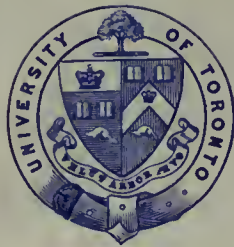




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EXCAVATIONS AT CARNAC



Frontispiece.

VIEW IN LANN MANÉ KERMARIO, TO THE N.E. (*From a Drawing by James Miln.*)

EXCERPTS

GARDNER

OF THE

1850



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EXCAVATIONS
AT
CARNAC
(BRITTANY)

A RECORD OF ARCHÆOLOGICAL RESEARCHES IN
THE ALIGNMENTS OF KERMARIO

BY
JAMES MILN



EDINBURGH
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PREFACE.

IN the preface of the work published in 1877, entitled *Archæological Researches at Carnac in Brittany*, I announced my intention of continuing my explorations in that neighbourhood.

Having since then realised these projects to some extent, I now offer to the public the present work, descriptive of my researches amongst the Alignments of Menhirs at Kermario. This, while forming a sequel to the *Bossenno*, is intended to be succeeded by others which will contain the results of more recent excavations in the region about Carnac, amongst Gallo-Roman remains, dolmens, circular places of sepulture, and quadrilateral monuments.

JAN. 1881.

The Author,
JAMES MILN,

DIED 28TH JANUARY 1881,

WHILE THE BOOK WAS BEING PRINTED.

PREFATORY NOTE BY THE PUBLISHER.

JAMES MILN of Woodhill, Forfarshire, born in 1818, was the second son of James Yeaman Miln of Murie and Woodhill. In early life he was much abroad, having resided for considerable periods in India, China, and New Zealand, and travelled extensively in other parts of the world. Naturally observant and reflective, the knowledge which he thus acquired of different races of men in different stages of culture and civilisation, drew him gradually to the study of archæology, to which he finally devoted himself with a degree of energy and ardour but rarely exhibited. In 1873 he went to Brittany, and when visiting the celebrated alignments of menhirs in the neighbourhood of Carnac, his attention was drawn to certain mounds at the Bossenno called Cæsar's Camp by the peasantry. Seeing how these were related to the alignments, he resolved to excavate them, and by comparison of the results thus obtained with the results of other excavations in and around the alignments themselves, he hoped to be able to throw some light on the age and purpose of these mysterious and marvellous monuments. The results of his first three years' work at the Bossenno were embodied in the work entitled *Researches and Excavations at Carnac (Morbihan), The Bossenno, and Mont St. Michel*, which was published simultaneously in Edinburgh and Paris,

and was very favourably received by the English and French press. Returning to Carnac in 1877, he continued his researches, and having at length finished the text and illustrations of the present work, intended as the first of a series in which the results of his last three years' work should be embodied, he came to Edinburgh at Christmas 1880, to see it through the press, and had finished the revision of the proof-sheets on the day before he was seized with his short and fatal illness. He died on the 28th January 1881, aged sixty-two years.

An obituary notice of him which appeared in the *Scotsman* states that "Mr. Miln was a Fellow of the Society of Antiquaries of Scotland, the Royal Northern Society of Antiquaries, Copenhagen, and several other scientific societies, British and foreign; and only a few days before his death, he had received intimation that, in recognition of his great services to archæology, he had been unanimously elected Vice-President of the Polymathic Society of the Morbihan. He was chiefly known in the literary and archæological world by his work, published in 1877, entitled *Excavations at Carnac*. But he was otherwise a notable and interesting man, full of intellectual energy, of large and varied information, and of a most generous nature."

He was greatly liked and esteemed at Carnac, and the collections which he had obtained from his six years' diggings in the neighbourhood, including all the objects figured and described in the pages of the present work and its larger predecessor, are to be preserved there as the Miln Museum.

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I.

KERMARIO.

B

KERMARIO.

ONE day in the autumn of 1877 our attention was attracted, when walking through the alignments of Kermario, by the red colour of a small object in the bottom of a spade hole, which formed one of a series that had been recently cut by the peasants for the purpose of obtaining turf to cover the top of an adjoining wall. Picking out the red object, about the size of a walnut, it seemed to be part of a Roman roofing-tile freshly cut by the spade, and on searching amongst the turf on the top of the wall we found its counterpart. These two fragments when united left no doubt (although much to our surprise) as to their forming part of a *tegula*. Roman brick amongst the alignments did seem strangely out of place. How came it to be there, and buried some inches under the surface? The astonishment attributed to Robinson Crusoe on seeing a footprint on the sand could not have been greater than ours: then came the reflection that there may be, after all, some reason for the peasants calling the alignments "Cæsar's Camp."

We proceeded to look about for other indications, and these were not long in presenting themselves, for farther along the wall we found other fragments of *tegulæ*; and on carefully examining the wall itself, we observed that a great number of the small cubic stones used by the Romans had

been utilised in its construction. This wall will be afterwards alluded to when we come to describe the west wall of the Roman camp in the field of the Little Métairie, on which it is partly superposed. Sending a few workmen the following day to cut a trench across the alley between the 4th and 5th alignments, they collected several fragments of both Roman and Celtic pottery. We certainly little thought when we made the drawing of this part of the alignments, already published in our work on the Bossenno (see page 5), that about thirty feet from where we then sat we should cut this trench and find in it traces of the Roman occupation.

All these indications, joined to others furnished by the undulating surface of the ground, offered strong inducements to undertake a series of excavations amongst the alignments. But before deciding to do this we hesitated when we considered that for centuries past these alignments had attracted the attention of *savants* from all Europe, that they had been already described by so many archæologists, and also that within the last few years they had formed the subject of a Special Commission appointed by the French Government. All these facts seemed to indicate that any excavations we might make would not only yield no result, but that any description we could give (coming after men so distinguished) would be considered superfluous. The inducements, however, proved too strong to be resisted, and we applied to the proprietors of the alignments for permission to excavate. This they willingly granted. Arrangements with the farmers were not quite so easy. Their reply was—"We are always glad to see you, but we dislike strangers running over our fields trampling down the grass and frightening our beasts. The operations you propose are certain to bring an increasing multitude of visitors (for you always discover antiquities wher-

ever you dig), and we find these tourists already too numerous." They very kindly consented however, but on the condition that our trenches and anything we disclosed should be filled up as we went along. This condition we accepted and fulfilled: eventually the farmers, who began to take an interest in the work, kindly permitted the constructions disclosed by our excavations round some of the overturned menhirs, and which form the subject of illustrations in this volume, to remain open; and any one who may visit the alignments, if furnished with the general plan contained in this volume, will easily find these, and will also be able to trace the whole of our operations all the way along from Kermario to Kerloquet.

For the sake of clearness, not only in this work but also in those intended to succeed it, we shall make use of the term *Celtic monuments* for all monuments anterior to the Gallo-Roman era, denominated by other writers as Pre-Celtic, Prehistoric, Druidic, Gaulish, or Rude Stone Monuments; and we shall make use of the following Breton names for these monuments in their Celtic sense, viz.—

Menhir = a long or standing stone.

Dolmen = a stone table.

Cromlech = a circle formed of menhirs.

Lech or *Lichaven* = a sacred stone or stone of justice.

Kist-vaen = a stone coffin.

The study of the Breton names given to fields and localities is always interesting, and frequently reveals to an archæologist facts relating to the existence or to the special character of ancient remains which he might not otherwise have suspected. For this line of investigation the forms of the names as they are written in the old titles and parchments are the most useful, but as these are not often available

we have had recourse to the Cadastre (or Government Survey), where they are always to be found. The Cadastre, however, is unfortunately very faulty in so far as regards the forms of the Breton names. Too often it has been compiled by those who were ignorant of the Breton language, and as a natural consequence many names are so disguised as to be unrecognisable. This is all the more to be regretted in the case of significant appellations. We have made another use of the Cadastre for these works, viz. for denoting the section and number of the divisions of land on which the different monuments are situated. This seems to us the clearest way of indicating their locality with such precision as to permit of their being easily found, and also of recording the fact if they have been destroyed.

Our researches were made amongst a portion only of the alignments of Kermario. We commenced in the month of October 1877 at the west end of the alignments, and finished in April 1878 at the little hamlet named in the Cadastre of the commune of Carnac, *Kerloquet*, doubtless intended for *Kerlosquet*—village of burning or of incineration. Beyond this hamlet we were not authorised to continue our excavations.

The exploration of each field was undertaken successively, and in describing these we shall follow very nearly the order of the excavations. With the view of rendering the description as clear as possible, we shall designate each of the alignments by a number. As there are ten of them we shall speak of the northern as the first alignment, and so on, consecutively, to the last one on the south side, which will consequently be the tenth. As for the menhirs which compose the alignments, each row will be numbered from west to east.

We shall confine our description to the different constructions discovered in the course of our excavations, and to the alignments we examined, with enumerations of the objects collected from these respectively, reserving for the concluding chapter a few remarks as to the age and destination of these constructions and also of the alignments.

II.

LANN MANÉ KERMARIO.

LANN MANÉ KERMARIO.

WE begin the description of our excavations by alluding to the field (see the west side of the General Plan) named in the Cadastre of the commune of Carnac, Section M, No. 263, *Pen Mesquen* (head of the short furrows).

On the north side of the road which passes through this field there is a group of overturned menhirs, all of which we explored, but without obtaining any important result, save some charcoal and ashes. We at first supposed that these menhirs had been collected there by the peasants in clearing the adjoining fields, but afterwards the examination of a similar group in the adjoining moorland led to a different conclusion.

On the south side of the road are the remains in two places of an ancient talus or earthwork, which extend a short distance to the eastward towards another talus situated in the adjoining moorland, and also for a considerable distance to the westward, which is not included in the general plan.

