream was diverted from its proper course by the hands of man to force it to enter the pound. This, however, is not the case. There is an outcrop of feldspathic granite in the midst of the furrow between Hameldon and Hookner Tor, so that the drainage of these hills cannot unite, but flows parallel in independent channels, and meets below the road from Chagford to Widecombe, at a distance of 400 yards from the enclosure. There is at present very little drainage from Hookner Tor: nevertheless, it must have been greater in former times, as the groove of the channel and its stream is not only distinctly visible, but is more important than that of Grimslake.

RADDICK HILL NEAR PRINCETOWN (O.S. cvi, SE).—This is a good example of a pound enclosing hut circles. The wall of the enclosure is in an imperfect condition, but enough remains to show that this was not a massive defensive wall like Grimspond, but was probably a mere corral for harbouring cattle by night. The hut circles within the pound are eleven in number, and of these seven gave unmistakable evidence of having served as habitations. They varied in internal diameter from 10 ft. to 25 ft.

The most interesting of the series is one which has a diameter of a little over 15 ft. It is paved throughout, the entrance ill-defined, but apparently facing SSW. Nearly opposite this supposed entrance is the hearth, slightly raised, backed by a large stone in the wall. To the right of this hearth is the cooking or fire-hole, under a large slab that has fallen forward out of the wall. This slab, in falling, protected from destruction a fine vessel of rude hand-made pottery, which occupied the cooking or fire-hole, and was fairly intact. It had the peculiar shape of the cinerary urns used in the early Bronze Age, with a rib running as a hoop round it $2\frac{1}{2}$ in. from the lip, and the portion above this was ornamented by rude chevrons. The bottom of the pot was rounded. This was distinctly seen when it was *in situ*, but when taken out the bottom, which was very rotten, went to pieces. The vessel measures $10\frac{1}{2}$ in. in height and was 10 in. in diameter at the top. The rib was 1 in. thick.

Although the utmost care was taken, considerable portions of the wall of the vessel crumbled on air-drying, but these were restored, and this interesting specimen of a cooking pot was deposited

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in the Municipal Museum at Plymouth. The same hut yielded much charcoal, numerous cooking stones, a rubber stone, and an oval sparry river-pebble that had both its ends bruised and broken by use.

LEGIS TOR (O. S. cxii, SE).—There is an important series of hut circles and enclosures lying above the River Plym on the south slope of Legis Tor. Many of these were explored in 1895-6 by Mr. R. Hansford Worth. The remains are very extensive, consisting of a series of irregularly-shaped enclosures, with lesser boundaries subdividing in rectangular or sub-rectangular patches, and a number of hut circles of varying dimensions, mostly within the enclosures. An evident settlement of a pastoral people. A description of hut No. 2 will suffice as an illustration of these prehistoric dwellings (see fig. 5).

This hut circle measures along its least internal diameter about $12\frac{1}{2}$ ft., and along its greatest internal diameter, at right angles to the last, about $13\frac{1}{2}$ ft. It has a well-defined entrance facing almost due south. A considerable portion of its floor was found to be paved with flat granite stones. There was a hearth-stone at or near the centre, cracked as if by fire, and a cooking or fire hole filled with ashes was found immediately adjacent to the hearth-stone and to the north of it. At the entrance to this circle there were two steps leading down from the outer ground level. The north-western half of the floor was unpaved, and consisted of natural hard 'calm' or sub-soil.

The raised hearth was the first indication of human habitation. Immediately over the actual floor of the hut were found some thirty rounded cooking-stones, mainly of elvan rock, many of which had been splintered by the action of fire. One flint flake was found in the soil within a few inches of the floor.

The cooking or fire hole to the north of the hearth was of a curved oval or kidney shape, being very nearly 2 ft. in length and about 10 in. in breadth. It was found full of charcoal and ash. On the western side of the entrance, from a pit sunk below the general level of the floor, was

excavated a quantity of rough pottery, being fragments of a pot, the exterior of which was of a red colour, and the interior had been blackened by charred organic matter. From all appearance this pot had been crushed where found by the weight of some of the wall stones which had fallen within the circle. From the point near the hearth a broken fired clay spindle-whorl was excavated from the joint between two of the paving-stones, the only example yet found in a Dartmoor hut circle.

Another hut circle in this group yielded a broken cooking-pot of unornamented pottery which was found set in the 'calm' below the level of the floor. In diameter it measured 10 in. at its widest point. Its total depth, including the rim, which was found inside it, was a little over

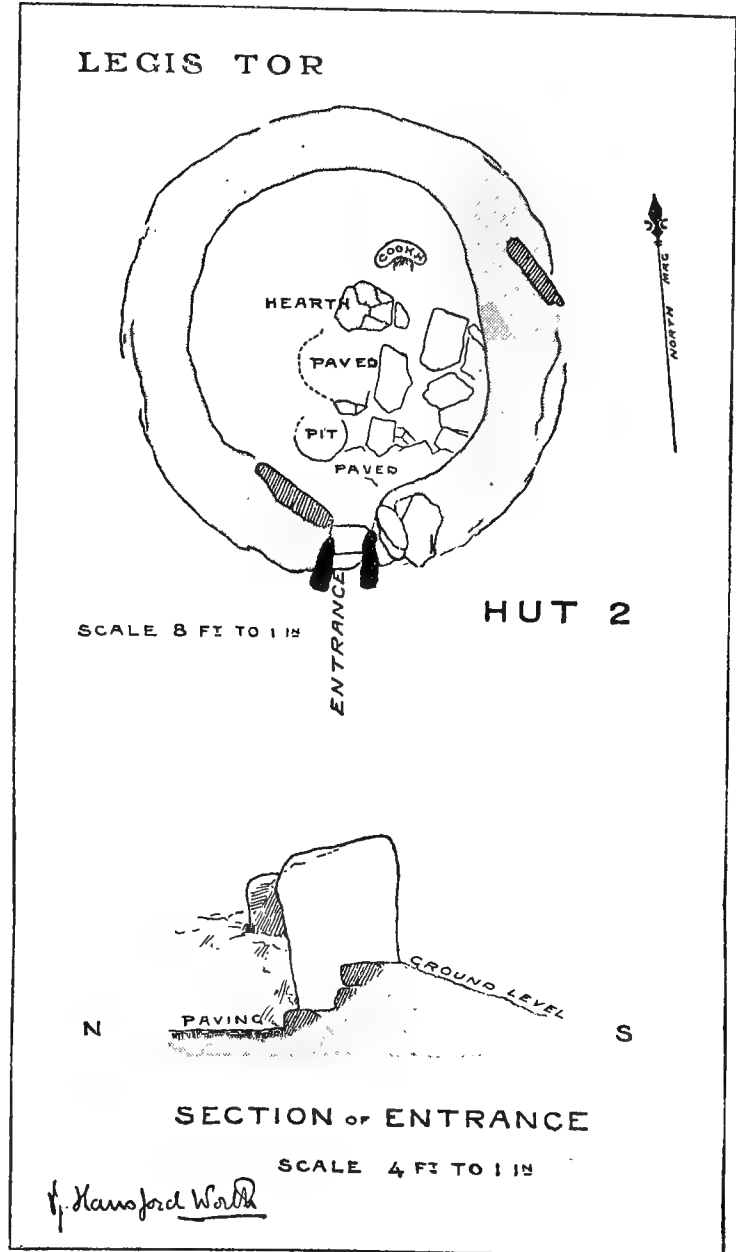


FIG. 5.—PLAN OF HUT 2 WITH SECTION OF ENTRANCE

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12 in. Two cooking-stones were found in it, and curiously enough the bottom of this pot, which was cracked, had been mended *in situ* with white china clay, a mass of clay having been pressed into the bottom to fill up cracks and cement together the broken fragments. This pot had a hemispherical bottom, and could not have stood on a plane surface. Judging from the fragments it was handmade, but not of such primitive shape as that found at Raddick Hill.

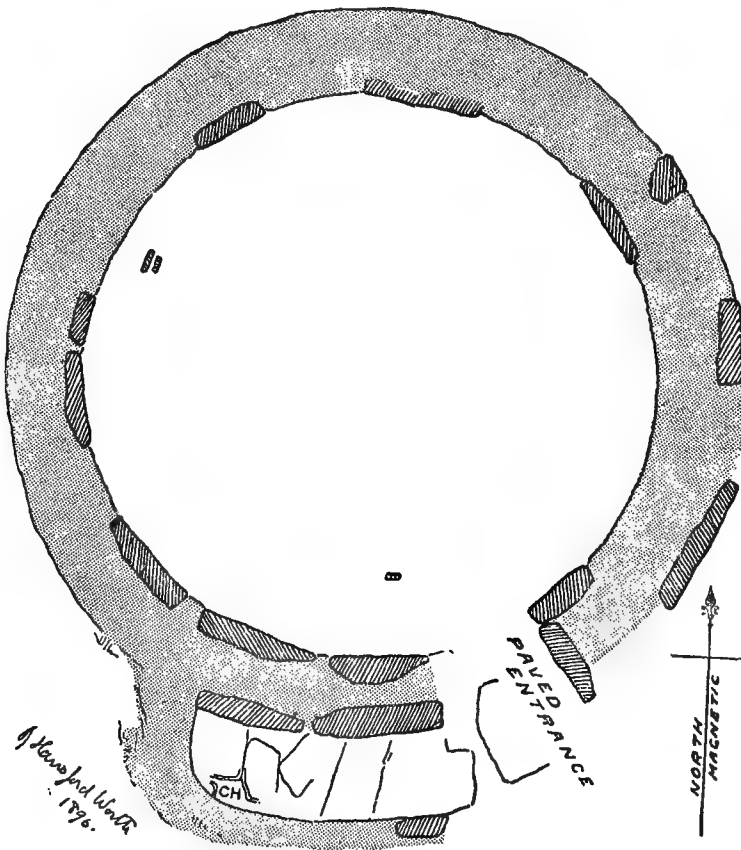
Other finds in this interesting group consisted of many fragments of rudely ornamented pottery, flint implements, and a wedge-shaped rubber stone which had been pierced from both sides with a hole for suspension, but never completely perforated.

BLACKSLADE COMMON (O. S. cviii, NW).—There is a considerable collection of hut circles in and about some remains of enclosures known as Foales Arrishes. The ancient name of this group of hut circles is Torr Town or Torr Hill. It probably received its modern name from some squatter who seems to have hazarded its cultivation, for attempts appear to have been made to gather the surface stone in heaps, so that a scanty tillage might be carried on between them.

Croker¹ states that this place possessed a circular pound almost as large as Grimspound enclosing hut circles. The road-menders have been busy since 1851, for no trace of the enclosure can now be recognized.

One of the still existing hut circles (No. 1) merits a brief description, for the cooking-place is outside the hut in a semilunar shaped erection (see fig. 6). It contained a cooking or fire hole and a hearth with much charcoal and some fragments of thin pottery. The whole of the floor of this kitchen was paved.

Considering the size of the hut circle, from 30 to 31 ft. in diameter, involving a large roof, which would be most difficult to keep weather-tight in the winter, and the position of the main fire and cooking-place, the reasonable supposition is that this hut represents a summer habitation, and if this surmise is correct it is an interesting illustration of the great antiquity of the summering of cattle on Dartmoor, for these huts and enclosures on the moor generally are the dwell-



FOALES ARRISHES, HUT NO. 1.
—Scale—10 feet to 1 inch

FIG. 6.—FOALES ARRISHES, HUT NO. 1

ings and paddocks of a primitive people, whose chief support was evidently obtained from their flocks and herds. Some of the smaller huts were doubtless permanent habitations, but the large examples were probably only occupied in the summer, when herbage is plentiful, and when a far greater head of stock could be supported than in the winter.

The exploration of the hut itself yielded fragments of blackened pottery and a flint knife. A curious feature was a small stone standing 6 in. above the floor, just inside the western side of the entrance, and two more standing side by side 15 in. above the floor near the north-western circumference. These stones seemed to have been fixed so as to follow the sweep of the circle, and were firmly earth-fast. They were not observed between these points. They had a surface length of only 8 in. or 10 in., and were merely thin slabs of granite let into the ground for some unknown purpose. They were not suitable for supporting planks of wood to form seats, nor could they be

¹ *Guide to Eastern Escarpment of Dartmoor* (1851).

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portions of a stone dais or platform, for they occur in the part of the hut which shows the greatest signs of occupation.

