The Keltic Cavern.

By L. S. Palmer, B.Sc.

The objects of this paper are—

1. To place on record the work of this Society in the discovery and investigation of the Keltic Cavern.
2. To indicate the place of the finds in the pre-history of Somerset in particular and of England in general.

I.—Introduction.

In March, 1919, at the first sessional meeting, it was suggested from general geological considerations that a cave might be expected at Swallet E. (Plates II. and III.). The two outstanding geological facts were the line of holes formed at the junction of the limestone shales and the " Z beds " of massive limestone, and the presence of a swallet at the 600 ft. contour line with Langford Spring on the 200 ft. contour line on the opposite side of Mendip Lodge Hill.

After the removal of 21 tons of material in the course of some weeks excavations this surmise was verified by the discovery, on September 13th, 1919, of a cavern, since aptly called " The Keltic Cavern." Of these 21 tons of material, 20 were removed in an attempt to enter the actual swallet. This, however, resulted in an almost vertical descent of 60 feet, amongst loose water-worn boulders, comparable with those of Eastwater Swallet. Only one ton of material obscured the passage which ultimately led to the cave, some 40 feet below the surface.

On the first day finds were made which showed that man had occupied the cave at some time or other. The following method was therefore devised in order to correlate subsequent work and to have a correct record of the position and depth of any material collected. A rough plan, afterwards replaced on the completion of a more exact survey (see Plate I.) was covered with 5 feet squares. The position of each square was indicated by a letter and a number. As the surface only has been searched, with the exception of one trench for testing the depth of the deposit, no suffix has been necessary to indicate the depth of the finds. The record was then written up in the Society's log book, with a description and the square number. The positions are recorded in the attached plan.

II.—The Cave.

The completed survey reveals the fact that the cave is comparatively one long rift chamber, 175 feet in length, with an average of 27 feet in height, and approximately 33 feet wide at the bottom, the cross section being triangular. So far exploration has failed to show the passage or passages which must lead to the lower strata. The cave (Plate II.) is situated at the line of junction of the massive limestone and limestone shales, similar in position to that of Goatchurch, and comparable in nature to Eastwater Swallet.[1] Like the latter, the cave will undoubtedly lead further, possibly when the water-way, beyond the chamber D., has been followed.

The interior contains the usual interesting examples of water action. The old swallet, from which the stream has been diverted, reveals beautiful stalactite and stalagmite formations, some of which are of the erratic type seen, for example, in Swildon's Hole. Other examples of water action are seen in all the offshoot passages where the water has weathered the rocks to such an extent that fossils, such as Zaphrentis, Syringothyris, Michelinia, Spirifer, etc., have been left protruding and showing their internal structure with greater detail than any specimen extracted with a geological hammer. Besides water action some interesting examples of earth movements are seen in this cavern. The mound, through which the entrance trench was cut, was undoubtedly at one time the roof of a shelter or cave which fell in and blocked up the entrace to the present cave. The otherwise fruitless labour expended in climbing down 60 feet into the swallet revealed the fact that the depth of this fall is probably indicated by the dotted line in the cross section on the line E.E.* Other interesting examples of earth movements are seen in the fold of rock above the entrance. The apex of the roof of the cave itself consists of a right-angled fold, part of which has fallen down, forming a right-angled rock, marked "K" (Plate I.). At another part stalactites and stalagmites had joined, forming a pillar from roof to floor. The subsequent downward movement

---

1 Wookey Hole (H. E. Balch) p. 209.

*Since writing remains of sheep have been found ten feet below top of mound on the level of this dotted line.

of the floor has caused the separation of the stalactites from the roof, recording in this way the motion of the underlying rock. The only other example of such a natural record can be seen in Swildon's Hole.

Another natural record is seen where a stalactite was formed on a rock which became tilted through an angle. The stalactite continued to grow vertically. The angle between the two portions is quite well defined, thus not only giving an exact measure of the angle through which the rock moved, but indicating by the straightness of each piece and by the definiteness of the angle that the rock movement must have taken place suddenly. Had this not been the case the angle would have been rounded and the new portion of stalactite would have been curved. It is quite probable that the violent action of the outer roof falling in caused the sudden movement here recorded.

The length of the stalactite from tip to bend is 1.3 inches. It is a fairly safe assumption, in this particular case, to take the minimum rate of growth as an inch in a thousand years, since the dry atmosphere of the cave will probably make this time much shorter. Thus we are led to the interesting conclusion that the falling of the roof which closed the entrance could not have occurred before 500 A.D., and probably actually took place much later.* This is of interest when we consider the present difficulties of the entrance, and realise the comparative ease with which even cattle could have been led down a gradual slope before the roof fell in. The original entrance level was only about six or eight feet above the west end of the cave floor.

This deduction is based on the rate of growth of a stalactite and is therefore to be accepted with considerable reserve till more exact measurements have been made at this particular spot. The error thus caused is, however, likely to make the time later rather than earlier.

On first entering the cave it is of interest to note that the air in the lower portion was slightly foul, whilst the atmosphere was very dry. Both these facts tend to show the reason for the excellent preservation of the iron which was subsequently discovered. The trench dug and indicated on the plan reveals a floor of stalagmite from $\frac{1}{4}$ to 1 inch thick, covering a layer of

* See footnote, page 10.

black mud, varying in depth from 1 to 8 inches. The mud covers a stratum of cave earth intermingled with boulders, but without evidence of occupation.[1] This bottom layer is about $2\frac{1}{2}$ to 3 feet in depth. At some parts of the cave the depth of the deposit is only a few inches.