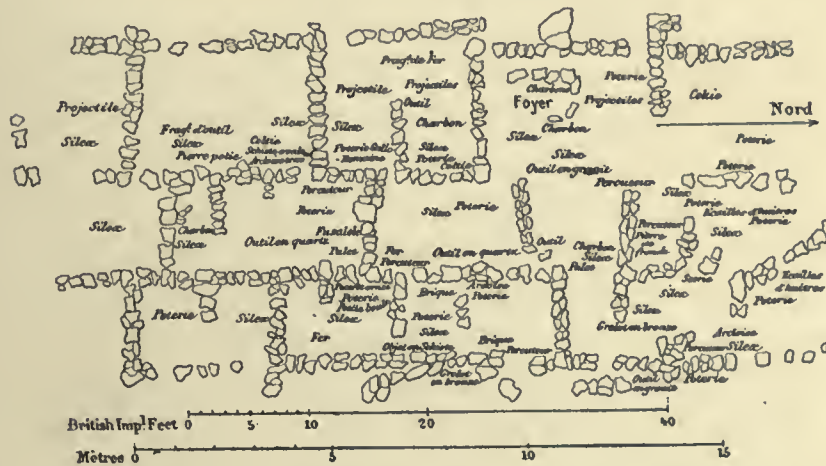
Continuing along the road and entering the moorland, popularly called "the field of menhirs," but named in the Cadastre, *Lann Mané Kermario* (the moorland hill of the town of the dead), we then have before us a desolate heath, covered with menhirs, and relatively higher than the adjacent fields. Ten alignments of menhirs commencing in the most

elevated part of this field extend for about two miles in an easterly direction ; there, after a short interruption, the alignments of Kerlescant commence. On taking a general view of the menhirs, one's attention is immediately arrested by the facts that by far the greater number have been overthrown, and that they lie prostrate on the ground generally in a direction from north to south. The question naturally arises, What can have been the cause of the overthrow of these huge stones? Can it be the effect of an earthquake? This hypothesis may perhaps be considered not improbable, for there happened one night at Carnac in 1878 a shock which awoke and frightened the inhabitants of that locality, although it did not overthrow a single menhir. Very many of the menhirs are of a flat shape, and are set up with their flat sides of greatest breadth facing at right angles to the direction of the alignments, which is nearly east and west. These stones must therefore fall naturally north and south, whilst those of a similar form which are lying east and west must have been more or less displaced, and their overthrow may with certainty be attributed to the hand of man. Besides, it is an undoubted fact that many of the menhirs have been overthrown and displaced by the cultivators of the soil even during the present century, and farther on we shall see that some of them had been overthrown by the Romans and utilised by them in constructing their works of defence.

One of those dolmens having an entrance way (which are called by French archæologists *dolmen à galerie*) is situated in the southern part of the field, but is in a very dilapidated state, owing to previous explorations which had been carelessly made some time ago. At 36 metres to the east of this dolmen is the commencement of the tenth or southern align-

ment, which stretches eastward in the direction of two large menhirs, situated in front of the farmhouse of the Little Métairie. We may be permitted to remark here, that one of these menhirs (the southern one) is set up at right angles to the direction of the alignments, as the observation of this peculiarity frequently proved in our subsequent excavations to be of great use.

The ninth, eighth, and seventh alignments converge towards this point, that is towards these two menhirs; whilst the other alignments pass on the north, following a direction nearly parallel to the seventh.



GROUND-PLAN OF THE PRIMITIVE CONSTRUCTIONS AT THE HEAD OF THE ALIGNMENTS OF KERMARIO.

Having finished this summary description of the Lann Mané Kermario, we proceed with the excavations therein.

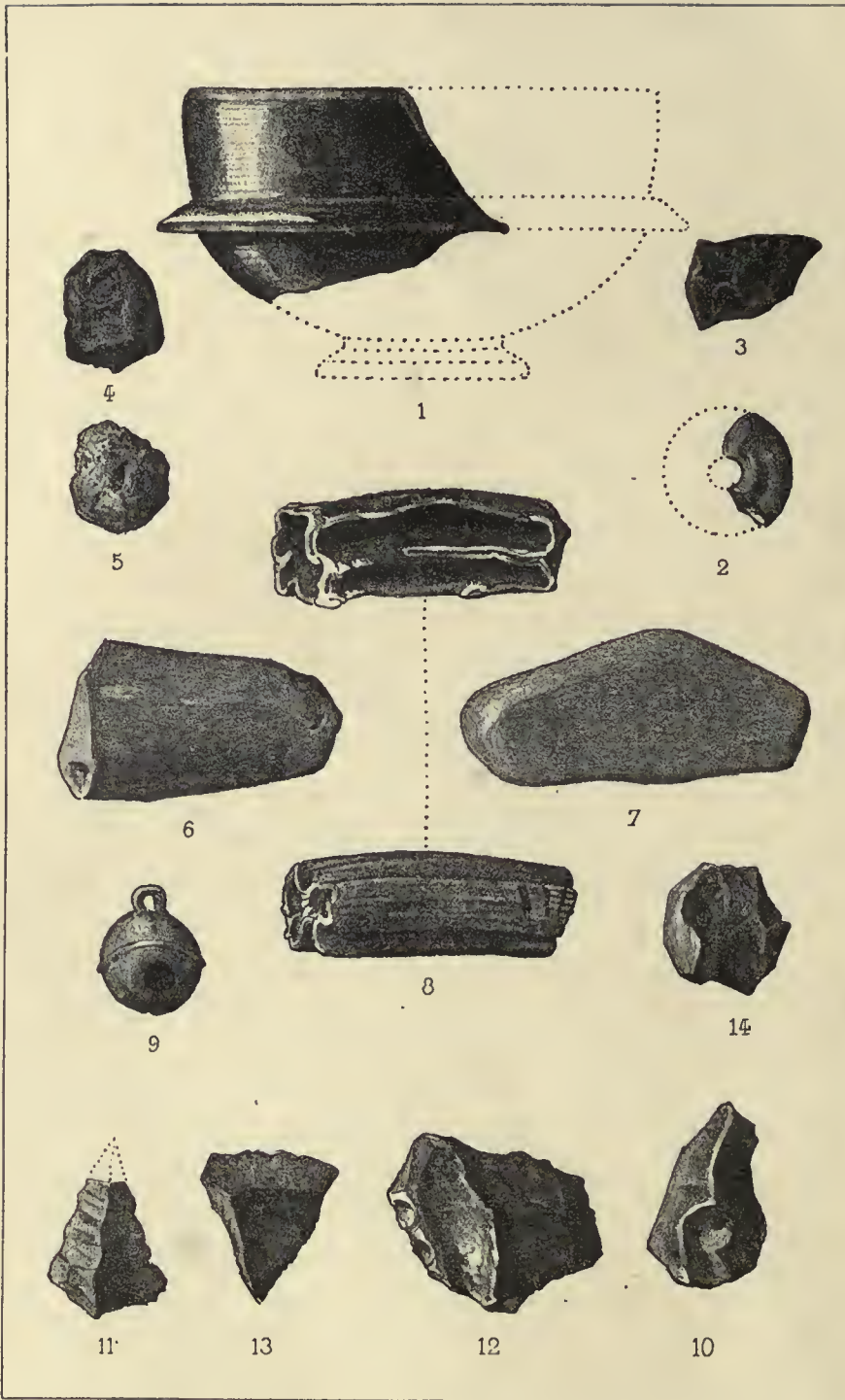
On making a careful examination of the western portion of the field, I observed that the ground, at about 30 metres off the head of the alignments, was slightly elevated. A trial-pit sunk here gave, to our surprise, nearly a metre in depth of blackish earth; thus contrasting strongly with the rest of

the field, where in some places the depth is hardly ten centimetres, and where in others the rock crops out at the surface.

This elevated portion of the field I had excavated and cleared away down to the general level, putting the earth aside to be sifted. The operation exposed to view the foundations of a group of rude irregular constructions of the most primitive description (see the ground-plan, p. 13). These ruins consisted of two or three layers of undressed stones, rudely built, and without mortar. In the second construction from the north, on the west side, we discovered a semicircular fireplace, having a diameter of one metre. The red colour of its stones denoted the action of fire, and a good deal of charcoal still remained in it. A layer of gravel, fifteen centimetres in thickness, extended under these constructions, placed there, doubtless, as a medium of drainage. Under this layer of gravel was one of black earth, which corresponded with that of the average general level of the field. The following report was sent me regarding a sample of the earth taken from the floor of the constructions:—"The sample marked Butte Gahinet, calcined, and treated first with chlorohydric acid, afterwards with molybdate of ammonia, gave a feeble yellow precipitate, indicating the presence of a very small quantity of phosphate of lime." We looked for a more decided result, seeing that we had found horses' teeth in the part from which the sample was taken.

The following list contains the description of the different objects found during the excavations on the floors of these constructions, with references to the figures as delineated in Pl. I. and II.

Several fragments of coarse pottery, Gallo-Roman and Celtic:—



To face page 15.

- Pl. I. No. 1. Upper part of a bowl in black lustrous ware, Gallo-Roman.
- „ „ 2. Part of a spindle-whorl in red paste.
- „ „ 3. Fragment of pottery with rude ornamentation.
- „ „ 4. Dice or marble in brick, diameter 0 m. 02 c.
- „ „ 9. Two horse bells in bronze.
Two small pieces of iron.
- „ „ 8. Several horse teeth.
A considerable quantity of oyster shells.
- „ „ 5. Dice or marble in granite, 0 m. 02 c. diameter.
- „ „ 6. Implement in quartz; length, 0 m. 08 c.; marks of percussion at the extremities.
- „ „ 7. Implement also in quartz, 0 m. 12 c.; polished on one side.
- „ „ 11 and 13. Two arrow-heads in yellow flint.
- „ „ 14. Small circular scraper, in flint, 0 m. 024 mm. in diameter.
- „ „ 12. Triangular scraper, in gray flint, 0 m. 045 mm. by 0 m. 050 mm.
- „ „ 10. Flake of gray flint.
- Pl. II. „ 3. Stone hammer, in granite, 0 m. 095 mm. by 0 m. 075 mm.
- „ „ 1. Flat Implement, in granite, 0 m. 10 c. by 0 m. 08 c.; one face highly polished.
- „ „ 5. Flat Implement, also in granite, 0 m. 16 c. by 0 m. 09 c.; one face highly polished.
- „ „ 2. Stone rubber in granite, made from the fragment of a quern, used on several faces.
Numerous oval-shaped sling-stones in granite.