Other hut circles in this group yielded fragments of ornamented pottery of material and workmanship superior to the rude example found at Raddick Hill, but as far as can be judged from the fragments they are portions of hand-made vessels. One sherd has distinct impressions of the potter's thumb.

STANDON, commonly known as STANNON DOWN (O.S. xcvi, NE.).—This is crowned by Standon Hill, and this again is dominated by high ground rising to over 1,700 ft., lying between the great loop of the Tavy, which, rising not far from Walkham Head, flows almost due north, then turning toward the west trends away in a southerly direction through the romantic gorge of Tavy Cleave.

On the left bank of the Tavy, on the north-west slope of Standon, is a level plateau about 200 ft. above the bed of the river. This is wet and boggy, but where it slopes gently towards the

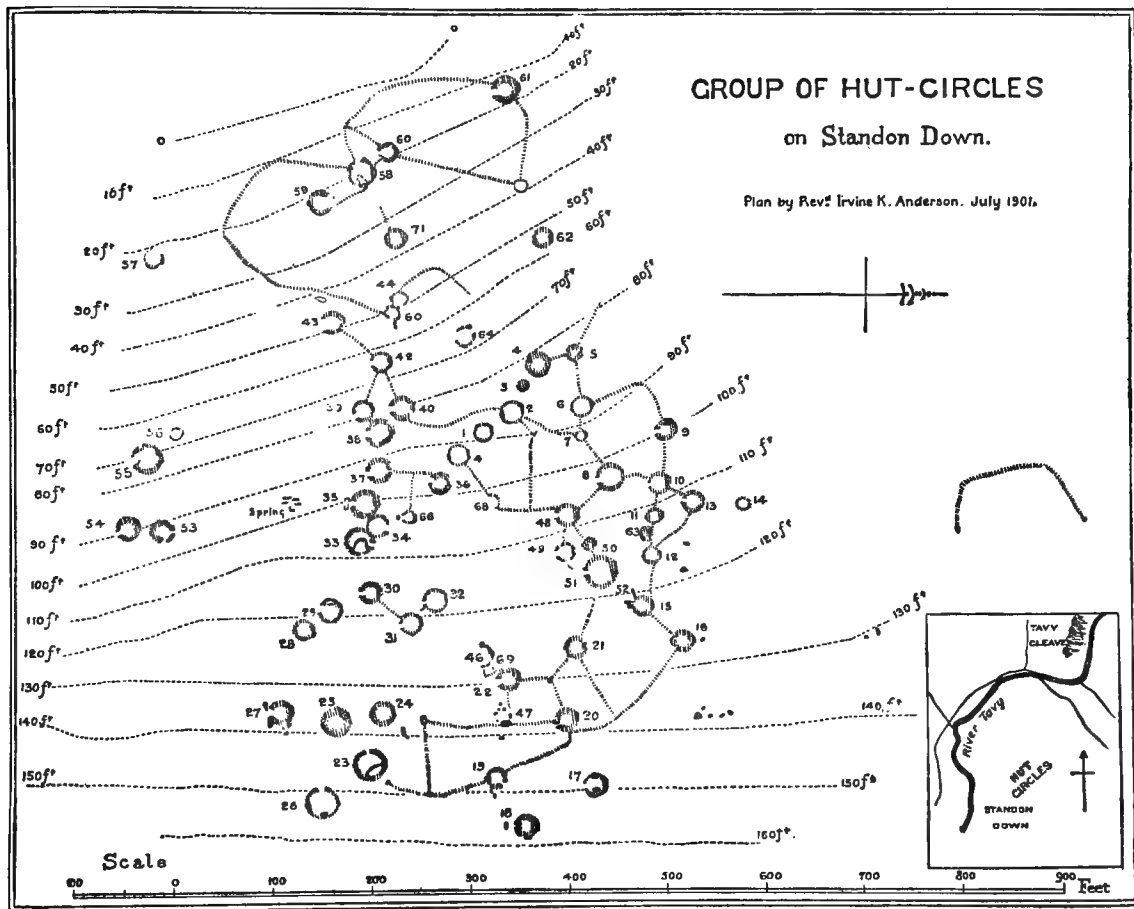


FIG. 7.—GROUP OF HUT CIRCLES ON STANDON DOWN

west the ground is dry and boulder-strewn. On this favourable surface are the remains of over seventy hut circles in a fair state of preservation. In some the walls are massive, 3 to 4 ft. high, built up with large stones placed vertically; others again appear to have been rebuilt so as to form modern shelters for sheep and shepherds.

None of the huts explored—forty-three in number—contained raised platforms of stone as at Grimspond, but some of the circles had interior walls forming inner compartments. The floors of many of the huts were regularly and wholly paved with flat stones, and nearly all had some portion thus treated. Owing to this there were but few finds of potsherds and other articles, for these could get no further than the paving. Where the floor is of 'calm' or sub-soil they have a chance of preservation, for they work down into this medium, and are thus ensured some manner of protection.

A reference to the accompanying plan (see fig. 7) will show the great extent and importance of this prehistoric village. Many of the huts appear to have been connected by walls forming a

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complicated system of cattle and sheep pens. There is no suggestion in the construction and capacity of the walls of anything but protection from the weather, and for night corralling of cattle.

The little pottery found in the huts appeared to be hand-made, and the ornamentation of the Bronze Age type. No cooking or fire holes were observed, but fires were evidently made on the paved floors, for many of these were strewn with charcoal and ashes. Pebbles, which had been fired and then used for cooking purposes, were numerous, and many large river-pebbles were found which had evidently been used as anvils and pounders. Flint objects were few and far between, and those which turned up were unimportant.

Such then in brief is a description of some of the villages and dwellings of the early pastoral race who migrated from the lowlands as each summer came round, and squatted with their flocks and herds on the breezy uplands of Dartmoor.

One of the striking peculiarities of the examination of the hut circles is the almost entire absence in them of means of grinding grain; one only, on Whiten Ridge, yielded a muller, oval in shape, and with a grinding surface of 12 by 9 in. It must, however, be borne in mind that parched grain could easily have been reduced to meal by many of the flat pebbles and pounders found in the hut circles without their appearance specially suggesting an occasional use for this purpose.

Up to the present no metallic objects have been discovered in the hut circles, indeed the whole surface of Dartmoor, including the graves, has yielded but few implements or weapons made of bronze. No middens have yet been found in any of the hut settlements. This is not surprising, for this primitive folk had little to throw away which would endure; potsherds, broken pebbles,

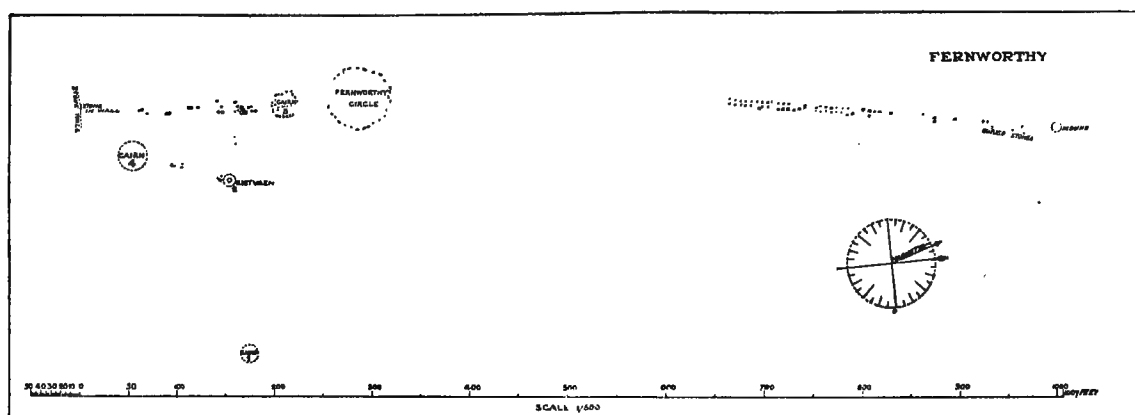


FIG. 8.—PLAN OF FERNWORTHY CAIRNS

and spalls of flint exhaust the list suggested to one's mind. These thrown outside the door of the hut would be speedily trodden in and disappear in the peaty soil. A few of these were fortunately allowed to remain in the huts, and we are thus enabled to form some idea of the utensils employed. We are also able from these and from the ornamentation and nature of the pottery to gauge the state of culture in which these people existed. They must have led peaceful lives, for only one arrow-head of flint has been found in a hut circle, and but few outside. These people existed at a time when bronze was known in Devonshire, but thus far no trace of early tin-smelting has been discovered in any of the hut circles.

YES TOR BOTTOM (O.S. cvi, SE.).—One hut circle, just beyond the twentieth milestone on the Princetown Railway, yielded tin slag, and the remains of an earthenware mug or jug, of fourteenth or early fifteenth century type, 6 in. under the surface; but this was clearly a comparatively modern intrusion, for the true floor of the hut circle was not reached until 20 in. had been removed, and this prehistoric level yielded the rim and two fragments of a hand-made cooking pot, with chevron ornamentation and one fragment of flint, and a flake of the same material. Later tin streamers had adapted the hut for their requirements in the same manner as a hut had been used on Shapley Common—probably by a shepherd—who had left behind him his eighteenth-century tobacco pipe.

That a stone-using people existed on Dartmoor is amply demonstrated, irrespective of the evidence obtained from the hut circles, from the fact that its surface or sub-surface has in almost all directions yielded large quantities of flint spalls, amongst which cores, flakes, and implements exist in considerable numbers. They are found in profusion at Post Bridge, Brownberry, and Huccaby—examples of the few cultivated spots on the moor. There is no doubt that in many

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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 mostly 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 some of the finer implements have evidently been fabricated from nodules of flint of considerable dimensions. The ancient workers in flint seem to have somewhat neglected the greensand of Devonshire, and to have preferred to go farther afield for their raw material. The superior chalk flint found east of Devonshire was imported into Dartmoor, and was largely used by its prehistoric folk.

Implements struck from the nodule are chisel-shaped implements or fabricators, borers, saws, knives, flakes of uncertain use, a few arrow and spear heads, and scrapers in profusion.

GRAVES

We must now turn to the graves of this prehistoric people, and describe a few examples on Dartmoor and in other parts of Devonshire. Some of these are associated with menhirs. The finest examples of these high standing stones are at Drizzlecombe, near Sheepstor, Merivale, near Princetown, Gidleigh Common, and Langstone Moor, near White Tor. Beardown Man is not associated with sepulchral remains.¹

FERNWORTHY.—This very important group of antiquities (see fig. 8) consists of the stone or so-called 'sacred' circle, a cairn (No. 3) standing at the head of a short stone row running south, a

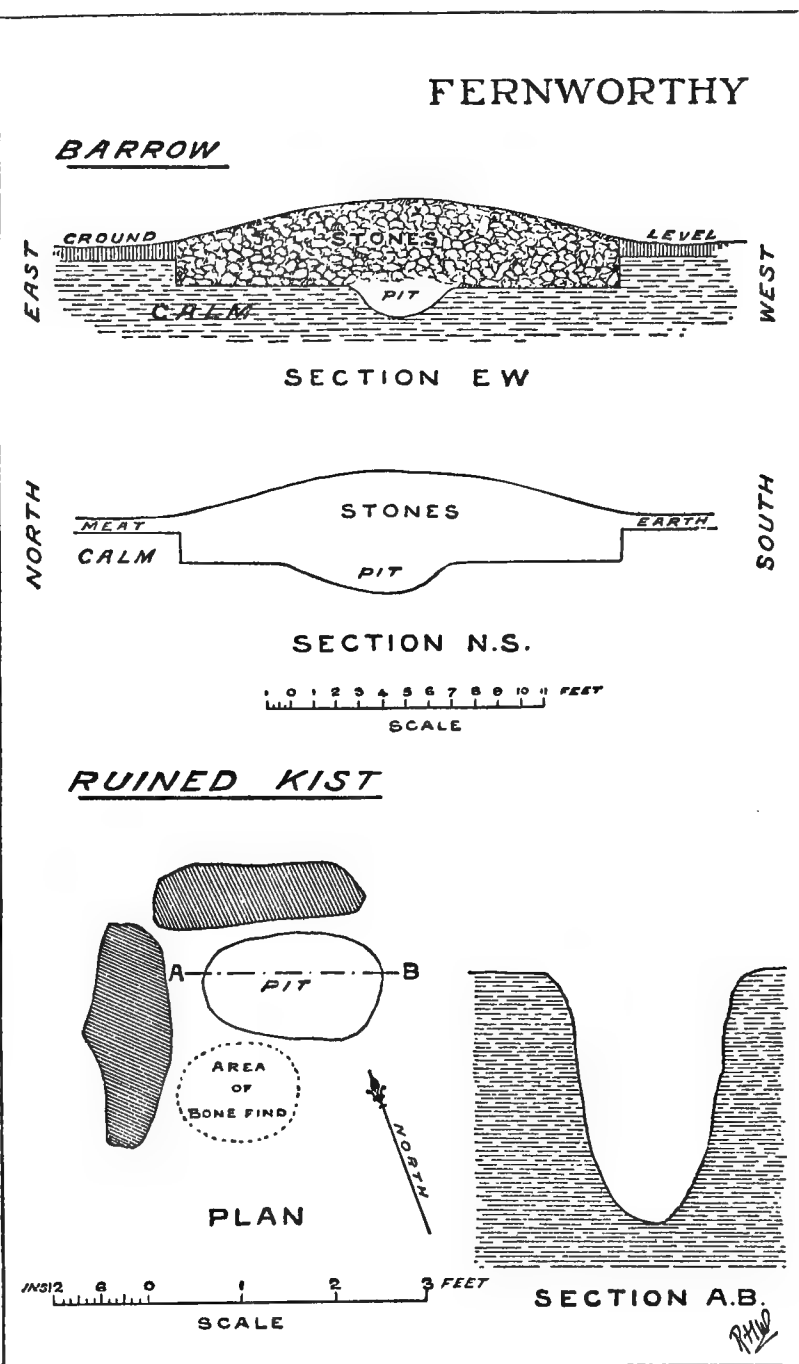


FIG. 9.—RUINED KIST YIELDING BURNT BONES AND CAIRN NO. 1
FERNWORTHY (SECTIONS)

¹ See note on the Stone Rows of Dartmoor, p. 372.