All the finds have been made in the black mould or on the surface, in which case, if the position was suitable, a thin coating of stalagmite covered them.

III.—The Finds.

1—Bones.—Only one human bone has been discovered,—a human radius, which was lying on the surface at the position indicated in the plan, and shown in situ on Plate IV. It was covered with a stalagmite coating.

Animal bones have been discovered of the following domestic animals, the order indicating their relative numbers:—sheep, pig, ox, horse, dog, goat (?). Bones of the following wild animals have been also found:—roe deer, wild cat and wild boar. (Plate V.)

The prevalence of sheep is in accordance with the finds at Glastonbury Lake Village,[2] whilst pig comes second in this cave only. At Worlebury Camp no sheep were found,[3] but these animals are typical of those found at Hunsbury[4] and other late Keltic settlements. The wild animals are also comparable with those found at Glastonbury Lake Village.

It is interesting to note, at this point, that one bone was gnawed, probably by a dog, and that one rib (ox) was considerably charred. The horse bones are those of the small Keltic pony of about eleven hands.

2—Worked Materials.—Only three stone implements have been discovered, a grinding stone, a spindle whorl, and a circular disc. (Plate VI.)

The quartzite grinder was probably used with a saddle-back quern, but is unlike anything found either at Wookey Hole, Glastonbury Lake Village, Hunsbury or Worlebury. The near-

---

[1] Cf. Wookey Hole, Plate IX., p. 52.
[2] Glastonbury Lake Village (Bulleid and Gray) p. 643.
[3] Worlebury (Dimond) p. 124.
[4] Hunsbury (George) p. 33.

est is that numbered Q 34 on page 609 of " Glastonbury Lake Village "; but the length of the specimen found in the Keltic Cave is about half as long, being only 4.5 inches. The shape of the specimen is approximately that of a semi-ellipsoid.

A white lias spindle whorl, similar in all respects to the commonest type at Glastonbury Lake Village was also found.

The third stone implement (?) is a circular disc, possibly an incomplete whorl or gaming stone, although, if the latter, its size is larger than any yet found. Its diameter is 1.75 inches, comparable with that of the spindle whorl.

Of worked bone, two, and possibly three, examples have deen discovered (Plate VII.):—a spindle whorl made from the femur of an ox, in every respect like the one found at Worlebury and Wookey Hole, or like the many from the Glastonbury and Meare Lake Villages ; a " cheek piece " made from a deer tine with two parallel holes, and a third hole unfinished.[1] It seems improbable that the large numbers found at Glastonbury, Ham Hill, Meare, Hunsbury, etc., should all be cheek pieces of bridles, especially when one without holes from Meare Lake Village shows signs of having been extensively used. Another piece of bone from the Keltic Cavern is highly polished, and shows signs of saw cuts.

Six bronze articles have been found—a typical Late Keltic ring of $2\frac{1}{4}$ turns, the half of a hollow bronze bracelet (Plate VIII.), and four nave hoops of chariot wheels (Plate IX.). The ring is like those depicted on page 209 of " Glastonbury Lake Village."[2] The bracelet has no counterpart in any of the local settlements, the comparable specimens having cores of Kimmering shale or iron. The sixth century B.C. bracelet from Halstatt (now in the British Museum) is the nearest approach to the present find. The four nave hoops, of 4.9 inches internal diameter, were found lying together, as in Plate IX., in one of the lower chambers of the south-eastern end of the cave. The place was such that no chariot could have been taken there without being dismantled. Unlike other similar finds, no portions of wheels or tyre bands were found. The hoops are comparable with those from the Yorkshire burials described by Canon Greenwell.[3]

---

1 Cf.—Type C; Glastonbury Lake Village. Fig. 155.

2 See also Arch. Journal, Vol. V., p. 323.

3 Greenwell's British Barrows, p. 454, and Archæologia, Vol. 60, p. 285.

The Plate shows in one hoop a solder joint, indicating that at one time the hoops had been used and repaired. It therefore seems probable that they were removed from the hubs and placed with some pottery in a place of security.

The objects of iron are of considerable interest. The shackles shown on Plate X. are precisely the same as those found at Bigbury.[1] There is no other record of a similar find in England. The key depicted on Plate XI. is a good specimen, and similar to those found at Wookey Hole, Charterhouse, Ham Hill, Combe Down and Glastonbury, etc.[2] The article shown with it is of unknown use. The flat end is in reality a circular disc containing an oblong hole which does not show in the photograph.

Plate XII. shows portions of a rectangular iron clamp similar to that found in a grave at Connantre, Marne ; a spike, many of which were found at Wookey, Glastonbury, etc., and a hook. The " U " shaped iron is the rim of a wooden spade, a unique find in this country. The nearest approach to it is the protecting rim of the early Scottish push plough. Jacobi's Saalbourg depicts two similar ones of Roman manufacture.[3] The " Bronze Age Guide " of the British Museum shows a somewhat similar iron hoe from Mesopotamia, dated about 1500 B.C.[4] A woman's grave at Breban, Marne, yielded another specimen with square edges. A similar rim from a Scottish crannog at Lochlee is supposed to be a breast plough.[5] From Wookey Hole a wooden shovel was obtained which showed no signs of having been shod.[6] The width of the present specimen is 7.1 inches, its total depth being 6.4 inches.