Numerous round hand-projectiles in granite,
0 m. 08 c. to 0 m. 10 c. in diameter.

Seven stone hammers, in quartz and in
granite.

Pl. II. No. 7. Quoit or disc in micaceous schist, 0 m. 05 c.
in diameter ; edge smooth by use.

„ „ 10. Quoit or disc in micaceous slate, 0 m. 04 c.
in diameter ; edge smooth by use.

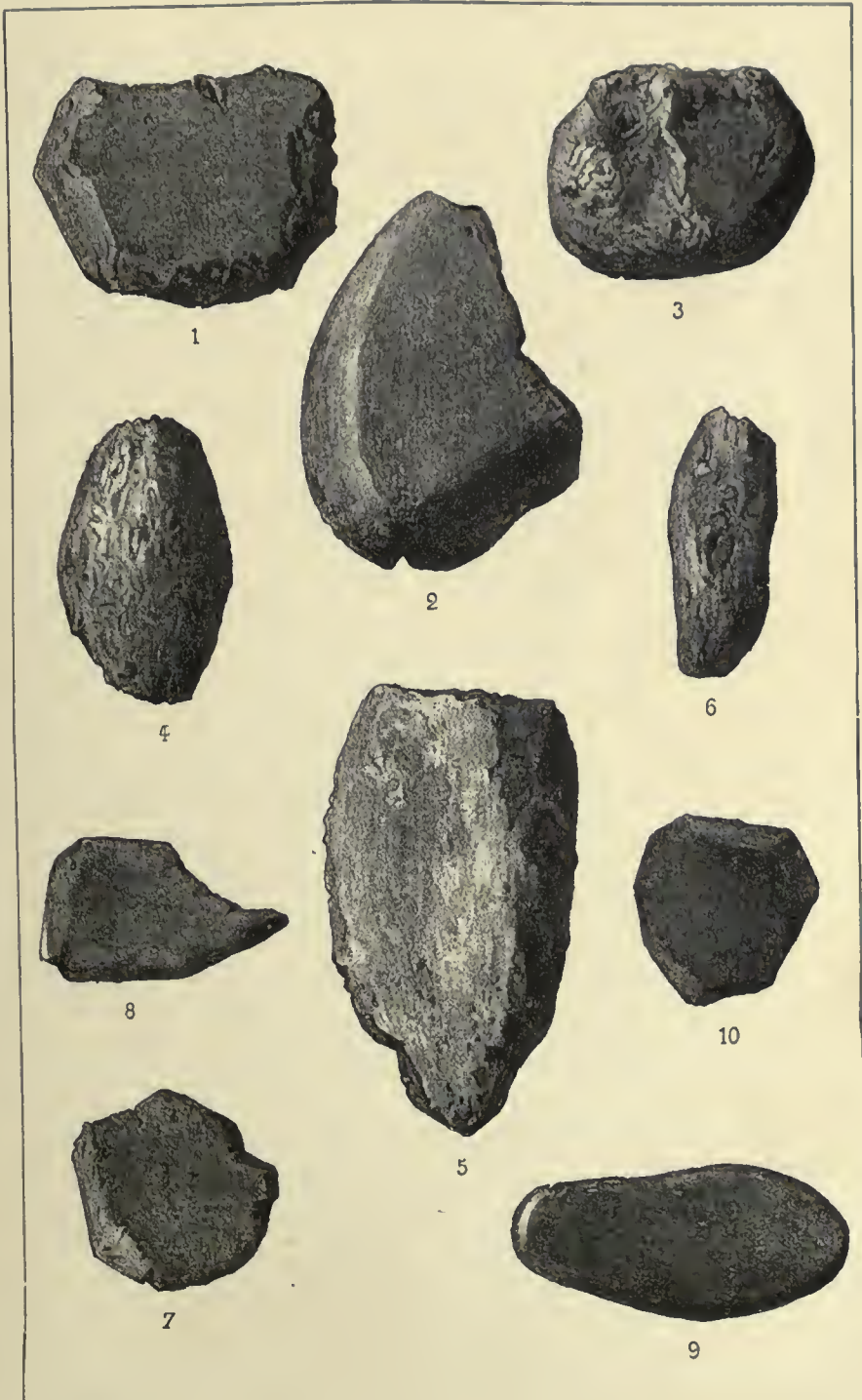
„ „ 8. Fragment of a triangular implement in
schist.

„ „ 9. Oval implement in schist, 0 m. 09 c. in
length ; polished on the edge.

Fragment of a celt in diorite.

Fragment of basalt.

Several flint chips.



To face page 16.

TALUS IN THE WEST PART OF THE FIELD
LANN MANÉ KERMARIO.

Having finished with the primitive constructions, we now return to the servitude road, which, joining the highway from Carnac to Auray, enters this field at a gateway situated on the west side. In front of this gateway is the end of the talus alluded to in the previous chapter, extending to the south-east.

Commencing our excavations at this end of the talus, we soon discovered the head of a wall, varying in breadth from 1 m. 70 c. to 2 m., running in the line of the talus. Both sides of this wall are fairly built with large dressed stones; the interior between them is filled up with earth mixed with charcoal and fragments of brick and flint. At the very commencement of our work we were much surprised to find, in the head of the wall on the south side, a menhir of 2 m. 15 c. in length. It was built lengthways on the first layer of stones, so as to form part of the wall, and thus had been evidently utilised in its construction. At the foot of the wall, facing this menhir, we found several fragments of Gallo-Roman pottery and roofing tiles, also a fragment of Celtic pottery with rice-grain ornamentation. (Pl. III. fig. 4.)

A little farther on, and on the same side of the wall, we came upon another small menhir which had also been built into the wall in the same manner, and near it at the base a flint chip and an arrow-head in flint.

In front of this second menhir, on the other side of the wall and at a depth of 0 m. 60 c., we found a fragment of rude Celtic pottery and two chips of grayish flint.

After having followed the wall for 13 m. 43 c. from its west

c

end, we there came upon an opening or entrance of 2 m. 77 c. in width.

At about 5 metres east from the entrance the wall is built round the first menhir of the fourth alignment. This menhir having a height of 2 m. 80 c. above the surface of the ground goes down for 0 m. 60 c., thus having a total length of 3 m. 40 c. In working at its base we came upon a layer of rich black earth 0 m. 15 c. in thickness, and containing a good deal of charcoal in lumps, some of which were of the size of a walnut.

In this same layer of black earth, close to the base of the menhir, but nevertheless not under it, we found :—

A fragment of pottery faced with plumbago.

Another fragment of the brown pottery so common in the dolmens.

A small bit of brick.

Two flint chips—one red, the other yellow.

A chip of yellow-gray flint, measuring 0 m. 09 c. by 0 m. 05 c., of a singular form (Pl. III. No. 11), similar to one we afterwards found in the dolmen of Mané er Gongre.

From this point the wall continues on with a slight deviation to the south, and on its way surrounds a group of three small menhirs, which do not appear to have formed part of the alignments.

The first of these, of a roundish form, and in the northern part of the wall, is 0 m. 57 c. above the surface, and 0 m. 70 c. below, thus having a total length of 1 m. 27 c. Near the base we collected :—

Two very thin chips of gray flint.

A fragment of Celtic pottery in a coarse granulated paste with a red coating ornamented with a line of pearl markings. (Pl. III. No. 3.)



To face page 18

A fragment of brick.

An object in red paste, similar to those called *pernettes*.
(Pl. III. No. 6.)

These *pernettes* are commonly found amongst the ruins of the Gallo-Roman furnaces along the coast, and are supposed to have been used by the potter for separating the pieces of pottery in the furnace during the firing.

The second menhir in the south part of the wall is only 0 m. 80 c. in total height. At its base there was found a good deal of charcoal, some of the pieces as large as a pigeon's egg, along with seven fragments of common Celtic pottery and two flint chips.

The third menhir, which is on the same side of the wall, has a total height of only 0 m. 60 c. At its base we found :—

A large lump of charcoal.

Two fragments of coarse gray Celtic pottery.

A small chip of yellow-gray flint.

A tool formed of a black stone highly polished. (Pl. III. No. 12.)

A little farther on the wall surrounds the second menhir of the fifth alignment. This monolith, shaped like an obelisk, measures 3 m. 90 c. above ground, and 0 m. 20 c. below, thus having a total length of 4 m. 10 c. This menhir stands upon a layer of rich earth 0 m. 10 c. in thickness, below which is the primitive rock. On the east side, near the base, at 0 m. 15 c. in depth, we collected :—

A chip of gray flint, measuring 0 m. 06 c. by 0 m. 03 c., which had been struck off from the surface of a nodule.

Two fragments of Celtic pottery—red and brown.

A fragment of brick and a small quantity of charcoal, which, under the microscope, proved to have been made from pinewood.

At 7 m. beyond this latter menhir the wall turns suddenly to the south, forming an angle of 115° , and continues for 20 m. in this new direction, with an interruption, however, of 4 m. at the distance of 8 m. from the angle. One-half of a Gallo-Roman millstone, in granite, 0 m. 40 c. in diameter, had been utilised in the construction of the wall and built into it near the angle.

About two metres from the angle of the wall, on the south-west side, is a menhir, the first of the sixth alignment, of 4 m. 50 c. in length by 4 m. in breadth, lying overturned on the ground. On clearing away below it we discovered that it sheltered a rudely-constructed fireplace. Farther on we shall see other menhirs sheltering fireplaces, but here perhaps I may remark in passing that my workmen frequently, during showers, found a good shelter round the fireplace under this menhir, where they had relighted the fire extinguished for many centuries. The groovings and sinuosities plainly marked on the west end of this menhir prove not only that this end had been once its summit, but also that, from its position, it must have been overturned from east to west. Besides, if it were re-erected, it would occupy both its place in the wall and in the sixth alignment. These facts would seem to indicate that for some reason or other it had been overthrown before the construction of the wall. The constructors would not overthrow what would save them labour.