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kistvaen (No. 2) with remains of a stone row connecting with a large cairn (No. 4). About 80 yds. ESE. of the stone circle is a small cairn standing on a slight rise in the ground (No. 1), whilst farther north is a double stone row terminating with a mound. This stone row points to the stone circle, but whether it was ever actually joined to it is doubtful.



FIG. 10.—URN FROM CAIRN No. 1,
FERNWORTHY

Cairns Nos. 2, 3, and 4 have all been disturbed at some unknown time. No. 2 (see fig. 9) contained a kistvaen; and although previously rifled masses of burnt bones mixed with 'calm' or sub-soil and peaty earth weighing $4\frac{1}{2}$ lb. were found in the bottom of the kist, the burnt bones could not positively be identified as they were too fragmentary and consumed by fire, but they corresponded with the characteristics of human remains. Cairns Nos. 3 and 4 gave no results, with the exception of a tiny flint chip in No. 4.

The leading idea of this group of antiquities was evidently sepulchral, and as No. 1 cairn appeared to have escaped previous disturbance it was thoroughly explored in 1897. It had a diameter of 19 ft., was 2 ft. above ground-level in the centre, but was concealed by a growth of heather, and short furze and bracken, the roots of the two latter being found deep down in the structure. The cairn was originally surrounded by standing stones; three of these were in position, 9 to 10 ft. from the existing foot of the slope of the barrow.

The accompanying sections (see fig. 9) explain the structure of the cairn. It was evidently made by clearing away a circular area of ground, with a diameter of about 19 ft., and after excavating about 14 in. of the 'calm,' or sub-soil, a pit was sunk in the centre to a depth of 18 in. This pit was 4 ft. wide from east to west, whilst from north to south it was 7 ft. The depth of this pit from original ground-level was 3 ft. 3 in., so that the total depth from the highest barrow surface was 5 ft. 3 in. A trench was dug from west to east, and subsequently another was cut from north to south, so that almost the whole of the interior of the cairn was exposed. These trenches disclosed the area occupied by the pit. The portions of the cairn left intact were subsequently examined, but nothing was found in them.

On removing the turf of the cairn it was found to be built of handy-sized stones, gathered from the surface. Some were large enough to require two hands to lift them. Not only was the cairn piled up with these stones, but the entire pit was filled up or packed with them, so that some little difficulty was experienced in getting them out. In the central pit at a depth of about $4\frac{1}{2}$ ft. from the surface a small piece of oxidized bronze was found, with fragments of some fibrous wood attached to it. The bronze object was $1\frac{1}{2}$ in. long, with a greatest width of $\frac{3}{4}$ in., and weighed $\frac{1}{2}$ oz.; it is apparently either the remains of a small knife or spear-head, most likely the former. Near this were two or three fragments of pottery, and close under them a small urn was discovered (see fig. 10), which had been crushed by the subsidence of the cairn stones. A large dress-fastener or button of horn was found on the same level as the bronze (see fig. 11) and distant 2 ft. towards the NW. The upper surface is polished, and has a brown lustre. The bottom of the urn was resting on the 'calm,' or sub-soil, and a flint knife was lying amongst the sherds in such a manner as to suggest that it might have been placed in the urn (see fig. 11A).

Not a trace of bone, burnt or unburnt, could be detected anywhere in the pit of the

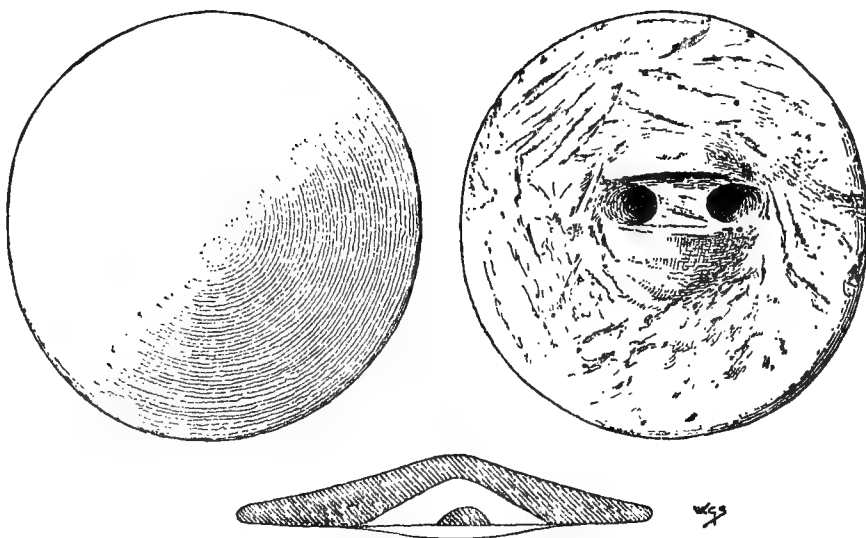


FIG. 11.—HORN DRESS-FASTENER FROM CAIRN No. 1, FERNWORTHY

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cairn, nor were there any of the larger-sized urns or remains of same for containing a cinerary interment. This absence of bone may seem surprising, but when it is remembered that the roots of the furze, etc., penetrated down to the lowest depths of the cairn, it is not difficult to realize that these plants growing for an unknown period had assimilated, and thus entirely removed, any signs of phosphatic matter.

The vase was evidently placed in the bottom of the pit on the 'calm' or sub-soil, and some of the cairn stones were roughly built around it, two flat stones forming the cover of this rude receptacle. The bronze object was found lying on the upper cover.

Although no bone ashes were recognized, the Exploration Committee had no hesitation in considering this to be an interment after incineration, for wood charcoal was discovered in the bottom of the pit.

The dress-fastener or button may have been deposited in the cairn alone, or it may have been attached to the dress, and the whole placed therein with the ashes of the dead, the vase, the bronze object, and the flint knife at the time of interment. This most interesting and important exploration settles the period of the interment as that of the period of culture known as the late Neolithic and early Bronze Age.

The bronze object above the vase, and the flint knife below, links the Stone and Early Metal Ages in a most satisfactory manner, and in addition to this there is the decoration on the vase and the evidence of the dress-fastener.¹

The vase contained fine soil, which gave distinct traces of phosphoric acid, and may have contained food, but the shape suggests a class of vessels known as drinking cups or beakers which, regarded as a class, is considered by some eminent authorities to be the oldest Bronze Age ceramic in Great Britain. The dimensions of the Fernworthy vase are as follows:—Extreme height $7\frac{1}{2}$ in., diameter of bottom 3 in., at mouth (internal) 5 in., thickness of rim $\frac{1}{8}$ in. The dress-fastener has a diameter of $2\frac{1}{4}$ in.

The next step taken was to examine the interior of the stone circle, and this was done by driving a trench north and south and another east and west. These were cut through peat, locally known as 'ven,' forming a layer 18 in. thick, which rested on the 'calm' or sub-soil. There was no 'meat' earth. The trenches were driven right through the circle with a width of 2 ft., and from end to end it was observed that the floor of the 'calm' or sub-soil was strewn with small pieces



FIG. 11A.—FLINT KNIFE FROM CAIRN No. 1, FERNWORTHY

of wood charcoal. There was no charcoal in the 'calm' or sub-soil; it was all existing on it, and the floor was as definite as those found in the hut circles.

Three pits were dug between the trenches, and another at the foot of one of the largest stones of the circle. The whole of these gave the same indications of charcoal—the remnants of fires of wood; in fact, fires seem to have been kindled all over the circle, for every scoop of the pick and shovel which was removed from the floor displayed charcoal. This is a very interesting and important discovery, for it may unravel the mystery of the so-called 'sacred' circles.

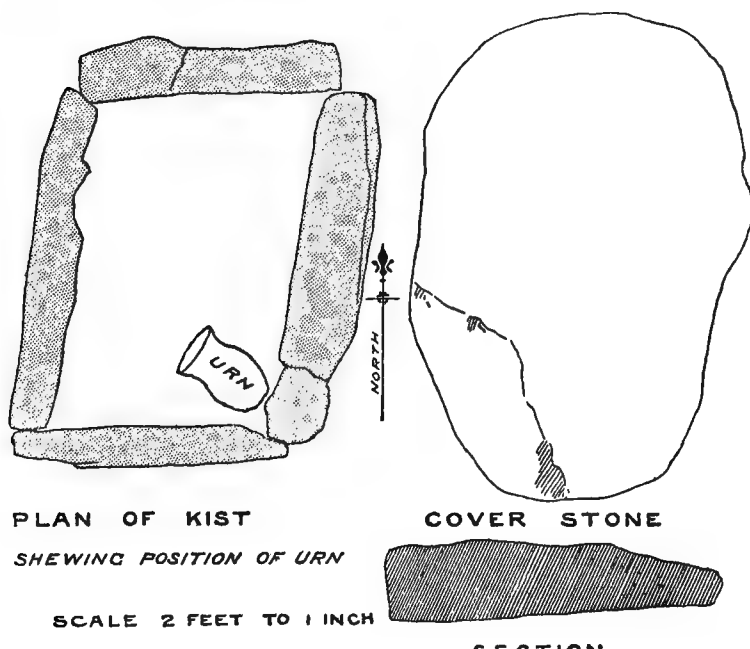


FIG. 12.—PLAN OF KIST, CHAGFORD COMMON

¹ For further particulars of buttons or dress-fasteners see Evans, *Stone Imp.* and Greenwell, *British Barrows.*

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Fernworthy stone circle is the important and predominant feature of a group of sepulchral remains, and it is very probable that we can now see in this the crematorium or the site of the funeral feasts, or both.

CHAGFORD COMMON.—This common is a continuation towards the east of Watn Down (O.S. xcix, NE). In 1897 the writer found an unopened barrow lying close to the north side of

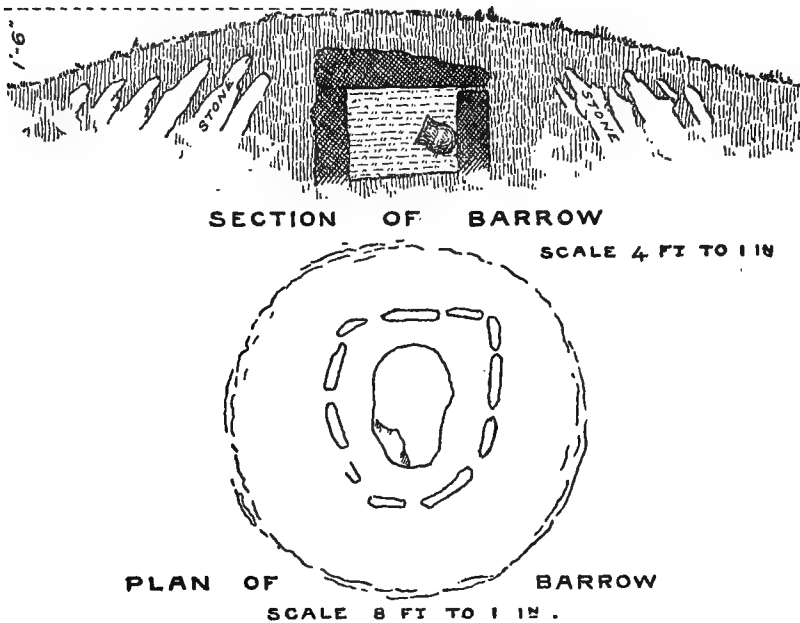


FIG. 13.—SECTION AND PLAN OF BARROW, CHAGFORD COMMON

but below this thin layer the kist was filled with compact 'calm' or sub-soil, in which could be seen here and there small fragments of wood charcoal. (For section and plan of Barrow see fig. 13.)