The pottery (Plates XIII. and XIV.) found in the cave is very similar to that found at Glastonbury Lake Village or below the Roman layer at Wookey Hole. Similar pottery has been found at Hunsbury, Worlebury, Ham Hill and Meare Lake Village, etc. It is also of interest to note that a specimen of this type has been dug up at Dolebury Camp.[7] The shape, markings and nature of

1 Boyd Dawkins—Archæological Journal LIX., 235, p. 211.
2 Glastonbury Lake Village, p. 375.
3 Saalbourg—(Jacobi), p. 446.
4 Bronze Age Guide (British Museum), p. 127.
5 Ancient Scottish Lake Dwellings (Munro), Fig. 120, p. 121.
6 Wookey Hole, p. 133.
7 At Taunton Museum.

the material are all comparable with the ware manufactured in Armorica and brought over by the Brythonic invaders, probably about 400 B.C. As yet no pottery with the "S" markings or crucibles, so common at Glastonbury, have been found. One piece probably shows the dot and circle pattern, but the fragment is too small for this to be certain. No Roman or Romano-British pottery has been discovered.

3—Miscellaneous Finds.—Much charcoal is scattered over the floor of the cave. One sample examined was charred grain, and another sample showed traces of beans. The cooking fires appear to have been scattered throughout the cave. One lump of limonite and one lump of galena were discovered. The former is quite typical of the limestone shales in which the cave is formed; the latter does not appear to have been used, and is common in the district.

4—Position.—All the finds are from the top, and apparently the only layer in the cave which yielded signs of human occupation. It has also been noticed that the finds have been placed, perhaps hidden, and not washed in. The presence of charcoal, the possibility of piecing together the pottery, and the position of the chariot nave hoops, amongst other evidence, all tend to support the view that the cave was occupied. It is, however, of importance that there were no definite divisions of the cave which can be said to have been stables, kitchen, or workshops, etc., as at Wookey Hole,[1] Glastonbury,[2] and other prehistoric settlements. This is clearly seen from the manner in which the solid and open circles are dotted over the plan in Plate I.

IV.—Associated Evidence.

1. Before indicating the place of these finds in pre-history a rough resumé of the main facts generally accepted by archæologists of to-day may not be out of place. The ice age left behind a poor remnant of the pathæolithic hunters, who, during the arduous times of the ice age, had gained a bare existence from the shell-fish and other food they could gather from the coastal districts. Following this, and the retirement of the ice, they again spread over the whole of the land, including Scotland and

---

1 Wookey Hole, Plate XVIII., and p. 103.
2 Glastonbury Lake Village, pp. 269, 303.

Ireland. Somewhere about 3000 years B.C. the isolation of England was probably completed.[1] It may have been that the first of the three pre-Roman invasions passed into England by land, but this is unlikely. It is generally estimated that the first invaders—the Goidels—entered this country between 2000 B.C. and 1500 B.C. It was just before this time that bronze was first used in England.

Following the first invasion a comparatively highly civilised peoples invaded our shores from the neighbourhood of Brittany. These people—the Brythons—were opposed by the amalgamated forces of the Goidel and the remnants of the palæolithic men—the Picts. From the place names of Ireland, Scotland and Wales and from the existing language of some of the remoter districts we can see how the Goidel retired before the advancing Brython. This second invasion took place about 400 B.C., and the invaders were probably the people who introduced iron, the industry of weaving, of soldering and other civilised arts unknown to the earlier invaders. It is these people of whom Cæsar speaks, and erroneously calls them Belgæ. He speaks of one tribe, the Morini, whose name is Brythonic in origin, as using the war chariot then abandoned on the continent.[2] Compared with the third and last group of pre-Roman invaders, these people were peaceful farmers rather than warriors. Somewhere between 50 B.C. and 50 A.D. came the last pre-Roman invaders—the Belgæ, a tribe of warriors rather than farmers. This invasion probably took place more or less continuously between the dates mentioned, and probably in a smaller degree from 100 B.C. These invaders repeated history by gradually driving the Brython northwards. Their conquest, however, was short-lived, and they reached only the southern provinces by the time that Constantine with the Romans governed England. As the Brython had been made the slave of the Belgæ, so all these tribes were subjected to Roman influence.

2. The successive invaders left their imprint in Somerset. The submerged forests on the western coast yield evidence of the earliest peoples. Such names as the Axe show the presence of the Goidel, though Somerset seems to lack evidence of the habitations

[1] Pre-historic Britain (Munro), p. 232.

[2] Cæsar's Commentaries, Bk. IV. 24 and 33.

of the early bronze age and neolithic peoples. The Brythonic invaders who came from Armorica, north of the Loire, have left abundant evidence of their stay in this locality. In Wookey Hole numerous finds have been obtained which show that this was one of their dwelling places.[1] Glastonbury and Meare Lake Villages give even more evidence of the Brythonic origin of their peaceful inhabitants.[2] Worlebury Camp was probably built either by the Goidel or by the Brython.[3] This conclusion was derived from detailed consideration of the methods of construction in comparison with other encampments. It has been stated that this camp was occupied by the Belgæ and sacked and destroyed by the Romans.[4] This implies that the Belgæ must have driven out the Brythons. Plates II. and III. lead to the same conclusion with regard to the builders of these camps. A very elementary tactical knowledge will show that the enemies expected by the defenders of the camps lived to the north. In every case the camp is placed on the northern and lower slope of the Mendips, and is backed by the higher hills, which must have been the country of those who built the camps. Such a state of affairs could only exist if the camps had been built by invaders. This confirms the conclusion of Dimond, which was based in his case, upon constructional details.