The fireplace in question is composed of two ranges of rough undressed stones, carelessly built, and reddened by the action of fire. These converge as they advance under the menhir. The fireplace contained a considerable quantity of charcoal and ashes, and also the fragments of a Gallo-Roman vase, which we succeeded in reconstructing. This vase, 0 m. 15 c. in height and 0 m. 12 c. across the rim, is of a grayish-brown paste, ornamented on the shoulder with a band in plumbago, and with a similar band on the rim. (Pl. III.



FIRST MENHIR OF SIXTH ALIGNMENT, KERMARIO. (From a Drawing by James Miln.)

To face page 20.

No. 9.) Several calcined bones were found amongst these fragments, which could not be determined. Here we selected a sample of earth and sent it to be analysed. The report gave no result when treated like the former one. There were also found at the entrance of the fireplace :—

A stone rubber, celt-shaped, in granite, 0 m. 17 c. in length.

A stone hammer, in quartz, measuring 0 m. 07 c. in length.
(Pl. III. No. 16.)

Between the fireplace and the large wall :—

Two bronze fibulæ, very much oxydised. (Pl. III. Nos. 1 and 2.)

An iron adze, very much oxydised, 0 m. 22 c. in length,
(Pl. III. No. 17.)

A fragment of a roofing-tile (*imbrex*) having X engraved on it after it had been fired. (Pl. III. No. 15.)

An iron nail with a flat head. (Pl. III. No. 7.)

A fragment of rock crystal. (Pl. III. No. 13.)

A chip of yellow-gray flint. (Pl. III. No. 10.)

A fragment of Roman glass.

In clearing out the space between the menhir and the angle of the large wall, we came upon :—

A long smooth celtiform implement in granite, broken at one end and bearing the marks of percussion at the other.
(Pl. III. No. 18.)

Another flat tool in schist, 0 m. 11 c. in length, and polished on the edges. (Pl. III. No. 14.)

A fragment of common gray Gallo-Roman pottery.

A square piece of brick, having lines engraved in different directions. (Pl. III. No. 5.)

A similar object to this was afterwards found in the southern talus of the camp at the Little Métairie. Several others also were found at the Bossenno.

TALUS IN THE EAST PART OF THE FIELD
LANN MANÉ KERMARIO.

In continuing our explorations at the exterior of the angle of the large wall, we brought to light the remains of another wall, which, starting from this point, goes on to the north-east, describing a curve. It is of the same dimensions as the preceding wall; but was in such a dilapidated state that we had at first great difficulty in following it.

At 5 m. from the angle, it surrounds, partially, the fourth menhir of the fifth alignment. Now this menhir, 5 m. in length by 2 m. 50 c. in breadth, is overthrown, and lay in a direction nearly north and south. Did its fall precede, accompany, or follow, the construction of this wall? We found no evidence sufficient to determine this question, because this portion of the field had all the appearance of having been already explored. This was fully confirmed by the statement of the inhabitants of the neighbouring farm, who remembered having seen an archæologist excavating this part of the alignments about thirty years ago.

Around this menhir, at a depth of 0 m. 50 c., on the primitive gravel, we came upon the bottom of a Roman vase in green glass (Pl. III. No. 8), two fragments of coarse black Celtic pottery, and a handful of charcoal, which, examined under the microscope, proved to have been made from pinewood.

Still farther on the wall surrounds a menhir upright, 2 m. 10 c. in height. Nothing was found at its base.

A little to the west of this, the fifth menhir of the fourth alignment, 2 m. 10 c. in height, attracted our attention by its

form being that of a water-rolled stone ; on digging all round its base, however, we obtained nothing but charcoal and ashes. The rounded form and smooth surface of this menhir distinguish it from the others ; it resembles the rounded blocks of granite on the sea-shore in the bay of Quiberon.

Between the third and fourth alignments the wall is cut by a servitude road leading from the farm of the Little Metairie to the Auray highway. At this point, on the north side of the road, we found a large quantity of charcoal and ashes.

Working on until we came to the seventh menhir of the third alignment of 3 m. in length, we found it overthrown and broken into several pieces, two of which had been utilised in the masonry of the wall. A fireplace containing a considerable quantity of charcoal and ashes is placed between this menhir and the wall. As this fireplace is open to the north, it may be supposed that the stones intended to shelter it have been removed of late years.

From the seventh to the thirteenth menhir the wall follows this alignment, embracing in its course all the other menhirs comprised in this interval. In this stretch we only found some charcoal, ashes, a few flint chips, two or three fragments of common coarse red pottery, and at the base of the ninth menhir a projectile in granite.

After leaving the thirteenth menhir, the wall, forming an obtuse angle, stretches out 36 m. to the north-east, where it terminates at a group of menhirs, similar to the group in the field *Pen mesquen*, all lying on the ground in a confused heap, and outside the alignments. In this stretch the wall embraces the eighth menhir of the second alignment and the tenth of the first. On the west side of the latter menhir a fireplace is constructed against the wall containing charcoal

and ashes. On exploring the confused group at the end of the wall, we only found some charcoal and ashes, a stone implement kidney-shaped in granite of a fine grain, 0 m. 13 c. in length, polished by use on the edge (a similar object was afterwards found in the dolmen in this field; see Pl. VI. No. 1), and another in red sandstone measuring 0 m. 10 c. by 0 m. 06 c., having one face smoothed by use and with traces of percussion at the ends. It cannot be supposed that the peasants would have incurred the expense of collecting this group from the comparatively worthless moorland. We conjecture that both of these accumulations were depôts of reserved menhirs destined to continue the alignments.

From the seventeenth menhir of the thirteenth alignment, two taluses, which we deemed it unnecessary to explore, extend one to the north-east and the other to the east. The former runs for 76 m. in a direction parallel to the wall which we have just described. The latter talus is prolonged in the direction of the third alignment and embraces its menhirs up to the twenty-third, but with an interruption for 3 m. between the nineteenth and twentieth menhirs.

Having finished the excavation of the talus in this field, we then proceeded to examine the alignments successively, commencing on the north with the first.



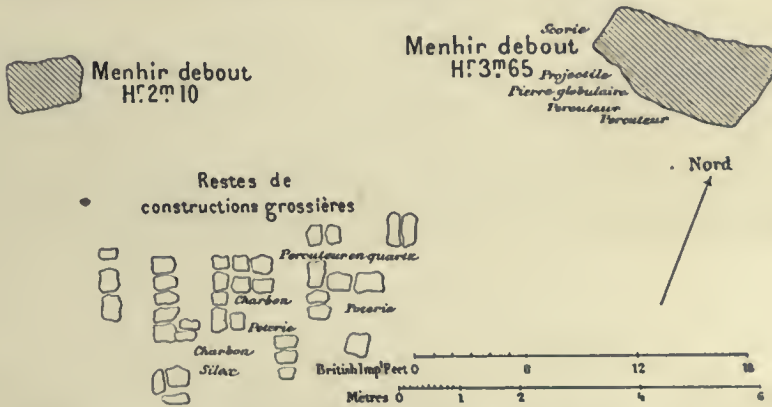
FIFTH MENHIR OF THE FIRST ALIGNMENT OF KERMARIO. (From a Drawing by James Mitin.)

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RESEARCHES AMONGST THE MENHIRS OF
LANN MANÉ KERMARIO.

FIRST, SECOND, AND THIRD ALIGNMENTS.

Whilst the operations amongst the walls just described were being executed, our attention was attracted by a slight elevation in the ground, hardly perceptible, between the head of the first and second alignments. On excavating this portion, however, we only found some flint chips, charcoal, and ashes, at the base of the menhirs.



GROUND-PLAN OF THE PRIMITIVE CONSTRUCTIONS NEAR THE THIRD AND FOURTH MENHIRS OF THE FIRST ALIGNMENT.

This disappointment was soon compensated, for in working on the south-east of the third menhir of the first alignment we came upon the foundations of a series of small constructions (see plan) similar to those situated in the west part of the field which we have already described. Of these constructions the lower course alone remained bedded on the primitive soil, a sort of gravel, at a depth of 0 m. 45 c. In the south

part of these we came upon a great number of burnt stones, charcoal, ashes, several stone hammers in quartz, numerous hand projectiles in granite, some flint chips, and seven fragments of rude Celtic pottery belonging to vases which had been made with sea mud.



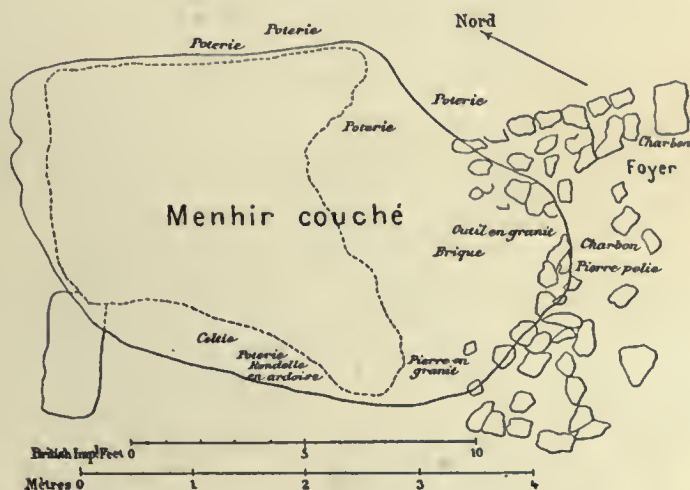
THE FOURTH MENHIR OF THE FIRST ALIGNMENT.

The peculiar form of the fourth menhir, the finest of the first alignment, specially attracted our attention. It measures 3 m. 55 c. in height, 2 m. 80 c. in breadth at the base, 1 m. 15 c. in average thickness, and cubes 9 m. 68 c.; its weight, calculated from the density of Brittany granite, is 26.523 kilos. Its large flat base reposes on a platform formed of dry stones slightly converging towards the surface of the field.* This enabled us, without fear of overturning the

* We have not as yet during all our excavations overturned a single menhir, save one which we overturned intentionally at the dolmen of Kermario so as to effect an entrance, and afterwards carefully re-erected in its original position.

menhir, to dig a wide trench all round the pedestal to a depth of 0 m. 60 c., where we came upon the rock on which the pedestal stands. In the north-east corner of the trench we found a small dice-shaped piece of brick (Pl. IV. No. 5), similar to those we have found in the dolmens, in the circular places of sepulture, in Gallo-Roman constructions, and in those of the Middle Ages. On the south side several hand-projectiles in granite, a stone of globular shape polished, two hammer stones in granite bearing the marks of percussion. At the west corner some lumps of scoriæ only.