The filling was carefully removed and sifted, and as the work proceeded a small urn was found lying on its side in the SE angle of the kist with its mouth pointing to the NW angle. It was lying 4 in. above the floor of the kist, which was 2 ft. deep, and had evidently been placed as found, for its bottom was set close into the angle, and it was resting on a bed of 'calm' or sub-soil. The urn is hand-made, 10 in. high, with the following diameters: Mouth 7 in., neck $5\frac{1}{2}$ in., body 7 in. The wall of the vessel is $\frac{3}{8}$ in. thick. The paste, of a light chocolate-brown colour, is clay mixed with a small proportion of apparently small fragments of partially decomposed granite. Very little quartz is visible. The ornamentation consists of a series of impressions forming short U-shaped dots arranged in parallel and diagonal lines, produced by some instrument—the half of a split bird bone would do admirably.

Nothing was found in the soil filling the kist except a little wood charcoal. If it had ever contained bone ash as well as charcoal, all traces of such had utterly disappeared. The disappearance in this instance cannot be ascribed to vegetation, for there was no appearance of the penetration of the joints of the kist by the roots of the heather which covered the barrow.

The urn itself contained from 3 to 4 lb. of light brown soil flecked with a little black matter. The contents were analysed, and it was found to be 'calm' or sub-soil with carbonaceous matter adhering to fragments of quartz. The amount of phosphoric acid (P_2O_5) present, viz. 0.19 per cent., and lime (CaO) 0.13 per cent., is only suggestive of the decomposition of the granitic matter or of food which may have been placed in the urn. No bone ashes were ever placed within it, and it must therefore be accepted either as a food vase or a beaker (see fig. 14)

HURSTON RIDGE.—A stump of a pillaged cairn 26 ft. in diameter was observed on Hurston Ridge (O.S. xcix, NE), and this on exploration by the writer in 1900 yielded a large portion of a broken urn with a circumference of 4 ft. 5 in., resting mouth downwards on a flat stone which covered a pit filled with wood charcoal. The urn was partially protected by a leaning

the grassy trackway which leads from Willandhead and Hurston to King's Oven, and about 400 yds. NE of the Stone Row. It was not very distinguishable, for it was not surrounded by a circle of stones. The barrow was small, 15 ft. in diameter, with a central height of only 18 in. It disclosed on exploration a small kistvaen, which was surrounded by an oblong enclosure formed of a series of stones lying inwards layer on layer. The kistvaen measured $3\frac{1}{2}$ ft. long and from 2 ft. 3 in. to $2\frac{1}{2}$ ft. wide (see fig. 12). It was full of soil. The top was evidently black peaty earth, which had washed in;

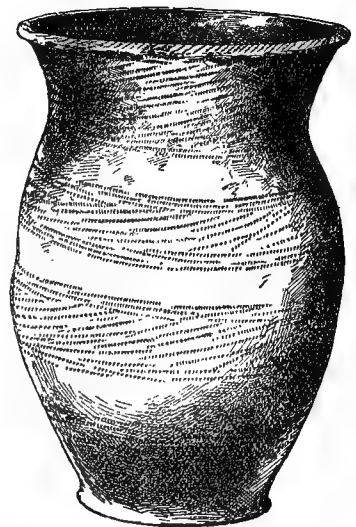
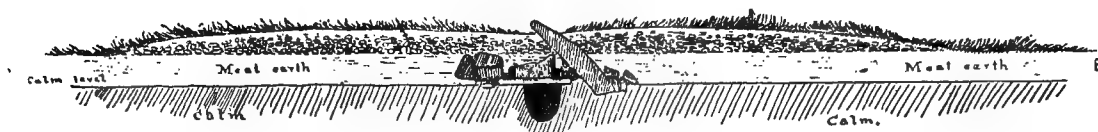


FIG. 14.—FOOD VASE OR BEAKER FROM BARROW, CHAGFORD COMMON

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stone kept in a suitable position by means of trigger stones. The remains of the urn are highly ornamented. The pottery is dark and friable, and contains but little clay. For section of cairn from east to west see fig. 15. There was no surrounding stone circle.

LANGSTONE MOOR.—Three small cairns lying close to the stone circle on Langstone Moor were discovered in 1897, and explored the same year. Two gave no sign of interments, not even a



Section E to W of ruined Cairn Hurston Ridge. Diameter of cairn 26 feet, leaning stone 30 inches long, 2 inches wide at top, 6 inches at bottom. At 14 inches diameter, 14 inches deep. This was filled with charcoal.

FIG. 15.—SECTION OF CAIRN, HURSTON RIDGE

trace of charcoal; but the third, with a diameter of 11 ft. and with the centre of the cairn 1 ft. above the level of the ground, contained a small kistvaen, which was packed with 'calm' containing small pieces of wood charcoal and a little bone ash. It did not contain any pottery or implements. The bottom of the kistvaen was paved. There were traces of a surrounding stone circle. This is the smallest and best-made kistvaen yet found on Dartmoor, and with the consent of his Grace the Duke of Bedford it has been removed from the cairn (where it would have lain invisible) to the Municipal Museum at Plymouth. It is only 21 in. long, 13 in. wide, and 14 in. deep (see fig. 16).

HAMELDON (O. S. c, SW).—One of the barrows on Hameldon was explored in or about the year 1872 by the late Mr. Spence Bate, F.R.S. (For section see fig. 18.)

The main portion of the barrow was of earth, with a small central cairn and margins of stone. The exploration yielded portions of a bronze dagger (see fig. 19 and fig. 2 on same), an amber pommel ornamented with gold pins (probably the pommel of the hilt of this dagger), and some burnt bones, which were undoubtedly human.

KISTVAEN ON LAKEHEAD HILL (O. S. xcix, SW).—A small kist denuded of its covering of stones or earth. It had previously been rifled, but the writer found on re-examination in 1897 fragments of pottery and three finely-worked and apparently unused scrapers, and the same number of knives, all of flint. These were embedded in the floor of the kist close to the stones, and had escaped the attention of the previous explorers (see fig. 17).

KISTVAEN IN ARCHERTON NEWTAKE (O. S. xcix, SW).—A small irregularly shaped kist close to and on the south side of the Powder Mills leat and about 350 yds. due south of Archerton House.

It stands in the centre of a small wasted cairn with a present diameter of 14 ft. The bottom of the kist contained a small pit sunk below this level. On clearing this out some wood charcoal was observed together with a worked flint flake. A thorough search under the eastern side stone resulted in the discovery of an archer's wrist-guard, fashioned from a fine gritty stone and rubbed down perfectly smooth. It is perforated at each corner; two of the holes on the reverse side are counter-sunk to accommodate the knots of the thongs which bound the guard to the wrist. The obverse is slightly convex and the reverse concave.

These bracers or guards are not uncommonly found in barrows and kistvaens, mostly of the Bronze Age. Examples have been furnished by Scotland, Denmark, and Germany, and in several counties of England, both in stone and bone.

CAIRN IN STANNON BOTTOM, POST BRIDGE.—In the enclosure

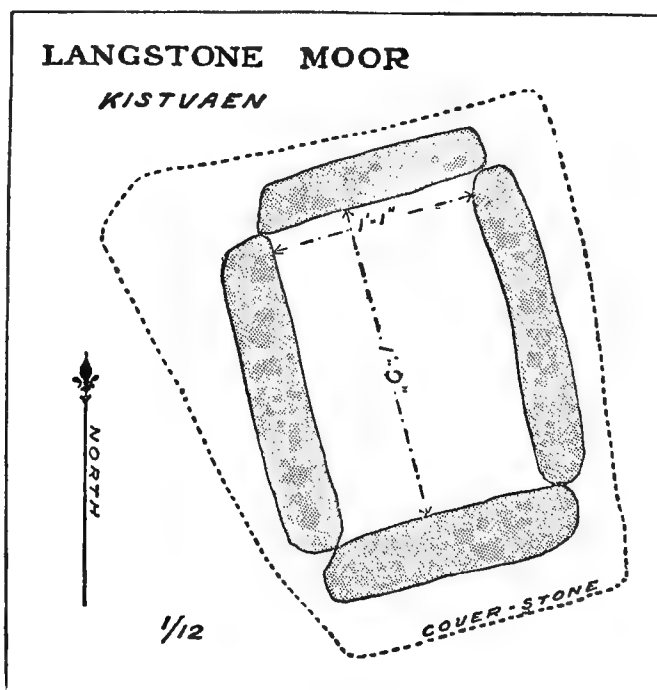


FIG. 16.—PLAN OF KISTVAEN, LANGSTONE MOOR

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north of Stannon is a kistvaen marked in O. S. xcix, NE ; 440 ft. WSW of this in the direction of Stannon Tor is a small cairn 15 ft. in diameter. This cairn had been previously opened in the centre. The writer drove trenches through it in 1895, and found the interment in a circular hole dug in the 'calm' or sub-soil. This urn-shaped cavity was filled with wood charcoal, ashes, and calcined bones, and also yielded a finely-pointed yellowish translucent flint.

The previous explorers looked for the interment in the centre, but did not find it as the cavity was near the NE circumference.

KISTVAENS IN THE PLYM VALLEY.—A kistvaen at Calveslake yielded a flint arrow-head and three flakes, and another at Langcombe, Deadman's Bottom, three arrow-heads and fragments of an urn.

Many of the districts of Devonshire outside the Dartmoor area are rich in barrows, and a considerable number of these monuments have been opened during the past thirty-five years by competent persons and the results recorded. The finds have not been in every case of much consequence, for some barrows turned out to be barren, having been opened in search of treasure in an irregular manner and at an unknown period. In confirmation of this there is a curious document in the Patent Rolls of 17 Edw. II. It secures to one Robert Beaupel¹ the privilege of excavating six



FIG. 17.—FLINT KNIVES AND SCRAPERS FROM KISTVAEN ON LAKEHEAD HILL

barrows in Devonshire, on condition that the search is made in the open day and in the presence of the sheriff and other responsible officers.

When previously unopened barrows have been explored under proper supervision some valuable evidence has been obtained.

HONITON.—There are many barrows in the neighbourhood of Honiton, and some of these on Broad Down and Gittisham Hill have been examined, first by the Rev. R. Kirwan and recently by Mr. R. H. Worth. All interments discovered were cinerary. (See fig. 18).

The important finds were as follows :—

Two drinking vessels of Kimmeridge coal with a capacity of about a gill, both ornamented with incised lines of such regularity as to suggest that these vessels were turned on a lathe ; a bronze spear-head (see fig. 19 and fig. 3 on same), and supposed fragments of another, and a celt of the socket type (see fig. 19 and fig. 5 on same) ; hand-made urns, including a very small, highly ornamented example, filled with burnt bones. It is only 2 in. high and 3 in. wide at the mouth, with

¹ The Beaupels held lands in Brendon, North Devon, on the borders of Somerset, and it has been suggested that the six barrows in respect of which the grant was made may have been Chapman Barrows, a short distance to the south-west. This immediate group originally consisted of at least five tumuli, and there are still remaining many others in the vicinity. *Trans. Devon. Assoc.* xviii, 107.

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an average thickness of $\frac{1}{2}$ in. One side of the vessel has two small perforations. This and similar vessels have been termed 'incense cups'—an imaginative description, at any rate in this case, for the cup served the purpose of a diminutive cinerary urn.

UPTON PYNE, NEAR EXETER.—A barrow here was opened by Mr. Kirwan in 1870 and yielded a bronze dagger and pin which were resting on a deposit of charred wood and burnt bones; an even smaller ornamented vessel of hand-made pottery of the so-called 'incense cup' type, containing a snuff-coloured coarse-grained dust, the nature of which was apparently not ascertained; the component parts of an amulet or necklace, consisting of flat beads of perforated shale, with a fusi-form central bead of the same material; portion of the stalk of an encrinite which apparently did duty as a bead; two beads of shale ornamented with chevron patterns, and a red bead of fired clay.