In the case of Worlebury there is some evidence to show that two battles were fought upon this site. With Glastonbury Lake Village it is quite evident that the village was sacked and the inhabitants massacred by a war-like peoples,[5] who were not, as in the case of the Swiss lake villages, Romans. That the finds at Glastonbury were Brythonic points to the sacking of that peaceful settlement by the Belgæ. In Wookey Hole also there is evidence that the inhabitants were driven into the fastnesses of the cave by some invader.[6] Thus the three local places in which finds similar to those of the Keltic Cave have been disclosed

---

1 Wookey Hole, pp. 52, 57, 59, 79 and 137.

2 Glastonbury Lake Village, pp. 488, 496 and 695.

3 Worlebury, pp. 110 and 115, and The Ancient Entrenchments and Camps of Gloucestershire (E. J. Burrow), p. 18.

4 Worlebury, pp. 111 and 115.

5 Glastonbury Lake Village, pp. 488, 496 and 695.

6 Wookey Hole, pp. 38 and 128.

appear to have suffered somewhere between 50 B.C. and 50 A.D. at the hands of an invader. In Lancashire the Dog holes[1] have been shown to contain similar remains, and appear to have been occupied as temporary refuges by these same people, presumably in their retirement northwards.

V.—Conclusion.

We can now sum up the evidence from the Keltic Cave under two heads, viz: the points which tend to give evidence of the peoples and the date of occupation, and, secondly, the points which tend to indicate the nature of the tenancy of the cave.

1. (*a*) All the finds are comparable with Late Keltic Settlements in general, and with Glastonbury Lake Village, Wookey Hole, Hunsbury, Bigbury, Dolebury and Worlebury in particular. An exception is the rim of a spade and the unidentified iron depicted with the key on Plate XI.

   (*b*) The absence of weapons is significant and may point, as in the case of Glastonbury, to a tribe of farmers rather than warriors.

   (*c*) The presence of chariots is in accordance with Cæsar's description of the people he found in the southern provinces in 55 B.C.

   (*d*) The cave is in what might be termed a "Brythonic front line of advance."

   (*e*) The presence of peoples similar to the inhabitants of this cave yet living in adjacent marsh villages is in accordance with the practice of the Brythons of northern France, recorded in Cæsar's Commentories.[2]

   (*f*) A large number of the names in the neighbourhood are further evidence of the Brythonic inhabitants, such as Dolebury (Dole-Marsh or Dale); Banwell (probably from Ban—deep); and Mendip (Mæn dippa—stone pits), Armorica and Morini both containing the Brythonic word "mori," meaning sea.

---

1 Trans., Lanc. and Cheshire Antiquarian Society, XXX.

2 Cæsar's Commentaries, Bk. III. 28, and Bk. IV. 38.

(*g*) No Samian ware, coins, or other evidence of Roman occupation has been found in the Keltic Cavern.

These points lead to the conclusion that the inhabitants of the Keltic Cavern were Brythonic ; their work is that described as "Late Keltic," and indicates a date from 400 B.C. to the time of their defeat by the Belgæ somewhere between 50 B.C. and 50 A.D.

2. The evidence pointing to the nature of the tenancy may be summed up as follows :—

(*a*) The depth of the layer yielding finds is, on an average, about three inches.

(*b*) There is no evidence of a layer above this or of previous occupation from the cave earth below.

(*c*) The depth of the cave, though probably less at the time in question, is exceptionally great for the place to have been used as a habitation for any length of time.

(*d*) Finds which might have been expected, but which have not yet been discovered are almost as interesting as those found ; i.e., a spindle whorle has been found but no weaving combs or loom weights, a grinding stone without a quern, nave hoops without wheel tyres, and no horse harness ; no currency bars, no weapons and no human remains except the one solitary radius.

(*e*) The articles were placed, possibly hidden, and not washed in.

(*f*) There are no signs of industry in the cave itself.

(*g*) There are no definitely established places in the cave from which groups of similar finds might have been expected.

Before interpreting these facts the possibility of applying one of the usual explanations of groups of finds must first be considered. Such explanations are generally one of the following :

1. A hoard of either personal belongings, merchants' stores or founders' implements.
2. A settlement.
3. A battlefield.
4. A cemetery.

From the considerations mentioned above it does not seem probable that either of these explanations will fit this particular case. It is therefore reasonable to suppose that this cave was a temporary refuge, and probably occupied about the time of the Belgæ invasion of this locality.

Hence it is concluded that:—

1. The finds from the Keltic Cavern were the work of the Brythons, and are "Late Keltic" in style.
2. The cave was used as a temporary refuge by the Brythons.

Prof. Sir W. Boyd Dawkins, R. Smith, Esq., H. E. Balch, Esq., H. St. George Gray, Esq., by their practical interest in the discovery, greatly facilitated the identification of the worked materials. R. H. Coysh, Esq., took the photographs from which Plates V. to XIV. were made.

THE KELTIC CAVERN.

PRESENT WATER WAY

CLIFF FACE

TUNNEL

TRENCH.

SWALLET "E" (DRY)

MAG. N

— PLAN. —

WET SWALLET

SCALE OF FEET.

LONGITUDINAL SECTION LOOKING N.E.

ALONG LINE F.F. APPROXIMATELY.

PRESENT GROUND LEVEL.

STREAM LEVEL.

CLIFF FACE

FRENCH

TUNNEL

SWALLET "E"

SCALE OF FEET.

CROSS SECTIONS LOOKING N.W.

SECTION ON "A A"

ON "B B"

ON "C C"

ON "D D"

ON "E E"

PRESENT WATER WAY

- A. The Grotto.
- B. Pipe Cavern.
- C. Crooks Passage.
- D. Water Cave.
- E. The Offshoot.
- F. The Bridge.
- G. Boulder Chamber.
- H. The Corner.
- I. "Z" Alley.
- J. The Office.
- K. Right Angle Stone.