The fifth menhir of the first alignment, 4 m. 75 c. in length



FIFTH MENHIR OF FIRST ALIGNMENT AND FIREPLACE.

and 3 m. in breadth, lies overturned on the ground with its head to the north. Its large normal base gave shelter to a fireplace protected also by two dry-stone constructions (see plan). In clearing out this part to a depth of 0 m. 70 c., we constantly worked amongst charcoal and ashes, in fact the workmen kept always calling out, "*Donar losquet*" (burnt earth). Had this menhir been expressly overthrown for the purpose of sheltering the fireplace? It seems probable; one thing is

certain, viz. that in this alignment it is the first overturned. Under this menhir we collected—

On the west side :

A small celt in quartz, evidently made from a sea-shore pebble. (Pl. IV. No. 6.)

A broken disc in schistose slate. (Pl. IV. No. 10.)

Some fragments of Celtic pottery.

On the east side :

A piece of brick and some other fragments of Celtic pottery.

In the fireplace :

A small round choice stone, yellow, highly polished, probably an amulet; similar to those we have found in the dolmens and other ancient places of sepulture. (Pl. IV. No. 8.)

A similar stone, but smaller; same remark. (Pl. IV. No. 7.)

A dice-shaped piece of brick, 0 m. 03 c. in diameter. (Pl. IV. No. 9.)

A flint chip.

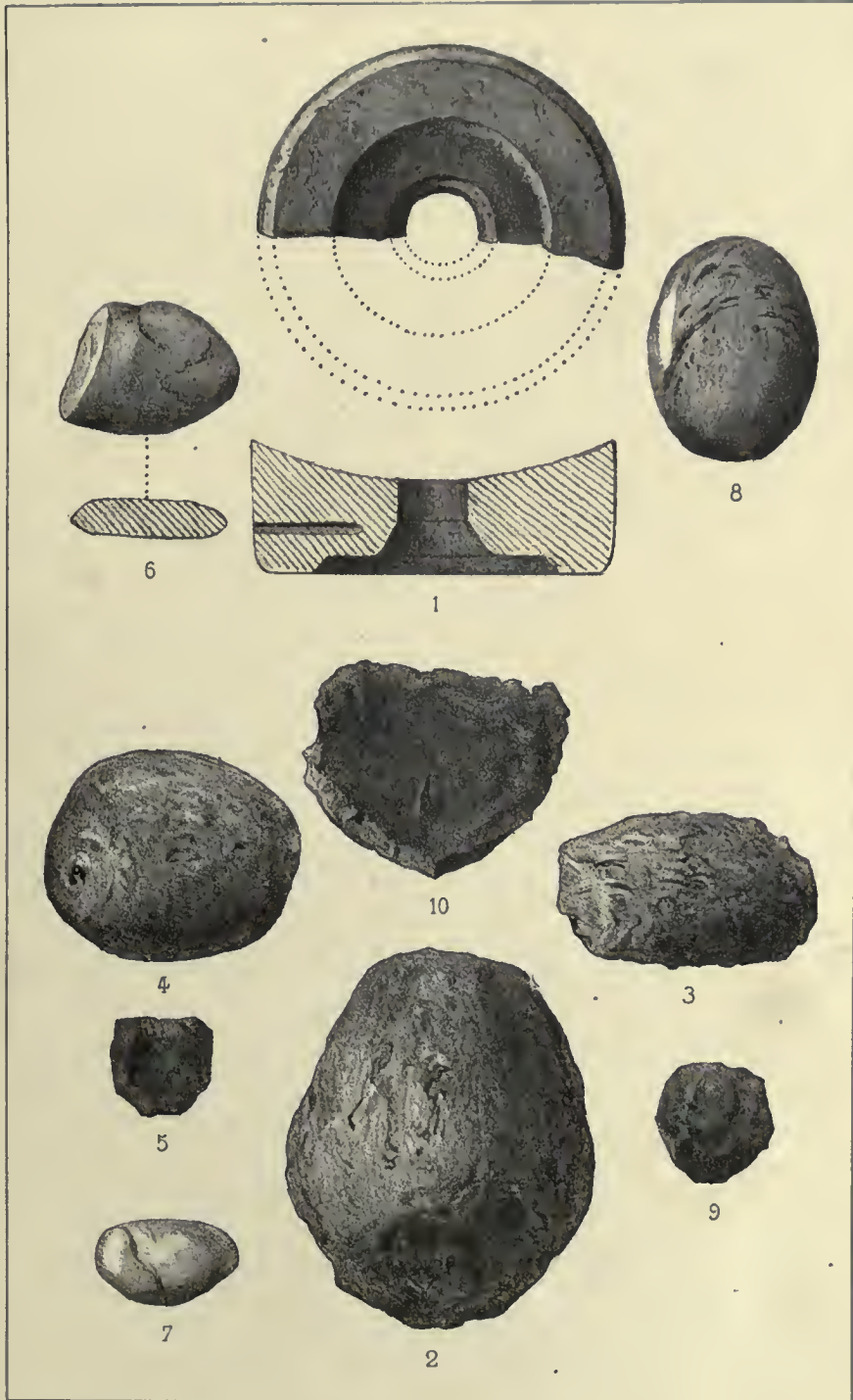
Several fragments of gray and black coarse pottery made with sea ooze.

Several hand-projectiles in granite.

After this we proceeded to the second and third alignments, but the only result obtained there was some charcoal ashes and flint chips at the base of the menhirs.

FOURTH ALIGNMENT.

Between the eighth and ninth menhir of the fourth alignment, we noticed the emplacement of a menhir recently



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destroyed. In excavating this site we found the following objects :—

A pestle in quartz, 0 m. 10 c. in length by 0 m. 08 c. in breadth, egg-shaped, truncated at one end. (Pl. V. No. 3.)

An implement in quartzite, 0 m. 15 c. by 0 m. 08 c., kidney-shaped, polished by use on one face, marks of percussion at the end. (Pl. V. No. 2.)

A similar implement, also in quartzite, 0 m. 10 c. by 0 m. 06 c., kidney-shaped, but polished on all the faces. (Pl. V. No. 1.)

Researches made at the base of the eleventh menhir, 2 m. 05 c. in height, of this alignment gave no result.

FIFTH ALIGNMENT.

We then proceeded to the alley between the eleventh and twelfth menhir of the fourth alignment and the fourteenth and fifteenth of the fifth. Here we came upon the primitive soil and rock at a depth of only 0 m. 25 c. This slight depth of soil is accounted for by the custom the peasants have of cutting the turf and mixing it with their manure-heaps, a practice which has prevailed so long, that in many parts of the alignments, as I have already stated, the rock crops out at the surface.

The twelfth menhir of this alignment, 2 m. 20 c. in height, is set up on the primitive soil, solidly wedged in with large stones. Examining and carefully replacing these, we found amongst them some flint chips, and under the base of the menhir some small lumps of charcoal.

At 2 m. 50 c. to the south, and on the gravel, a fragment of an amphora. (Pl. V. No. 9.)

At 4 m. 50 c. to the south, a fragment of the shoulder of a vase in black paste coated with plumbago (Pl. V. No. 10),

similar to the vases we afterwards found in the circular sepultures of Nignol and Coet a Tous.

At 1 m. 50 c. to the south, some fragments of coarse gray micaceous pottery, 0 m. 025 mm. in thickness, forming part of the rim of a large Gallo-Roman vase.

Still farther towards the south, and near the middle of the alley, some fragments of common gray Gallo-Roman pottery, ornamented with horizontal bands, and three fragments of roofing-tiles (*tegulae*).

The eleventh menhir of the fifth alignment is half overturned, and has a length of 2 m. 70 c. above the ground. Down on the gravel on the west side, at a depth of 0 m. 40 c., were five fragments of Gallo-Roman pottery of a yellow-red colour, a small fragment of gray Celtic pottery, and about a handful of pinewood charcoal.