BERRY DOWN BARROWS, BERRYNARBOR.—In one of these barrows an inverted broken urn was found with the large diameter of 19 in., together with some of its fragments. The mouth of the vessel downward for about one-third of its original height was ornamented with a chevron pattern enclosed within two sets of triple incised lines running around the circumference of the urn, which is furnished with two lugs. The vessel was hand-made, of coarse ware, and, as usual, imperfectly fired.

In May, 1883, Mr. George Doe and others examined two barrows situated in a field which was once part of Berry Down. In one a deposit of fine clay streaked with charcoal was observed, and the other yielded another inverted sepulchral urn covering a deposit of burnt bones—some of these were recognized as human.

PLYMOUTH.—A kistvaen containing a large urn, mouth upwards, was found in Stillman Street, and reported by Mr. Francis Brent in 1881.¹ It was supposed to have contained bone ashes.

HALWILL.—A barrow in this parish was examined by the writer in 1895. It is situated in a field known as Burrow Park Tolly, and lies close to the road leading from Halwill Railway Station to the Manor House. A quarry has been opened (now disused) on the eastern side of the barrow, taking a considerable piece out of the circumference, but without in any way disturbing the central portion of the monument which stands 5 ft. high in the centre above ground-level. A trench was driven, 20 ft. long, 12 ft. wide, and 5 ft. deep, in a westerly direction and to the centre of the barrow. This disclosed a platform in the centre of small flat stones 12 ft. long, 6 ft. wide, and 1 ft.

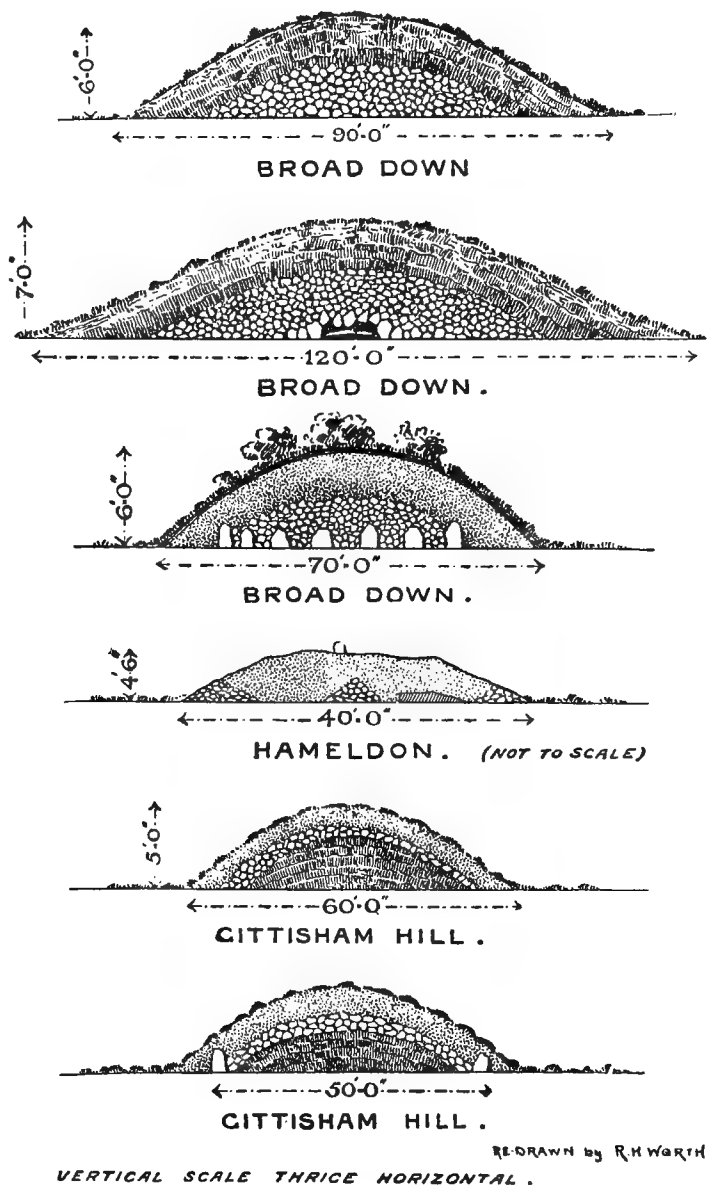


FIG. 18.—SECTIONS OF BARROWS ON BROAD DOWN AND GITTISHAM HILL. (See page 361 for reference to Hameldon.)

¹ *Trans. Devon. Assoc.* xiii, 99-101.

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thick, resting on the 'meat' earth. It was strewn with fragments of wood charcoal and covered with wood ashes, and the stones showed signs of having been subject to heat. Close to this platform was a pit, $4\frac{1}{2}$ ft. by 3 ft. and 4 ft. deep, dug out of the sub-soil and *full* of 'meat' earth mixed with fragments of calcined bones. The latter on examination did not appear to be human, but bones of some animal. The barrow was made of stiff clay, and some of this near the platform was burnt so hard as to resemble pottery. It was impossible to sift the material removed, for the clay was too heavy and plastic, but careful scrutiny disclosed a pear-shaped amber pendant $\frac{3}{4}$ in. long, some pottery of the early Bronze Age, and a little calcined bone. This was found 15 in. below the surface of the centre of the barrow, which rose 5 ft. above the surface of the ground. More pottery and calcined bones were found at a depth of 5 ft. The pottery is hand-made, $\frac{3}{4}$ in. thick, and black on the inner surface. The paste is well made, hard burnt, and of the clay of the district with a little sand to temper it.

MISCELLANEOUS

We have thus briefly shown that Devonshire is rich in evidence of the Bronze Age, possessing as it does the ruins of the huts, together with a great number of the graves, of the people of that period.

The domestic pottery of the huts, with the exception of some of the pots used for cooking, differs but little in make or ornamentation from the vessels found in the graves. They are sufficiently akin to form a connexion, and to satisfy the expert that the people occupying the huts on Dartmoor were buried in the cairns which studded both that area and other parts of Devonshire as well.

It is hardly to be wondered at that no bronze has been found in the hut circles. It was precious, great care was taken of it, and on rare occasions only was it placed in graves with the honoured dead. There are sixteen records of finds of bronze in graves in Devonshire, but one of these (Lovehayne Farm) may be considered to be unconnected with the interment.

Considering the small number of graves which have been opened under efficient superintendence during recent years, and which were previously undisturbed, this is not a small proportion, for according to Canon Greenwell articles such as bronze swords, spear-heads, and celts appear only on the rarest occasions to have been interred with the dead.

There are records of finds of bronze in Devonshire not connected with interment.

GAWLER BOTTOM, POST BRIDGE.—A bronze ferrule of the shaft of a spear was found here in 1892, 4 ft. deep in the peat, and is now in the Municipal Museum, Plymouth; the remains of the blade of a dagger were also found in the peat at the same depth at Broadhole near the head waters of the Plym. The bronze ferrule is interesting, for it is not of common occurrence in Great Britain. Only some forty examples have been thus far recorded, and of these only three or four are in the British Museum. Four specimens about 7 in. long were found with bronze spear-heads at Bloody Pool, South Brent. The latter were barbed and 14 in. long, but, unfortunately, they were all broken.

TEIGNGRACE.—A spear-head 11 in. long was discovered here. It has a delicate bead, which runs down each side of the midrib, and is continued as a square projection below the blade.

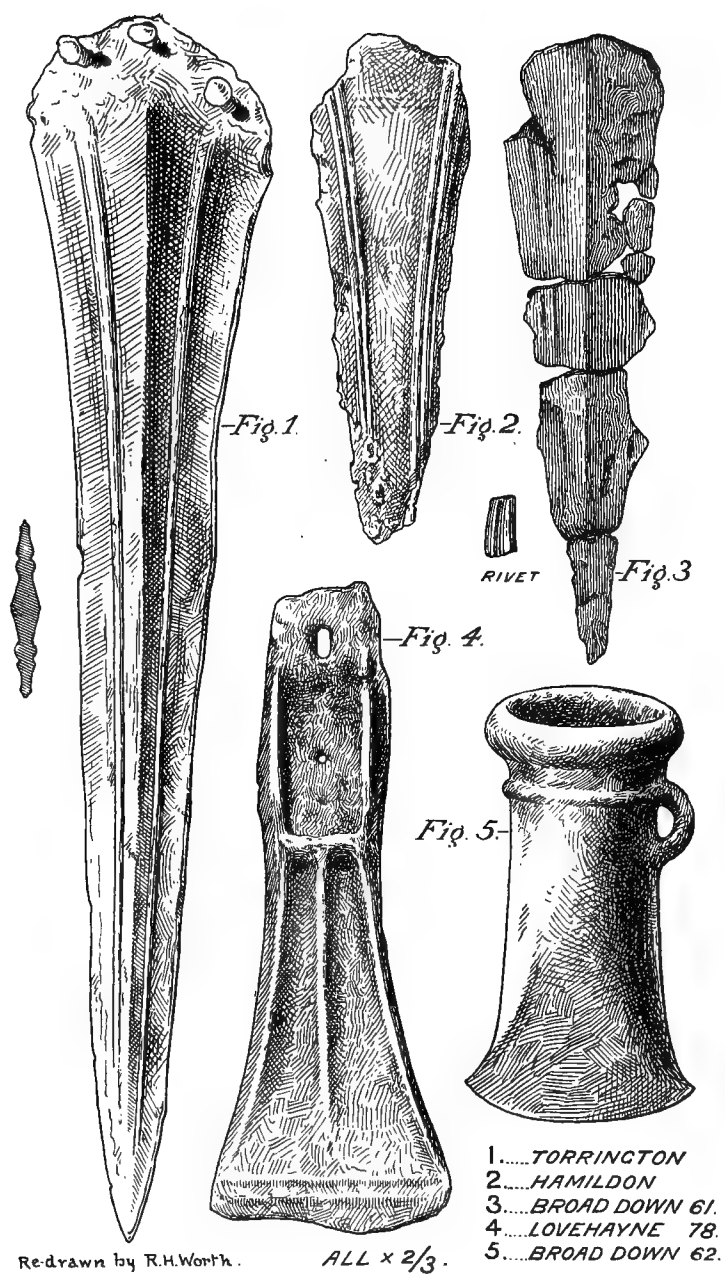
WASHFIELD.—Leaf-shaped spear-heads were found in an ancient entrenchment at Worth in this parish. With these were also found a leaf-shaped sword 14 in. long, with rivet notches at the side of the base and a flat plate of bronze, apparently hammered out, 5 in. by $5\frac{1}{2}$ in. and $1\frac{1}{2}$ in. thick.

ESCOT.—Several bronze swords were discovered in a field near here.

TALATON.—Six sword blades were found here. They were of the rapier type, and from 12 to 22 in. in length.

WINKLEIGH, NEAR CREDITON.—Another blade of 17 in. was found in this place.

SIDMOUTH.—A flat celt $4\frac{1}{2}$ in. long, having the faces ornamented with a number of longitudinal cuts, was found near here.



BRONZE OBJECTS. Fig. 19

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HUNTSBAY, NEAR GREAT TORRINGTON.—A bronze dagger found in a barrow with burnt bones, ashes, and charcoal.¹ (See fig. 19 and fig. 1 on same).

FARWAY CASTLE, NEAR HONITON.—A palstave was picked up in this immediate vicinity. Other examples have also occurred at Morebarton, in a field near Subhill between Clyst St. Lawrence and Rockbeare, at Chagford, Drewsteignton, and at Rumby, Bovey Tracey.

HONITON.—A socketed celt is recorded as having been found here.²

HENNOCK, NEAR CHUDLEIGH.—Moulds for bronze castings have also been found in Devonshire. Two are figured by Evans³ which were found in this parish; they are of a light greenish micaceous schist. One mould is a trifle over 2 ft. in length and 3 in. wide—the other 21½ in. long and the same width. These moulds produced castings of rapier-shaped blades.

LOVEHAYNE FARM, COLYTON.—A large number of celts and spear-heads 'half filling a wheelbarrow' were found by road-makers in removing a cairn in 1770. The bulk of these were sold as old metal in the neighbouring town of Honiton. One celt from this find, a palstave, was in existence in 1868, and is figured in *Trans. Devon. Assoc.* ii, 647. (See fig. 19 and fig. 4 on same).