- ● Animal Remains.
- ⊕ Human Remains.
- o Remains of Human Work.

To B & A

To B

To I

L.S.P.
10/1/1920.

PLATE I.

CROSS SECTION OF BLACKDOWN ON N.S. LINE.

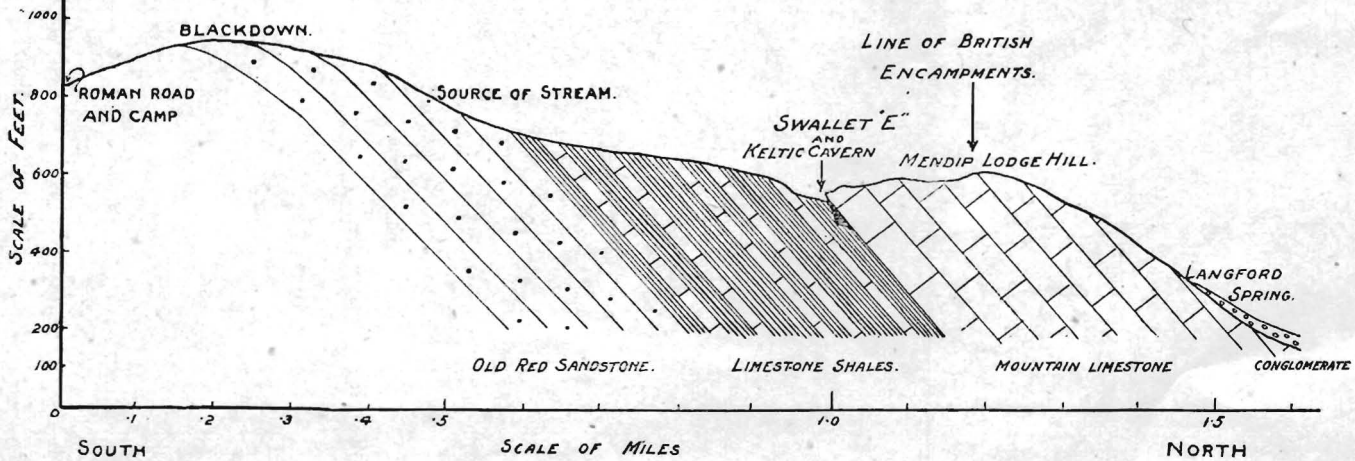

PLATE II.

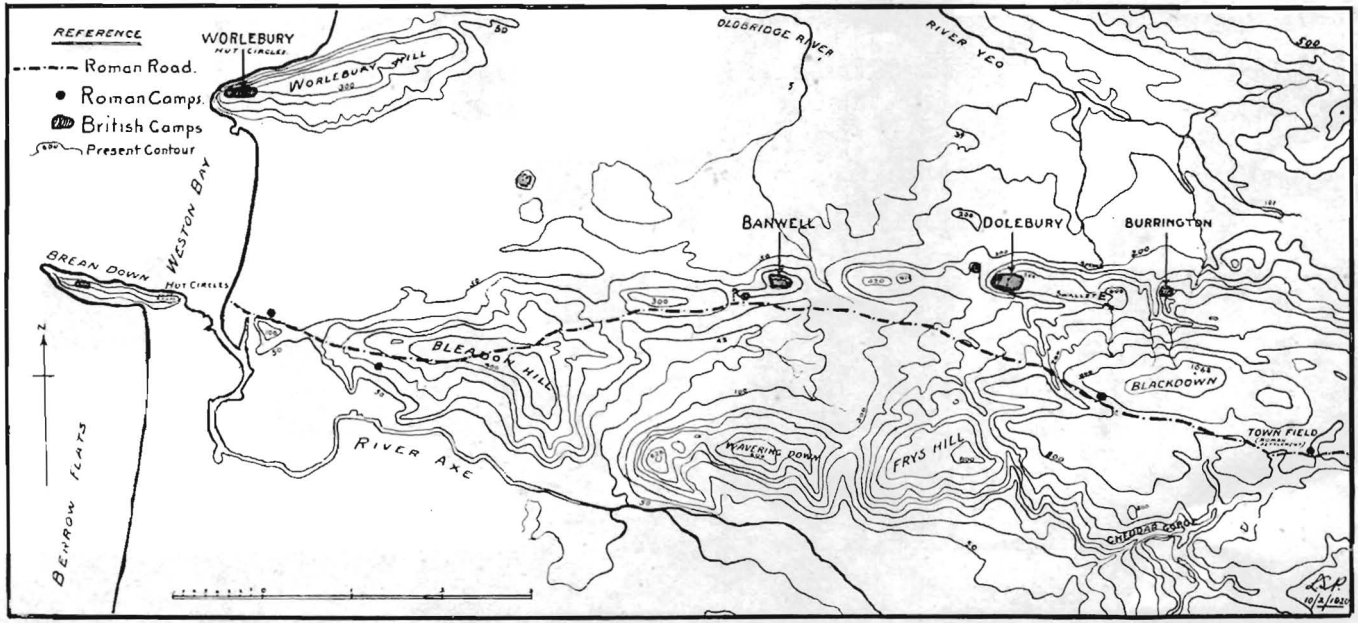

PLATE III.

Scale of Miles.