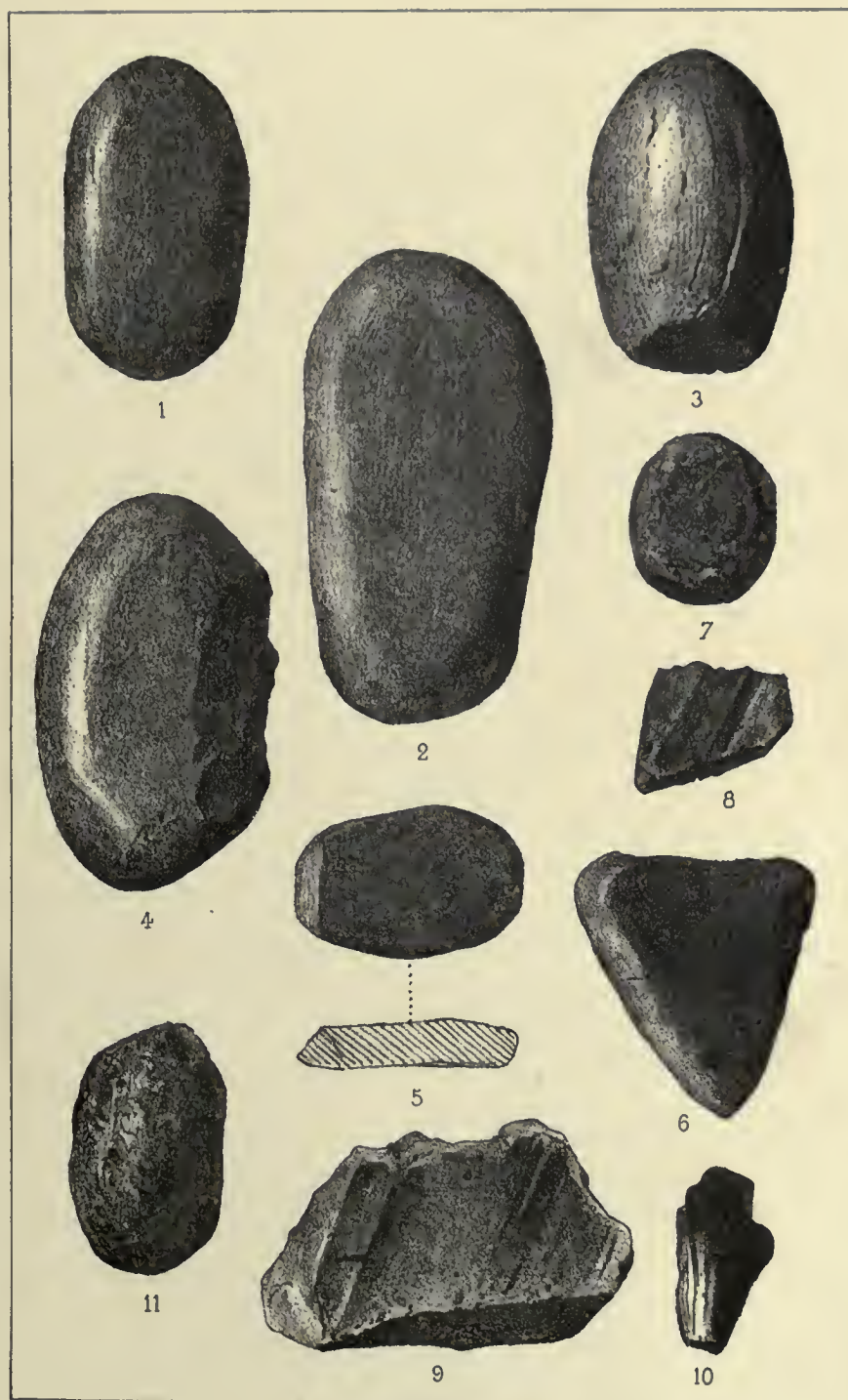
The fifteenth menhir of this alignment, 2 m. in height, is packed at its base with large stones, amongst which, on the north side, we extracted a thin flint chip and a small fragment of red Celtic pottery.

SIXTH ALIGNMENT.

In this field there are only three menhirs left of the sixth alignment, one of which, 2 m. in height, stands upright; the two others are overturned on the ground. The excavations made here gave no result.

SEVENTH ALIGNMENT.

The first menhir of the seventh alignment has a height of 3 m. 50 c. At 2 m. to the south we discovered a fireplace rudely constructed with dry stones in a sort of moat. In clearing out this we collected two flint chips, charcoal, ashes, a fragment of gray Celtic pottery, some pieces of Roman

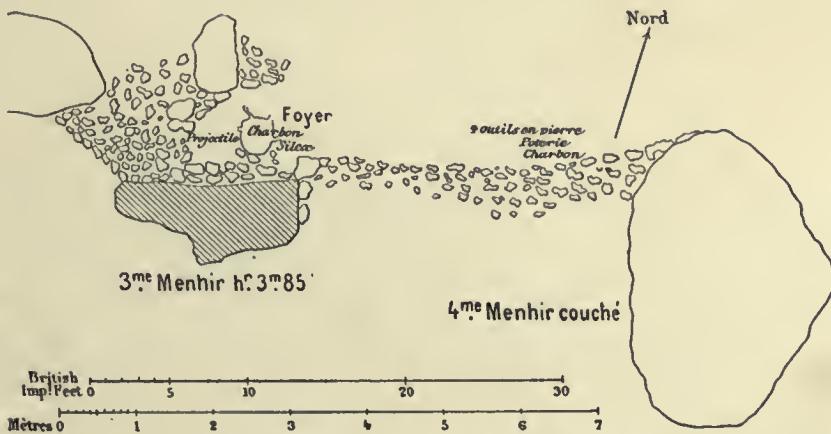


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roofing tiles, a few hand-projectiles in granite, and a small disc formed of granite, 0 m. 043 mm. in diameter. (Pl. V. No. 7.)

The second menhir of this alignment lies on the ground broken into four pieces.

The third, however, is upright, and has a height of 3 m. 85 c. above ground. A talus formed of dry stones extends from the fourth to the third menhir, turning to the north at the base of the latter, so as to shelter a fireplace there, which has no access save to the east. This fireplace, at a depth of 0 m. 50 c., is formed of one course of flat stones arranged in a circular form 0 m. 50 c. in diameter, and contained charcoal ashes and two flint chips.



THIRD AND FOURTH MENHIRS OF THE SEVENTH ALIGNMENT.

Another fireplace of similar construction was discovered at the same depth between these menhirs, and on the north side of the talus. The following objects were collected here:—

Charcoal, ashes, and some fragments of coarse brown Celtic pottery.

A triangular implement in sandstone. (Pl. V. No. 6.)

A celt-shaped tool in quartzite, having one of its extremities dressed to a chisel face. (Pl. V. No. 5.)

A tool in granite, 0 m. 15 c. in length, similar to the one found in the primitive constructions to the west of the alignments, and somewhat resembling those found by Dr. Arthur Mitchell in the Shetland Islands, which are in the Museum of the Society of Antiquaries of Scotland at Edinburgh.

Several hand-projectiles in granite.

An oval-shaped tool in quartz, 0 m. 12 c. in length, polished on one face, having the appearance of a cobbler's lapstone. (Pl. V. No. 4.)

The other menhirs of this alignment comprised in this field were examined, but without yielding any results, save some charcoal and flint chips.

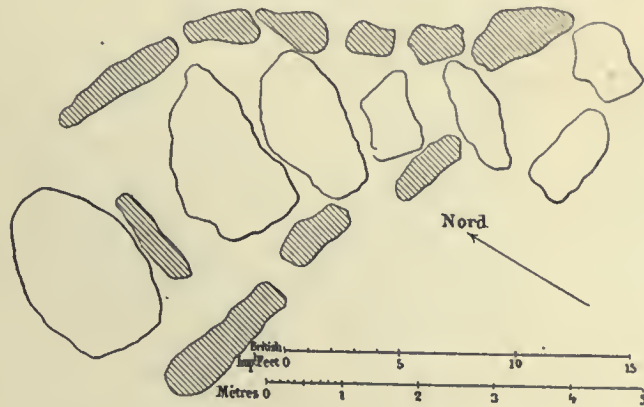
EIGHTH, NINTH, AND TENTH ALIGNMENTS.

The eighth, ninth, and tenth alignments, comprised in this field, are situated in the south-east part, where, for the most part, the rock comes to the surface; in consequence, we considered it unnecessary to continue our operations there, and proceeded to examine the dolmen in ruins situated in the south-west part of the field. Samples of earth extracted from the base of the menhirs in the different alignments were sent to be analysed: the report stated that these had been treated in a similar manner to those formerly sent, but gave no reaction.*

* It is a curious fact that while the soil from this part of Brittany, where we are on the Cambrian formation, has never yielded to the analyst any trace of calcium, yet the furze (*Ulex Europæus?*) which covers the moorlands gives, on being analysed, a considerable quantity. There is, therefore, good chemistry in the practice of the Breton farmers, who collect it on the roads round their dwellings, there to rot for manure.

DOLMEN OF LANN MANÉ KERMARIO.

This dolmen was partly explored about thirty years ago, but only in the chamber, for, during that operation, one of the covering stones had slipped down into the interior, so as to block up the gallery, and the work was abandoned. Since that period, other attempts had been made by different amateurs of antiquities. In consequence of these repeated



PLAN OF THE DOLMEN OF KERMARIO.

excavations, there was only the middle part of the gallery left for us to examine. In order to penetrate there we removed one of the supports, and after our excavations were finished, it was carefully set up again in its original place.

The following enumeration contains the description of the different objects found by us in this dolmen.

In the interior of the gallery :

Pl. VI. No. 4. Celt formed of diorite, blackened by fire, and having the edge broken by use.