PLYMSTOCK.—In 1868 there was a remarkable discovery of bronze implements here consisting of sixteen celts, a spear-head or dagger,⁴ and a narrow chisel. They lay beneath a flat stone at a depth of about 2 ft. below the surface. The celts were of the flat and flanged variety; the chisel was 4 in. long with a cutting edge of ¼ in. square in section in the upper part, and gradually tapering to an edge at the lower end.⁵

PLYMOUTH.—In the early part of 1884 a perfect and an imperfect palstave, together with a celt with a square socket, were found on removing an old hedge at Torr Lane.

WHITE TOR.—This (perhaps more generally known as Whittor) is a fine tor, 1,526 ft. above the level of the sea, on Cudlipptown Down, overlooking Marytavy and Petertavy. The summit of the tor is surrounded by the ruins of two walls with a space between of about 10 ft. or more in places. Both the walls appear to have been 10 to 11 ft. thick, and judging from the débris the inner wall must have been about 4 to 4½ ft. high, whilst the outer reached a height of 6 to 7 ft. The area enclosed is 1½ acres.

The supposed entrances are to the east, where access is easy. The other approaches to the summit of the tor are steep and covered with 'clatters' of rock. Within the enclosure are the remains of half a dozen hut circles or huts of a semi-circular character, which were built up under the lee of large boulders of igneous rock. These and other portions of the enclosure were explored in 1898 and yielded charcoal, a little hand-made pottery, a flint scraper, a trimmed flake which might have served as an arrow-point, and a great number of chips. These chips occur under the turf surface all over the enclosure.

The large cairn was explored right down to the surface on which it stands, and this also was dug into in search of a possible interment, but nothing was found except two small flint flakes. No charcoal was seen and nothing to indicate the use of this great heap of stones, amounting to hundreds of cartloads. All the stones are of handy size, and it has been suggested that they may have been intended for use as missiles or for repairing the walls of the enclosure. The summit of the cairn, which is about 10 ft. high, has never been used as a beacon—for, as previously stated, not a trace of charcoal was noticed in the exploration. There is no trace of water within the protecting walls, nor is there any now available within a distance of several hundred yards.

The exploration yielded no sign of the place having been assailed or occupied by a fighting force, for no weapons, with one doubtful exception, or sling-stones were observed.

There was just enough evidence found to indicate that this defensive place apparently appertained to the same period as the hut circles, the potsherds and the prevalence of flint chips being the principal evidence.

CRANBROOK CASTLE.—Excavations were made in many places on this site, including the moat, south-west, and south, and rendered many sling-stones and large pieces of charred wood; in many other trenches no results were obtained. The principal finds were in excavations numbered 1, 2, 3, and 4.

At No. 1 the site of a hut or dwelling of some kind was found, and this yielded, about 1 ft. below the grass surface (the soil at Cranbrook is very shallow), some small fragments of pottery, and the bottom stone of a granite quern 13 in. in diameter with a central hole of 2 in. in diameter. There was much wood charcoal, and two fire-holes were observed.

At No. 2 another site of a dwelling or shelter was opened out—this also had a fire-hole scooped out of the sub-soil. There was a good deal of charcoal strewn over the site, and some potsherds also were found.

¹ *Trans. Devon. Assoc.* vii, 102-5.

³ *Ibid.* 434.

⁴ *Arch. Journ.* xxvi.

² Evans, *Bronze Imp.*, *Trans. Devon. Assoc.* iv, 298-9.

⁵ Evans, *Bronze Imp.* 165-6.

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Excavations 3 and 4 yielded charcoal but no pottery. Sling-stones were found in nearly all the excavations, and some of these were battered and broken as if by impact.

The interior of the camp is studded with small round stumps of stone of about 4 to 5 ft. in diameter, and these are continued over the north slope of the hill, where they are dotted about in dozens. Several of them were examined both inside and outside the camp, and were found to be little heaps of stones placed on the grass surface. No information could be obtained regarding them, and their occurrence is inexplicable. No metal of any kind was observed in any of the excavations.

The ornamentation of the pottery is similar to that of the Bronze Age, and the sherds *appeared* to be portions of a hand-made vessel. But as we now know that the style of ornamentation usually associated with the period of bronze survived down to the Prehistoric Iron Age, and as rudely made vessels which may apparently be described as 'hand-made' were also in use at the same time as wheel-made pots, it is not safe to assume that the pottery found on the floors of the hut or shelter sites in Cranbrook Castle indicates that this defensive place appertained to the Bronze Age; in fact the quern and the elaborate system of fortification on the southern portion of the camp favour the assumption that it was erected and occupied not earlier than during the Prehistoric Iron Age. The discovery of the remains of iron objects would have settled this doubt, but, as previously stated, no metal of any kind was seen.

SIDBURY CASTLE.—A hoard of sling-stones was found here in March, 1864.¹ They were found in a cavity which was situated on the outside slope of the inner rampart, and would have filled one or two wheelbarrows.

HIGH PEAK.—Relics have also been found in and about the remains of a camp which formerly existed at High Peak about $1\frac{1}{2}$ miles west of Sidmouth.² The eroding action of the sea has practically caused it to disappear. The Rev. R. Kirwan and Mr. P. O. Hutchinson found some thirty-three years since that only a small portion remained, and that the falls of the cliff—the site of the camp was some 500 ft. above sea level—had exposed a kitchen midden, which yielded much charcoal, bones of hog, deer, and ox, sling-stones, flint chips, and cores, rude bone implements, and potsherds, both hand and wheel-made. Some of the sherds were plain, others were ornamented with incised lines made with a toothed instrument, some had circular indented lines and bands impressed upon the clay before firing and others had raised hoop-like marks or ridges formed either by the hand or by the wheel. All this domestic *débris* was presumed to be the accumulation of the dwellers in the camp. If this assumption be correct it indicates a prolonged occupancy.

There is again evidence of the overlapping of the hand-made Bronze Age type of vessels with the wheel-made pots, and of the continuation of the earlier form of ornamentation with that described as 'Circular indented lines,' a characteristic of the Prehistoric Iron Age.

ASHBURTON.—A spindle-whorl was found in the wall of Boro Wood Camp, near Ashburton.³

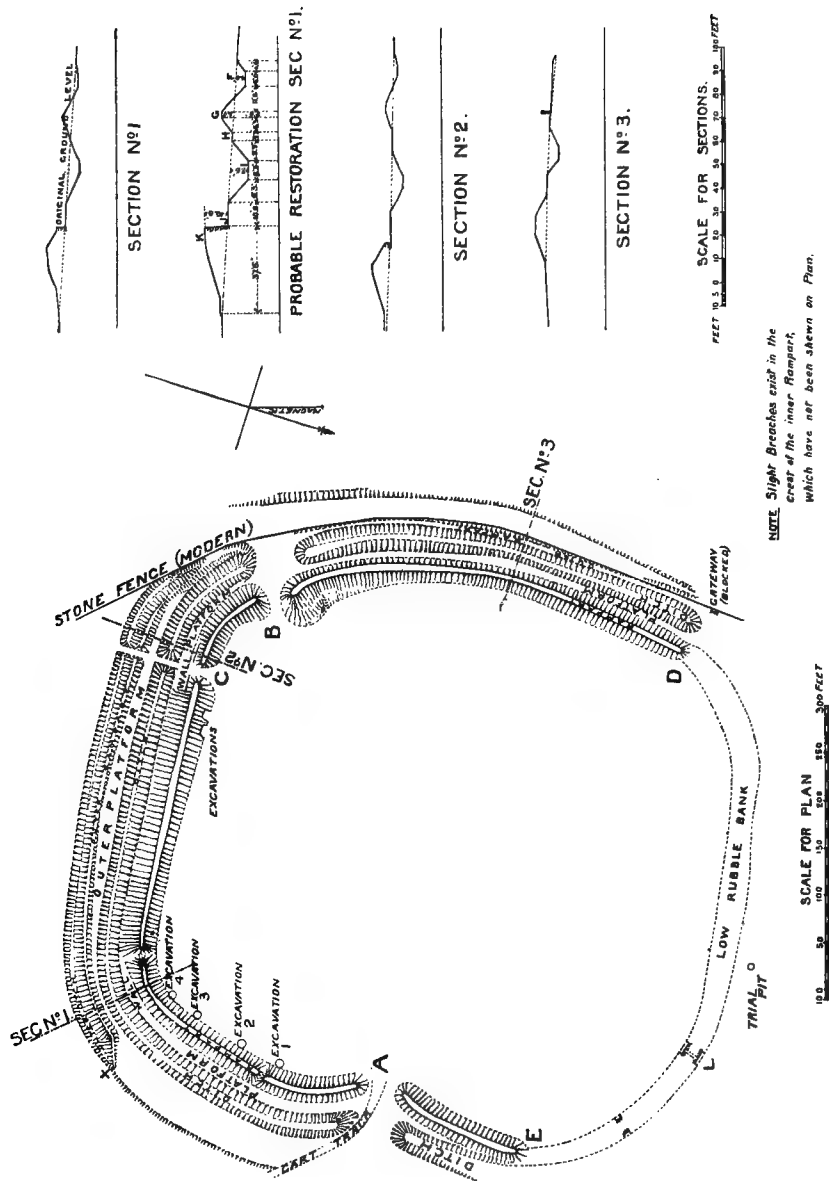
It will be observed that all the graves which have been examined indicate cremation; in fact there are no reliable records of carnal interments in Devonshire barrows. It is possible that such may yet be discovered, for a contracted interment was found in a kistvaen in Sheviock parish, just over the border in Cornwall. In this kistvaen was a small urn similar to the pottery of the Bronze Age period. From the examination elsewhere of osseous remains of the people of this period, it is evident that their skulls were generally broader than those of the Neolithic folk who were at home in Devonshire when these Celtic roundheads arrived. These first Celtic invaders overran the fertile and temperate portions of Britain, dispossessing the Neolithic people, who retired to less favoured districts, or remained and gradually blended with the conquering race.

Sir John Evans is of opinion that the Bronze Age in Britain commenced about 1200 to 1400 B.C. and continued down to about 500 B.C. To this period must be assigned the dawn of decorative art. Weapons, implements, and vessels of daily use were more effective and of greater variety and symmetry, and were often ornamented in a lavish and comparatively elegant manner.

¹ *Trans. Devon. Assoc.* ii, 376.

² *Ibid.* iv, 647-651.

³ *Ibid.* vi, 263.



PLAN OF CRANBROOK CASTLE

EARLY MAN

THE PREHISTORIC IRON AGE

As the use of stone implements overlapped the period when bronze came into use, so objects of bronze continued in use in what is known as the Prehistoric Iron Age.

The knowledge of the preparation of iron was either brought to Britain through the peaceful channels of improved communication with the Continent and adopted by the Britons, or, as some think, the new metal (i.e. new to this country) formed portions of the equipment of another wave of Celtic invaders who swarmed into Britain somewhere about 400 to 500 B.C.

Finds of early iron are rare, for iron oxidizes rapidly, leaving but traces of rust in the soil. But notwithstanding this perishable nature of the metal, it is curious that so far none of the Dartmoor hut circles have rendered signs either of the remains of iron objects or of pottery characteristic of the Prehistoric Iron Age. The later hut circles, if such exist, may yet disclose such evidence, for it is not quite reasonable to suppose that all the numerous hut circles on Dartmoor were occupied only during the Bronze Age, or that people of a later period did not resort to the moors for the summering of their flocks and herds. We do not know when the circular form of dwelling was superseded by the rectangular, but we do know that what are known as the 'ancient tenements' have been fixed abodes for many centuries, and it is possible that in the sites of these homesteads we have the very early moorland farms, which followed the earlier settlements. If this be the case there is little wonder that relics of the Prehistoric Iron Age are so rare, for objects of iron have long since gone to complete decay, and potsherds in and about a place in continuous occupation have broken up and disappeared. Kitchen middens on farms are not likely to exist, for their contents would be a fertile aid to the cultivator.

This paucity of relics of the Prehistoric Iron Age is general over Devonshire, and but for a cemetery of the period discovered on Stamford Hill near Plymouth in 1864 the county would be almost barren in this respect.