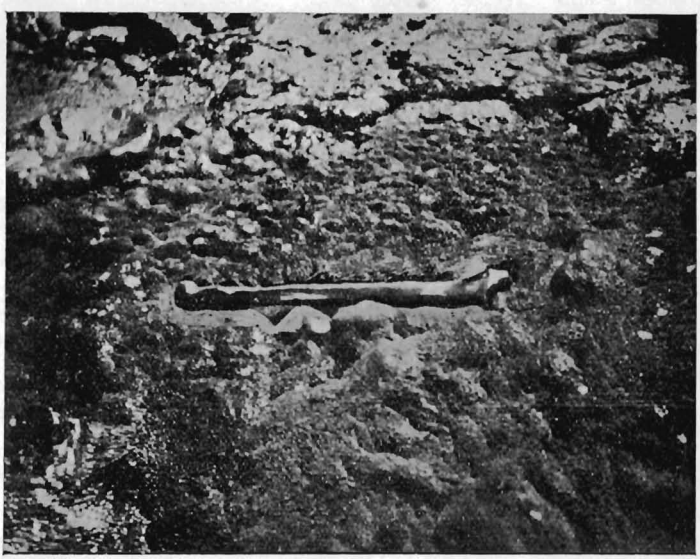

PLATE IV.

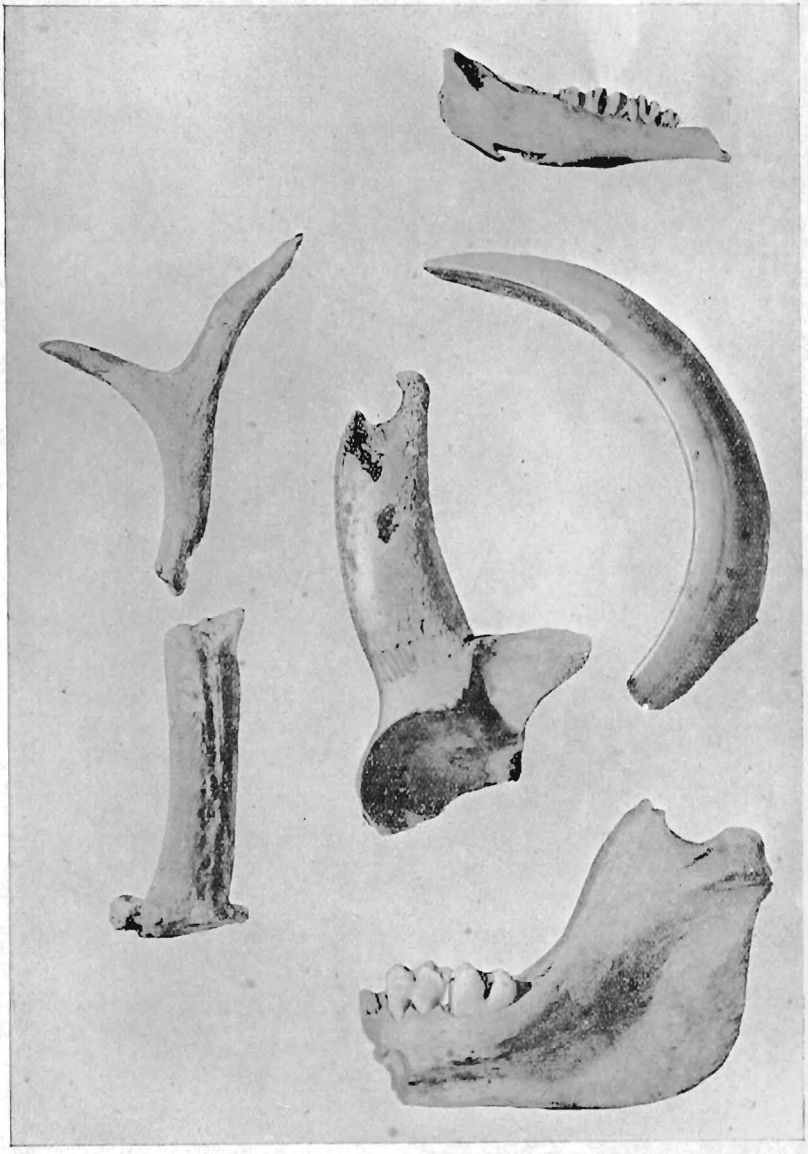

PLATE V.

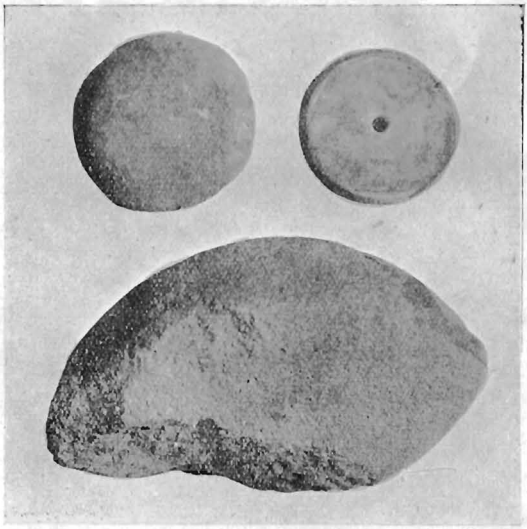

PLATE VI.

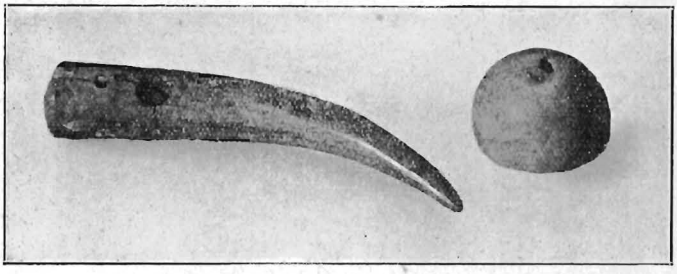

PLATE VII.

PLATE VIII.