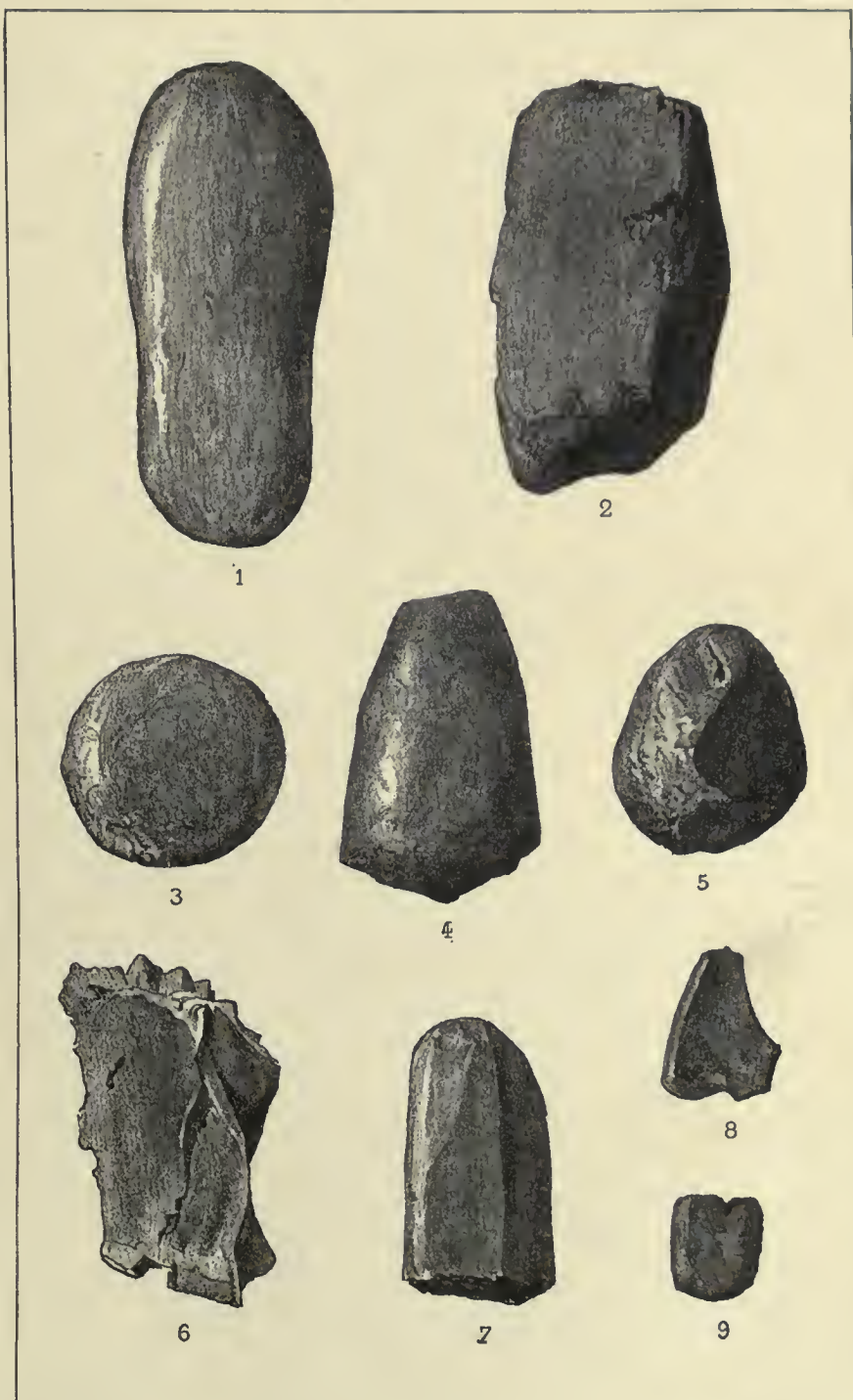
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- Pl. VI. No. 3. Globular stone in diorite, 0 m. 05 c. in diameter, much worn, having probably been used as a hammer.
- „ „ 5. Stone hammer in quartz, 0 m. 05 c. in length, also very much worn.
Fragment of an implement in schist.
- „ „ 7. Implement in schist, 0 m. 065 c. in length.
- „ „ 6. Two gray flint chips, nearly alike, probably from Champagne.
Two yellow flint chips.
A whetstone in fine sandstone, having one face concave and smooth, possibly destined for sharpening celts. This object was unfortunately lost in transport. We have found similar tools in the dolmen of Grah tri men, in the oppidum of the Lizo, and yet another, as we shall see (Pl. XV. No. 17) when we come to the Talus F.
A stone rubber in diorite.
- „ „ 2. Implement in sandstone, 0 m. 07 c. in length.
- „ „ 1. Implement in fine-grained granite, 0 m. 13 c. in length, kidney-shaped and polished by use on one side.
Five fragments of coarse Celtic pottery.

At the exterior of the dolmen, north-west :

Chip of yellow flint, transparent and very thin.

Eight fragments of coarse Celtic pottery.



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At the exterior of the dolmen, south :

Four chips of yellow-gray flint.

Chips of silex pyromaque.

Pl. VI. No. 9. Small dice-shaped cube of brick, similar to those I have already frequently described.

Thirty-five fragments of different varieties of Celtic pottery : amongst these we remark several pieces of rims belonging to apodal vases.

In concluding this list, and with it the description of our researches in the field of Lann Mané Kermario, we call the attention of the reader to the fact that the objects contained in it are of a similar nature to those we collected along the walls of the talus, and under the menhirs.

III.

FIELDS OF THE LITTLE MÉTAIRIE.

FIELDS OF THE LITTLE MÉTAIRIE.

THE ROMAN CAMP.

HAVING finished our explorations in the Field of Menhirs, *Lann Mané Kermario*, we next directed our attention to the neighbouring field on the east side, in which were several taluses. Here the Cadastre gives no significant appellation, for in it this field is simply called the Field of the Little Métairie.

The excavations which we made in following these taluses brought to light the remains of four large walls, enclosing a piece of ground of a quadrilateral figure, which had evidently been occupied as a camp by the Romans. In describing this, I shall follow the order in which the excavations were made.

THE NORTH WALL.

Our operations commenced at the north-west angle of the camp in excavating the northern talus, which stretches out from that point to the eastward. We soon came upon the remains of a large wall, two metres in breadth, but in a dilapidated state, sufficiently well preserved, however, to show us that this angle of the camp had not been rounded off.

Having followed this wall for five metres to the eastward,

we then found it in a better state of preservation, having three or four courses of dry stones. This gave us greater facility in following it, especially on the northern face, which was the best preserved.

At seven metres from the angle on the south face of this wall, we came upon a smaller one, 65 centimetres in breadth, joined to the former, and projecting 7 m. 50 c. to the south in a direction parallel to the western talus. At about two metres farther on, we came upon another wall of similar construction, forming a diagonal to the south-west.

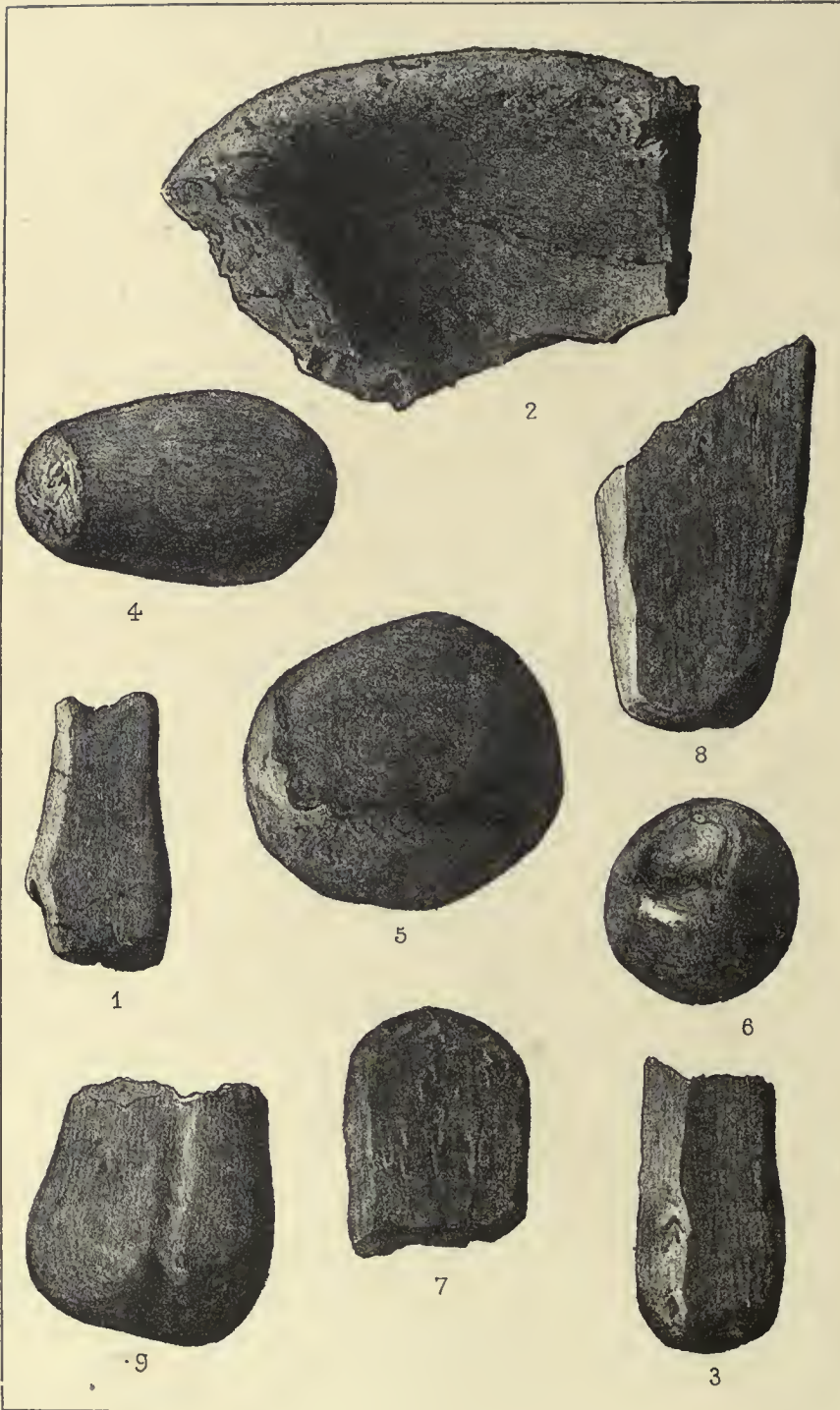
At about two metres to the eastward of the latter wall was an overturned menhir, measuring 2 m. 50 c. in length by 1 m. 30 c. in breadth. On digging round this menhir (the seventh of the eighth alignment), we found under the north-east end some charcoal and ashes.

Continuing to excavate along the talus, we found, at seventeen metres from the angle, that there was an interruption of the wall for four metres, probably the northern gate of the camp.

Between this opening and the north-east angle of the camp, five overturned menhirs, of average size, were laid alongside the northern face of the wall. It cannot be supposed that these menhirs had been overturned and placed there by the builders of the camp, in a position which would have facilitated an escalade; one is rather led to suppose that their displacement had taken place at a later period by the peasants in clearing their ground.

On the south side of the talus, at eighteen metres east from the gate, and protected by a row of large stones placed against the wall, were the remains of several fireplaces, containing charcoal, ashes, and fragments of brick.

Ten metres farther, on the same side, a small menhir was



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placed against the wall. A little farther on another menhir is surrounded by the wall, and near the east end is a triangular projection, having a base of 80 centimetres.