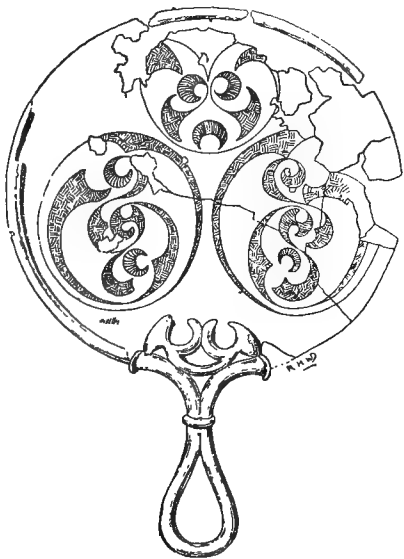


FIG. 20—BRONZE MIRROR, STAMFORD HILL

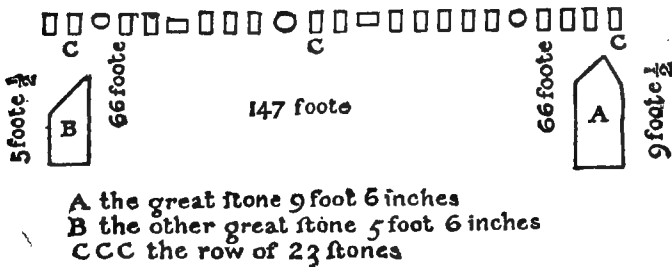


FIG. 21.—STONE ROW AND MÈNHIR AT MADDOCKS DOWN

STAMFORD HILL.—In cutting away the slope of the hill so that the guns on the new fort which was being erected here might have no interference with their range seawards an ancient burying-place was disclosed. The relics were found in pits, generally about 4 or 4½ ft. deep, 1 ft. of which consisted of soil, the remaining 3 having been excavated in the

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partially disintegrated rock (slate). These graves were mere hollow excavations, the walls sometimes sharply cut. This appears to have been the more evident where the soft slaty rock was firmest. The bottoms of the excavations were deepest towards the centre, and they were filled in with the débris which had been taken out of them, together with numerous large, rough, worn blocks of

limestone, that must have been purposely brought from one of the neighbouring limestone hills. These stones, according to the late Mr. Spence Bate, were used as walling to the graves and as coverings for the body, which was placed in the grave in a sitting posture. The graves were very numerous, but, unfortunately, they were not explored in the interests of science. All that Mr. Spence Bate could do was to follow the excavations of the contractor's workmen, and rescue and note all he could whilst the work rapidly proceeded. The longitudinal axis of many of the graves was east and west, but this was not invariably the case.

Human bones were disinterred together with the following objects of bronze:—Por-

tions of mirrors (see fig. 20), a small broken cup or pot, bracelets, fibulae, dagger sheath, and finger rings. The circular and running scroll ornamentation of these are characteristically Late Celtic.

The objects that were found made of iron were too decomposed to identify with confidence. They consisted generally of irregularly-shaped nodules of rusted iron from which a point or sharp tongue projected—others again appeared to be the remains of a pair of scissors and blades of knives and of the tongues of knives that were driven into handles. Some of the latter had remains of wood still attached to them.

The black, yellow, and red pottery consisted of remains of bowls, jugs, a vase and drinking cups.

In addition to the fragmentary vase a small perfect example was rescued from the destruction wrought by the excavators. The bottom is flat, and about $1\frac{1}{2}$ in. in diameter, from which it gradually rises outwardly until just above the middle, from which point it rounds more suddenly inwards, to form a constricted ring just beneath the edge of the mouth, which turns outwards. The diameter at the mouth is 3 in., at the broadest part $3\frac{1}{2}$ in., and the height is about 4 in.

The fragments of a low, broad, glass bowl or basin were thrown out of one grave; these were of a beautiful amber colour with iridescent surfaces. The lower portion of the vase was ornamented by a series of raised lines radiating from the base, but instead of passing directly to the circumference, flowed diagonally outward, as if they were formed as the plastic material was revolved by the Celtic glass blower.

HOLNE CHASE CASTLE (O. S. cviii, SW).—A man digging out a rabbit near this ancient camp in

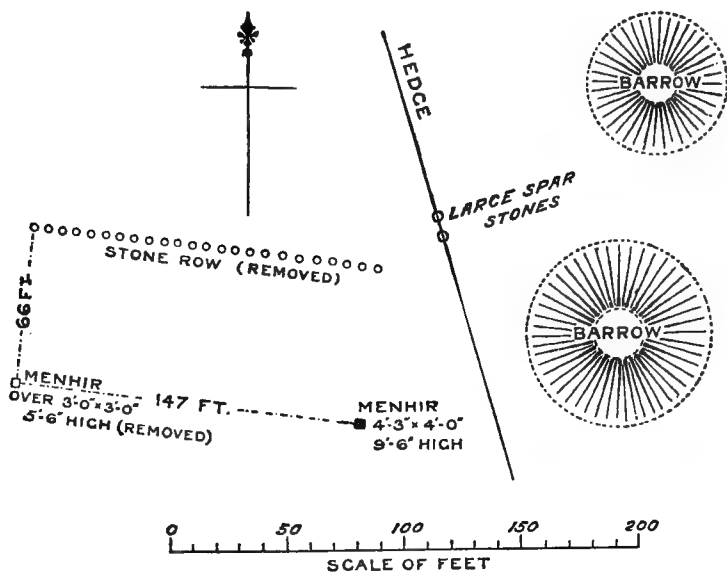


FIG. 22.—STONE ROW AND MENHIR AT MADDOCKS DOWN
(Reconstructed)

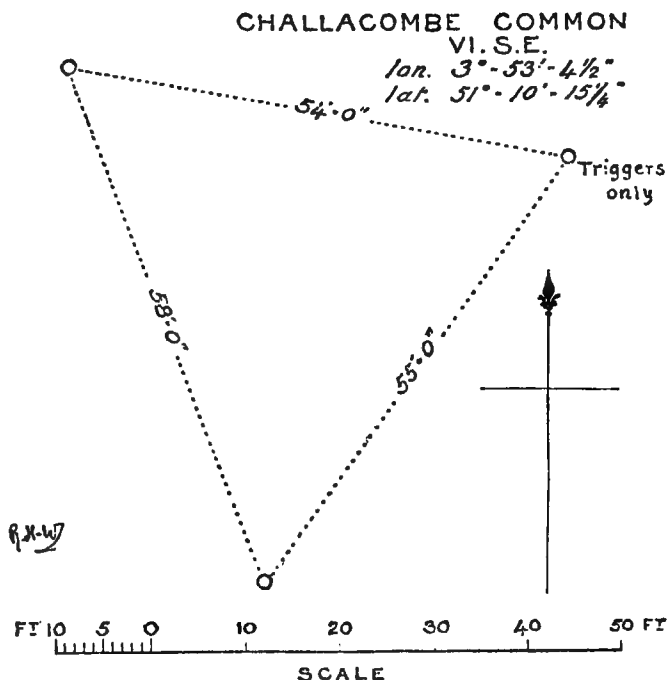


FIG. 23.—TRIANGLE ON CHALLACOMBE COMMON

EARLY MAN

1870 found about a dozen rusty flat iron objects about 4 ft. below the surface. These were carelessly thrown out, and being very brittle, broke into fragments. Two or three of the most perfect pieces were preserved and handed to Mr. P. F. S. Amery of Ashburton, who communicated the find to the members of the Devonshire Association in 1873.¹

The most perfect specimen was a flat bar of iron 24 in. long by $1\frac{1}{2}$ in. wide and $\frac{1}{4}$ in. thick—rather tapering towards one end, which was, however, much decayed. The other end possessed a rude handle formed by turning up the edges so as to meet one another. This fold was 3 in. long, but being of thinner metal suffered greatly from rust.

The edges of the bars were quite square and appear never to have been sharpened. The objects were presumed to be unfinished weapons. This find attracted the attention of Mr. Reginald A. Smith, F.S.A., who recognized them as 'currency bars,' a form of the monetary system of the Britons, in use before and during Caesar's visits to these shores.²

In a communication to the Society of Antiquaries, entitled 'British Iron Currency,'³ this gentleman described finds of similar iron bars in Dorsetshire, Hants, Somersetshire, Gloucestershire, Worcestershire, Berkshire and the Isle of Wight. They have generally been found in or near ancient camps, lying together in considerable numbers, and evidently intentionally concealed. In 1824 a large number—394—were found deposited in the middle of the ancient camp on Meon Hill, Gloucestershire. In 1856 150 specimens were found near Malvern, and in the following year a further deposit of a similar number was discovered 3 or 4 yds. distant from the first.

The bars were often mistaken for unfinished sword-blades, but the similarity vanishes on examination, for the sword-blade of the period did not contain so much metal, and had a thin blade with a slender rounded tang for a wooden handle.

The bars hitherto found are hoarded like coins, and as money were much more likely to be concealed in a British camp at a time of commotion than half-made sword-blades. The smith who made a blade would finish it, there was probably no such division of labour in pre-Roman times involving an artificer for one stage, and a finisher for the second.

LONGSTONE ALLOTMENT
CHAPMAN BARROWS. VI.S.E.
lon. $3^{\circ} 51' 45''$
lat. $51^{\circ} 10' 25\frac{1}{2}''$

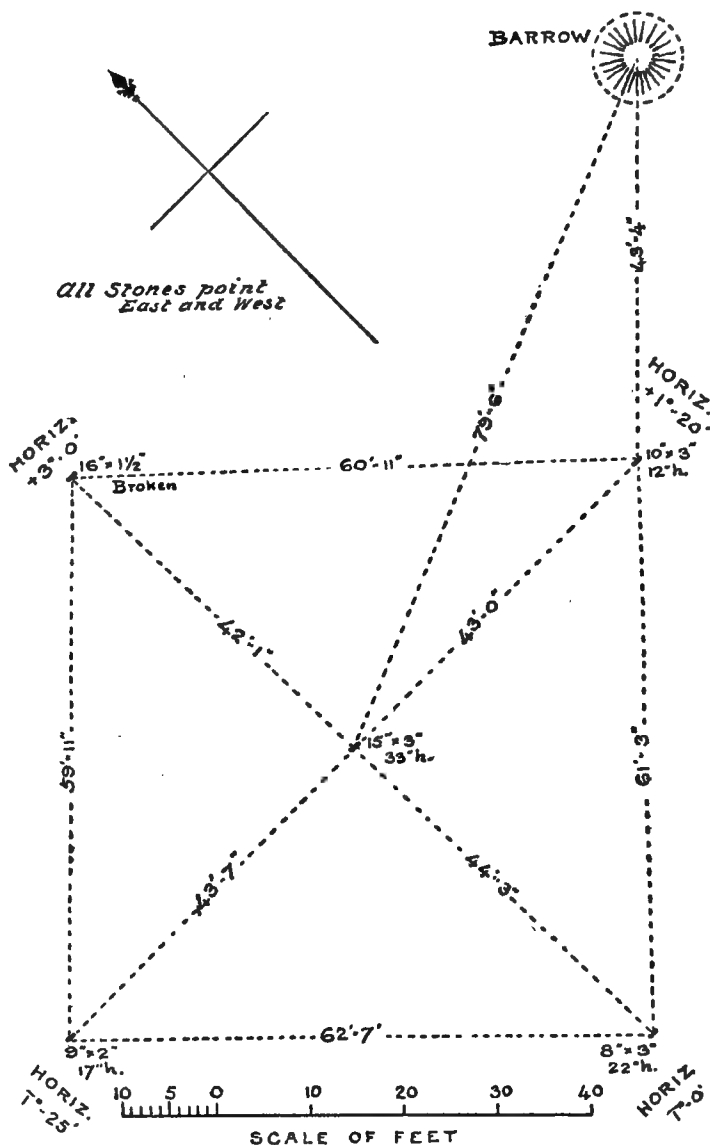


FIG. 24.—QUADRILATERAL, LONGSTONE ALLOTMENT, CHAPMAN BARROWS

¹ *Trans. Devon. Assoc.* vi, 264.

² Caesar, *Commentaries* (5th Book).

³ *Proc. Soc. Antiq.* vol xx, No. 11, pp. 179-95.

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In addition to this the bars, which have been found in various places, conform to a series of sizes and weights, for amongst the recorded discoveries is a smaller set representing half the value of the ordinary specimens, and a larger series four times the weight of the smallest.