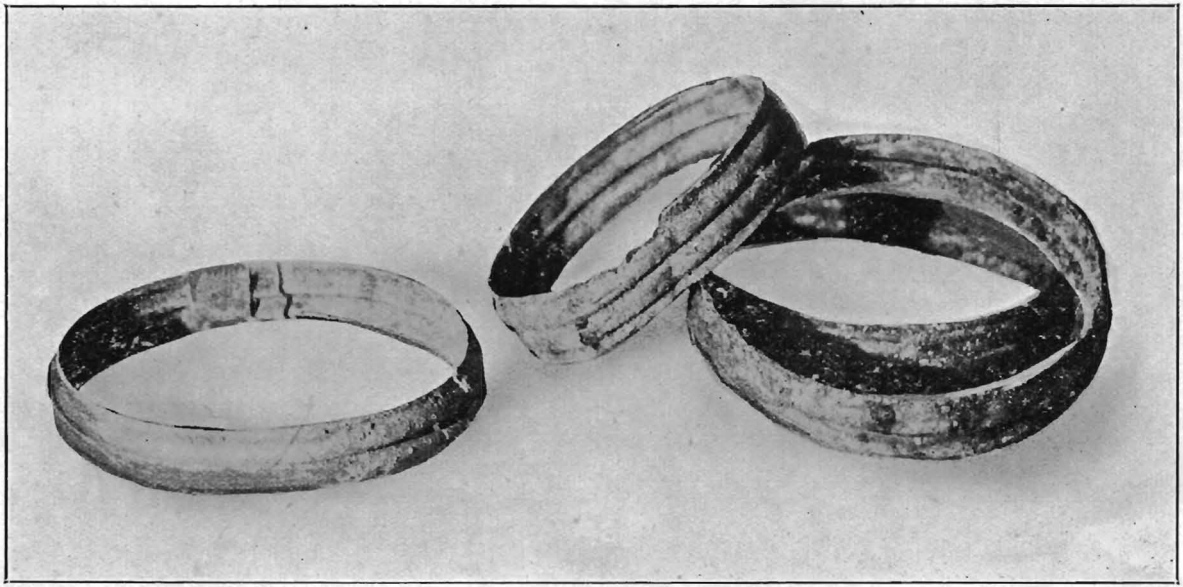

PLATE IX.

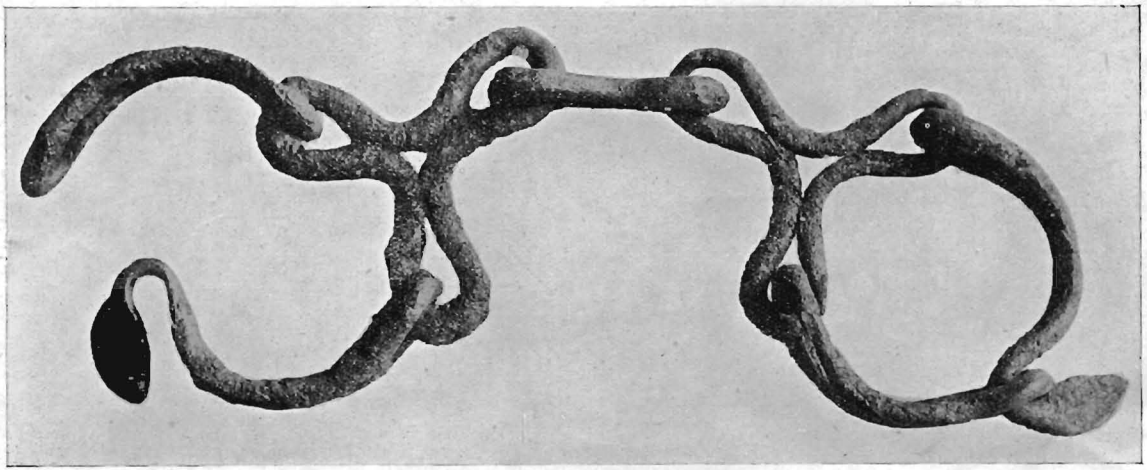

PLATE X.

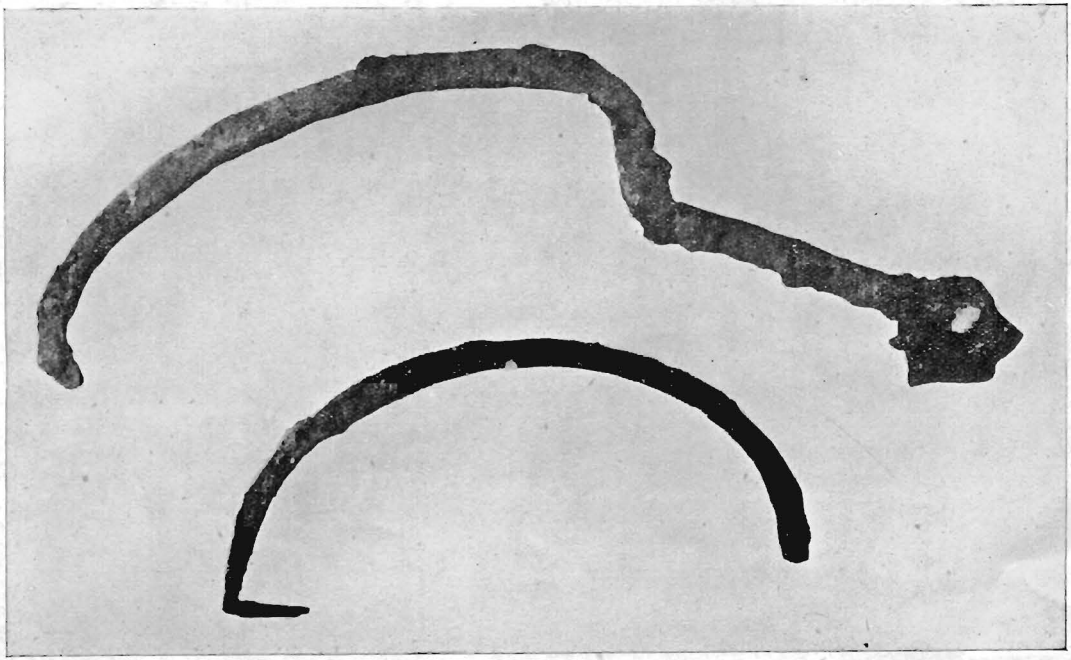

PLATE XI.