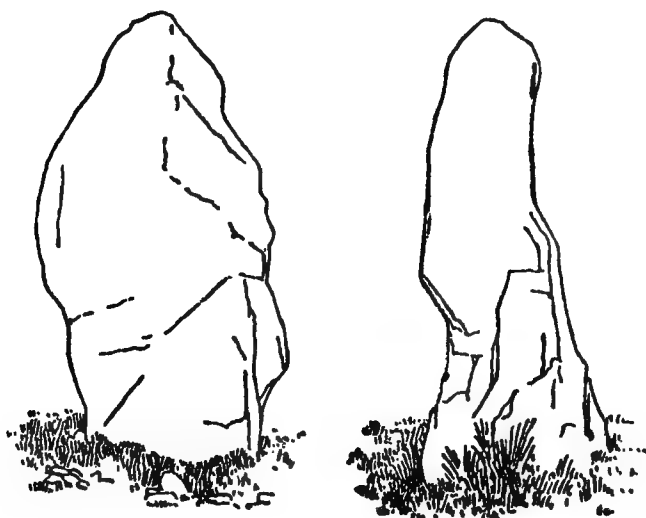
EXMOOR.—A part of this moor lies in Devonshire, and is ill provided with surface blocks of stone suitable for rude stone monuments. Some of these, however, were sufficiently prominent in the seventeenth century to attract the notice of William Camden, Tristram Risdon, and Thomas Westcote, and were described by the first as ‘stones pitched in order, some triangle-wise and some in round compasse,’ whilst the last gives a detailed description and a diagram (fig. 21) of a stone row with two *mênhirs* associated therewith. The row of stones and one *mênhir* situated on Maddocks Down have disappeared. The remaining *mênhir* of quartz is still standing, its dimensions and reconstruction of the whole monument by Mr. R. H. Worth are indicated on the accompanying plan (fig. 22).

In addition to the destruction caused by the formation of enclosures there has been a gradual decay of the Exmoor stone monuments owing to the perishable nature of the slate employed, but enough remains to indicate a considerable amount of primitive work.

Some of these remnants have lately been examined and described,¹ and it would seem that, like the Dartmoor examples, the stone rows and *mênhirs* are contiguous to and apparently connected with interments. This same association applies to stones forming an isolated triangle, for it is

adjacent to a group of barrows on Challacombe Common (now enclosed) O. S. vi, SE. This triangle possesses two of its stones intact, whilst the third is represented by the trigging stones which supported it. It is not quite equilateral, being north 54 ft., south-east 55 ft., and south-west 58 ft. (fig. 23).

In Longstone Allotment, Chapman Barrows (O. S. vi, SE) is an example of what Messrs. Chanter and Worth describe as a quadrilateral, the definition being four stones placed on or near the circumference of a circle so as to form an approximately rectangular figure; at the intersection of the diagonals of this figure, and hence approximately at the centre, there stands a fifth stone. A reference to the accompanying plan (fig. 24) gives details and position of adjacent barrow. The figures appended to each stone are dimensions in inches—the first gives the



MADDOCKS DOWN
looking Sky E $\frac{1}{4}$ E

CHAPMAN
looking E $\frac{1}{2}$ S.

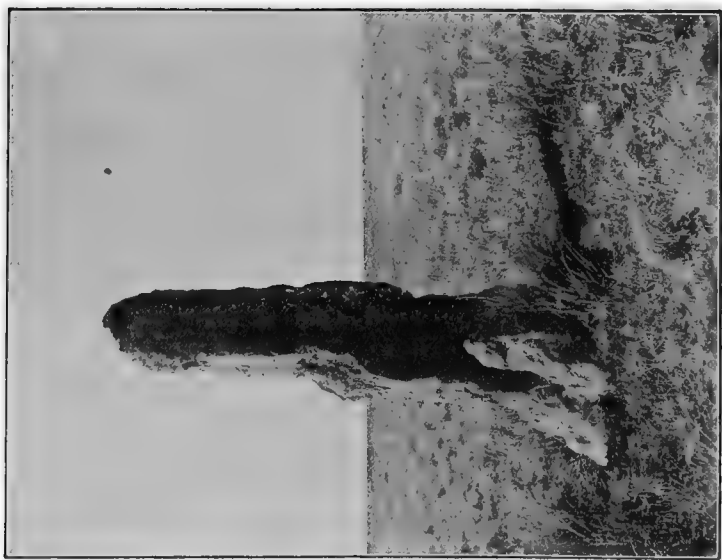
FIGS. 25, 26.—MADDOCKS DOWN AND CHAPMAN MÊNHIRS.
VIEWS AND OUTLINES

width, the second the thickness, and the third the height above ground. The word ‘Horiz.’ accompanied by an angle plus indicates the elevation of the visible horizon in the alignment of the stones.

To the north of this quadrilateral and 500 ft. distant from its centre, a line drawn practically parallel to the east and west diagonal would pass through seven barrows of the Chapman group (O. S. vi, SE); other barrows lie south and east, and the Longstone itself is companion to this quadrilateral, although 2,440 ft. distant (see figs. 25 and 26 for illustrations of Maddocks Down and Chapman *mênhirs*). 713 ft. distant, in a direction approximately 30 degrees south of east, is a large barrow which was opened in 1904, and which yielded a covered interment-pit with charcoal and bone-ash. Fourteen hundred and fifty feet from the centre of the quadrilateral, and in a direction approximately 21 degrees north of west, is a barrow which was opened in 1885, and which yielded an inverted urn and burnt bone.

Near Woodbarrow Arms (O. S. vii, SW, described in O. S. as Woodbarrow Hangings) is an example of the quadrilateral in combination with a triangle; and on Furzehill Common, over Hoar Oak Water (O. S. vii, NW), is an instance of a parallelogram associated with a triangle (fig. 27). Originally it consisted of three rows of three members each; now the central pillar is represented by its triggers only, while the southern centre stone is broken off at ground-level. There are con-

¹ *Trans. Devon. Assoc.* vol. xxxvii, p. 375–397.



LONGSTONE, CHAPMAN BARROWS
Looking 18° W. of N.



GREAT MENHIR, MADDOCKS DOWN
Looking 3° E. of N.

EARLY MAN

siderable irregularities in the spacing, but through it all the diameters and diagonals intersect with great exactitude at the point where the centre-stone has been.

It is not necessary to dwell on the unequal distances of the stones, as the figure is fully dimensioned. The parallelogram is approximately 69 ft. long by 47 ft. broad. The tallest stone is 13 in. wide, 6 in. thick, and 24 in. high. All stones point one way, along the length of the figure (approximately north and south), except the north-west and south-west corner stones, which lie at right angles to this. To the south, and about 30 ft. distant, lies a triangle, which makes no attempt at equilateral symmetry, its north side being 17 ft. 9 in., west side 24 ft. 6 in., and south-east side 28 ft. 2 in. There is no parallelism or precise alignment between the members of the triangle and of the parallelogram. Were it not for the exact accuracy of the work where it was evidently intended to be precise it might be suggested that the south-east side of the triangle was designed to point to the south-east corner of the parallelogram and the west side of the triangle to the south-west corner.¹

ANCIENT ROADS

Devonshire in pre-Roman times evidently contained a numerous and comparatively cultured population. They were skilled workers in bronze and iron, and efficient potters. We know from Caesar that, like the Veneti, they built better ships than the Romans.

These people had roads or trackways linking their villages and camps, and in addition to this, main roads connecting them with other parts of Britain. The minor roads are now difficult to trace or recognize, but here and there trackways of great antiquity may be seen. Some branched from Exeter and others traversed the northern

The very ancient roads entered Devonshire from the eastward. There was the coast road, which the Romans used as their route between Durnono-

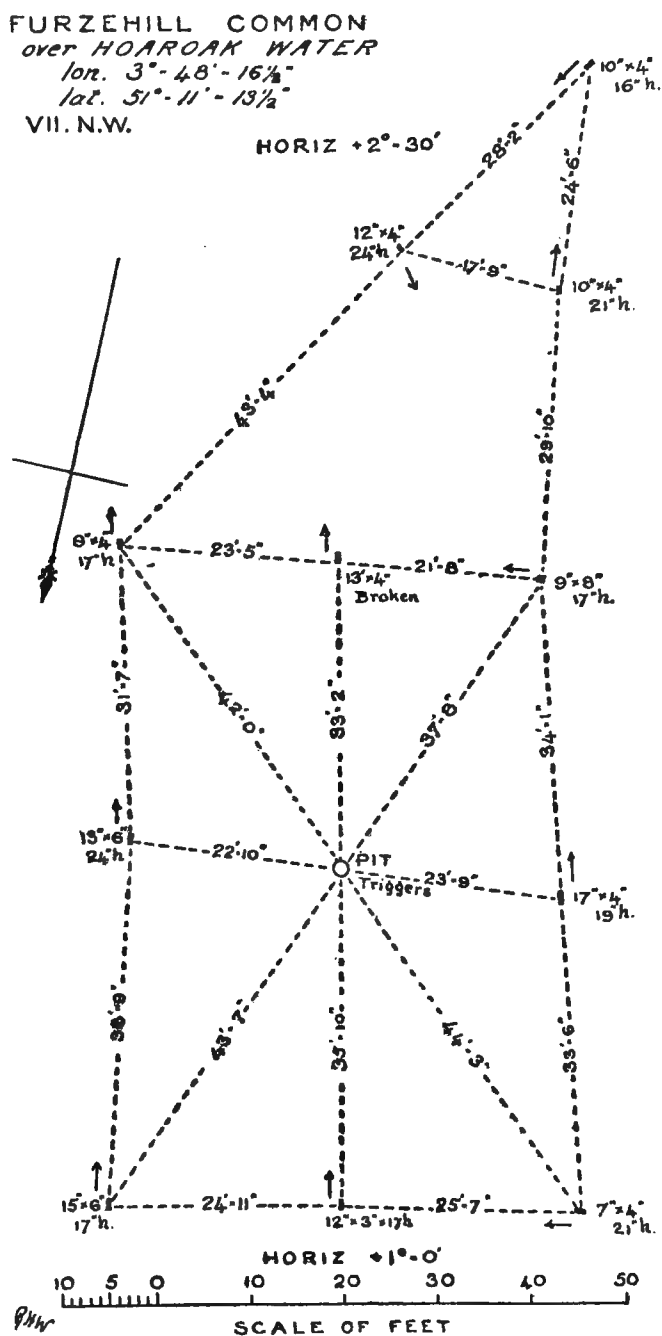


FIG. 27.—PARALLELOGRAM AND TRIANGLE, FURZEHILL COMMON,
OVER HOAROK WATER

¹ These curious monuments, presumably coeval with the barrows, are being subjected to further examination, and it is to be hoped some additional light will be thrown on their meaning.

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varia (Dorchester) and Isca Dunmoniorum (Exeter) via Moridunum—supposed by some authorities to be either Honiton or Hembury Castle near by; and there was the main line of the Fosse Way joining the other road somewhere near Moridunum. The united road passed through Exeter, continued in a direct line over Haldon to the ford of the Teign, near Chudleigh, crossed Dartmoor as the great central trackway to the vicinity of Tavistock, took the lowest ford on the Tamar, and finally passed along the backbone of Cornwall to Mount's Bay.¹

The Romans doubtless greatly improved the old British trackways, but they appear to have done but little road-making, for the only evidence of this west of Exeter was rendered by the rebuilding of Teign Bridge in 1815, when Roman foundations of a previous structure were discovered. This may mean either a new road tapping South Devonshire from Exeter to this point, or the improvement of a British route.

The Roman bridge over the Teign is supposed to be the furthest point in a westerly direction to which the Romans carried their strictly Roman road, or improved British road. Beyond this the road followed the devious winding and irregular course which characterizes a British trackway.

Lists of tumuli, hut circles, kistvaens, stone circles, etc., will be found appended to the article on the Ancient Earthworks of the county.

NOTE ON THE STONE ROWS OF DARTMOOR

Small menhirs set in single, double, and even up to eight lines of stones, and usually starting from a circle of upright stones or from a cairn or kistvaen, and often ending in a similar manner, form the well-known Stone Avenues or Stone Rows. They are of varying lengths and point in no settled direction. The longest is a single row on Stalldon Moor (O.S. 113 SW.) which, starting from a stone circle, is clearly visible for a mile and a half—it probably extended for another three-quarters of a mile and terminated at a kistvaen. There are some fifty of these stone rows on Dartmoor.² Although the particular meaning of these monuments is at present not definitely known, the recent attempt to invest them with an astronomical use is speculative and can hardly be borne out by a close study of these alignments.

¹ R. N. Worth in *Trans. Devon. Assoc.* xxiii, 59.

² For list of the more important stone rows see Rowe's *Perambulation of Dartmoor*, 1896, pp. 409-13.