PLATE XII.

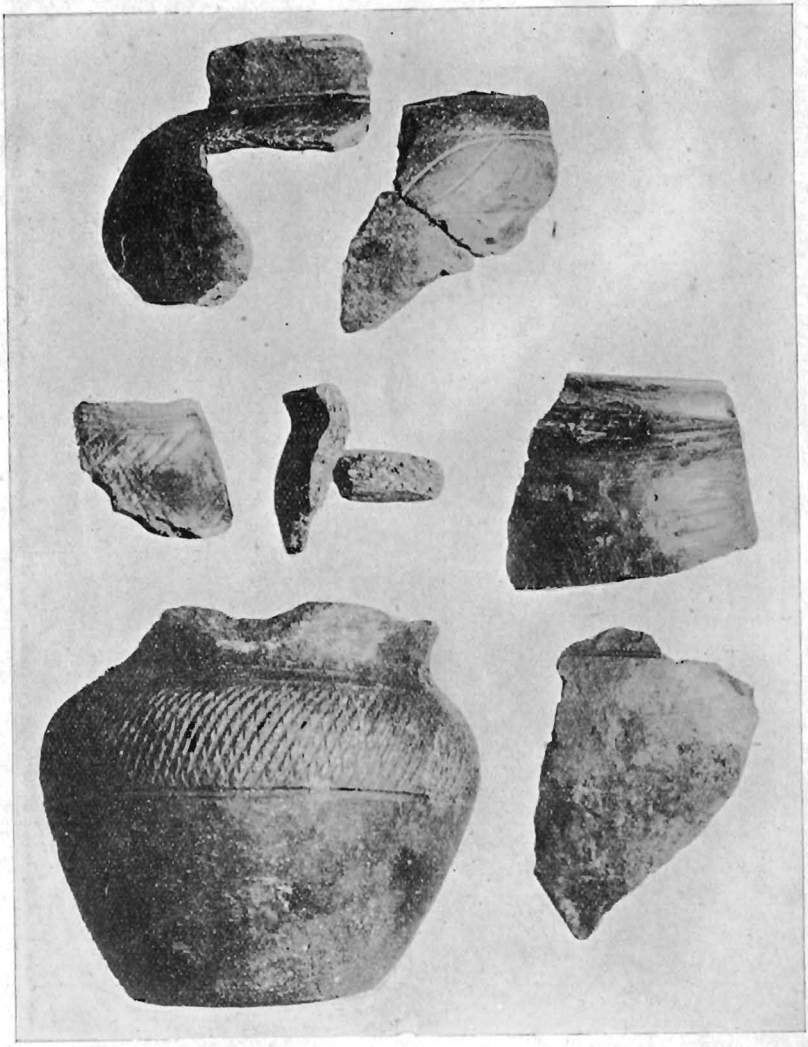

PLATE XIII.

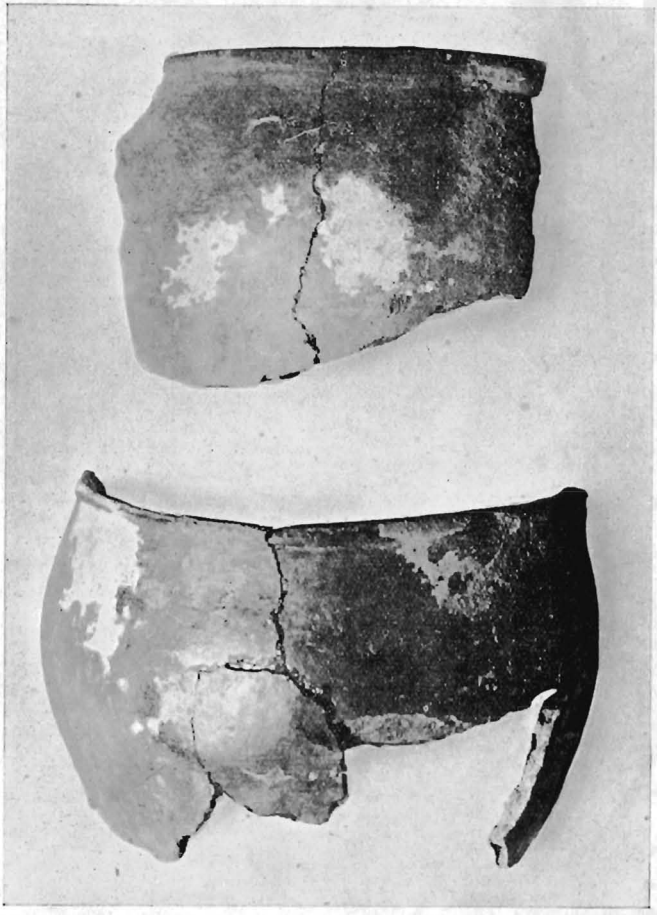

PLATE XIV.