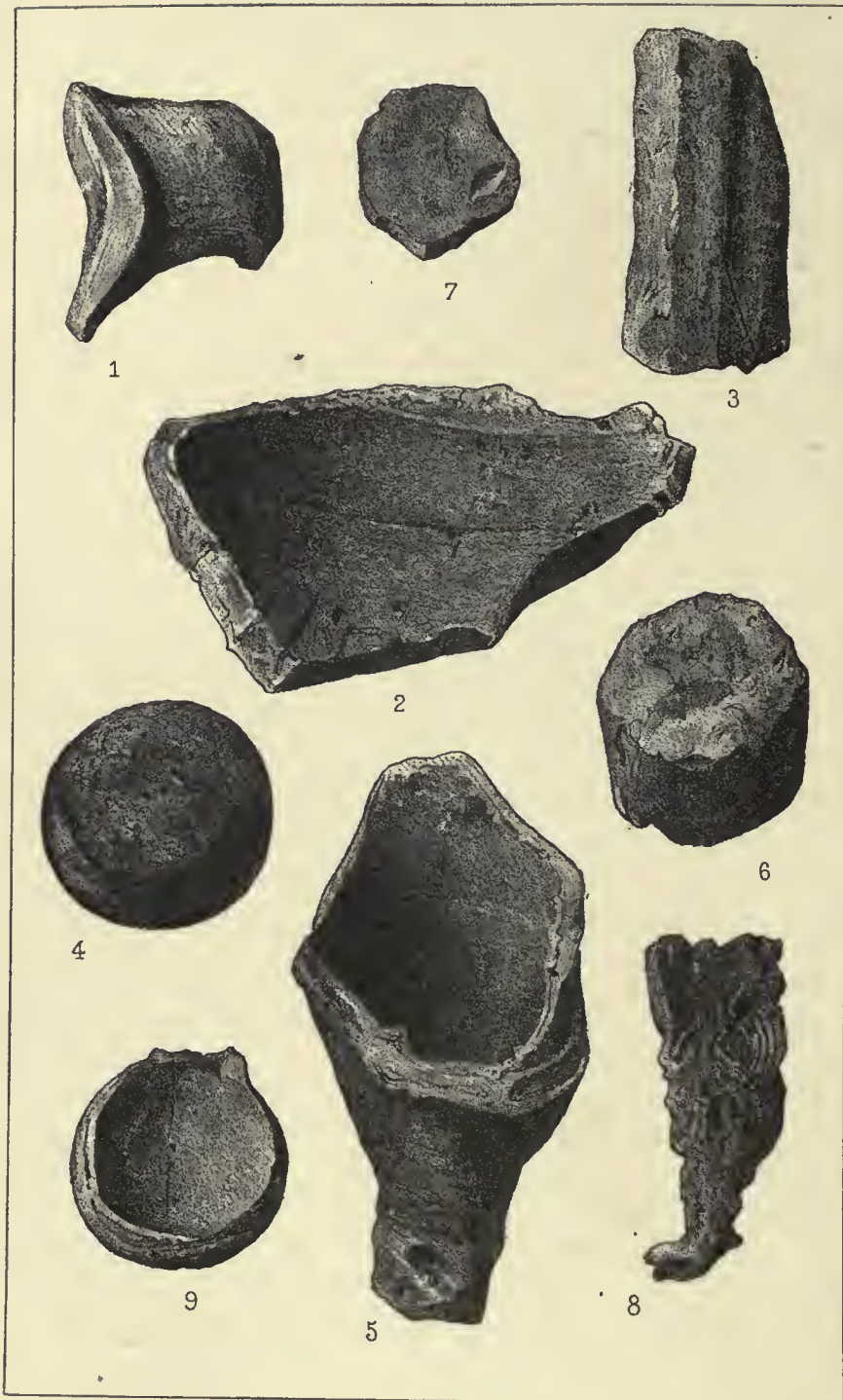
After a length of 65 metres, the north wall terminates in being rounded off at the exterior, where it joins the eastern talus.

The following objects were collected during the excavations at the base, and on both sides of the north wall.

Numerous fragments of Gallo-Roman pottery in coarse and fine sigillated ware, of charcoal, of broken roofing-tiles (*imbrices et tegulæ*), and of projectiles and implements in granite and in quartz, were found on both sides all along near the base. Amongst these, I note the following objects:—

- Pl. VII. No. 5. Stone hammer in quartzite, worn by percussion, similar to those found in the dolmen of Gragueux. Found on the south side, to the west of the gate.
- „ „ 9. Broken weight in granite, having a groove cut round it like those of the Bossenno. South side, west of gate.
- „ „ 2. Portion of a stone mortar in granite, polished by use. South side, west of gate.
- Pl. VIII. No. 7. Disc or quoit formed from a piece of gray pottery. South side, west of gate.
- „ „ 9. Disc formed from the bottom of a vase in red sigillated ware. South side, west of gate.
- „ „ 2. Fragment of the body of an amphora, in red paste. South side, close to entrance.

- Pl. VIII. No. 1. Handle of the body of an amphora, in red paste. South side, close to entrance.
- „ „ 5. Bottom of the body of an amphora, in red paste. North side, close to entrance. The interior of the latter object is covered with a thick crust. On sending a portion to be analysed, it proved to be the residuum of wine.
- Pl. IV. „ 1. Half of a circular millstone in granite, 0 m. 42 c. in diameter. South side, east of entrance. The other half was found on the same side of the wall, twenty metres eastward.
- Pl. VII. „ 3. Part of a whetstone, formed of sandstone. South side, east of entrance.
- „ „ 4. Pestle formed of quartzite. North side, 20 metres east of entrance.
- „ „ 7. Fragment of an implement in schist. North side, 20 metres east of entrance. Mortar in granite measuring 0 m. 25 c. by 0 m. 20 c. by 0 m. 10 c. North side, 20 metres east of entrance.
- „ „ 8. Fragment of a flat tool formed of schist, polished on the edge. South side at 25 metres east of entrance.
- „ „ 6. Stone hammer, in quartzite, 0 m 07 c. in diameter.
- Pl. VIII. „ 3. Handle of an amphora, in red paste. North side, at 25 metres east of entrance.



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Disc in schist, 0 m. 07 c. in diameter.

North side, at 30 metres east of entrance.

Fragment of an implement in schist.

North side, at 30 metres east of entrance.

Two flat implements in schist, with the head rounded off. North side, east end of the talus.

Pl. VII. No. 1. Broken whetstone, in sandstone. North side, east end of the talus.

Pl. VIII. Nos. 4 and 6. Two bungs or stoppers for amphoræ, in red paste. South side, east end of the talus.

„ „ 8. Two pieces of iron much oxydised.

Stone mortar, in granite, polished in the hollow, measuring 0 m. 34 c. by 0 m. 25 c. East end of the talus.

Mortar of similar description, measuring 0 m. 26 c. by 0 m. 18 c. East end of the talus.

(Similar stones to the two latter were found at the Bossenno.)

Mortar in granite, polished by use, measuring 0 m. 26 c. by 0 m. 23 c. by 0 m. 10 c. East end of the talus.

Mortar also in granite, and polished by use, measuring 0 m. 17 c. by 0 m. 15 c. by 0 m. 09 c. East end of the talus.

(A stone, similar to the latter, was found close to the fifth menhir of the first alignment of Kermario.)

THE EAST WALL.

The eastern talus had been destroyed from where it joined the rounded-off end of the northern talus to a point distant 62 metres off in a south-westerly direction; there it recommenced and went on for 13 m. 60 c. in the same direction, to join the southern talus, with which it forms an obtuse angle. The destruction of the greater part of the eastern talus is explained by this portion of the field being under cultivation; probably if trenches were cut across the field the foundations of the wall might be yet discovered.

In excavating the talus at the point above alluded to, we came on the eastern wall of the camp. It differs from the northern wall in being 0 m. 50 c. less in breadth.

At 0 m. 60 c. to the west of the place where we found the wall was a small menhir overturned and in all likelihood displaced.

At 3 m. 50 c. from the south-east angle of the camp, and on the west side of the wall, we came upon a circular fireplace formed of dry stones and full of ashes, charcoal, and fragments of Roman roofing-tiles (*tegulae et imbrices*).

A stone measuring 0 m. 60 c. by 0 m. 30 c. by 0 m. 20 c. was situated 4 metres to the west of the fireplace. The surfaces of this stone were so hollowed and polished that it had evidently been much used as a whetstone.

The following objects were found along the eastern talus. No drawings are given of these, as they are mostly analogous to preceding objects.

Between the overturned menhir and the wall :—

Two stone hammers in quartz.

Several hand-projectiles in granite.

Spout, handle, and fragments of amphoræ.

At the exterior of the wall :—

Several fragments of reddish-gray pottery, Gallo-Roman.

Other fragments of common coarse „ „

Round the fireplace :—

Handle of a gargoulette in yellow paste, Gallo-Roman.

Other fragments of common pottery, „

On the exterior of the wall near the south-east angle :—

A stone burnisher in chert.

Fragment of an amphora in yellow paste.

Several bottoms and rims of vases in gray paste, Gallo-Roman.

Other fragments of coarse pottery, Gallo-Roman.

THE SOUTH WALL.

From the south-east angle of the camp the wall concealed under the southern talus stretches out for five metres to the westward; there it forms an elbow projecting 1 m. 50 c. to the south. This part of the wall is only 1 m. 40 c. in breadth, and is built on the rock.

Starting again from the south end of the elbow in a westerly direction, but now with a breadth of 1 m. 70 c., the wall goes on for 11 metres; there a smaller wall, 0 m. 80 c. in breadth, projects to the north for 3 metres. At 2 m. 80 c. farther along the great wall, another little wall of the same size and parallel to the former projects northwards for 2 m. 40 c. The shattered state of the ends of these little walls shows that they had formerly projected still farther to the northwards. Between these walls was a rude fireplace

formed of two flat stones set on end upon a rude circular pavement, so as to leave an opening of 0 m. 50 c. to the north. As usual, it was full of charcoal and ashes. The quantity of fragments of roofing-tiles (*tegulae et imbrices*) between the walls indicates their having been roofed in.

Working along the talus to the westward, we came upon an opening of 2 m. 50 c. in the great wall, at a distance of 5 metres from the latter little wall. This opening was evidently destined as the side entrance of the south gate of the camp; the ends of the great wall being finished off in large dressed stones rebated for a door.

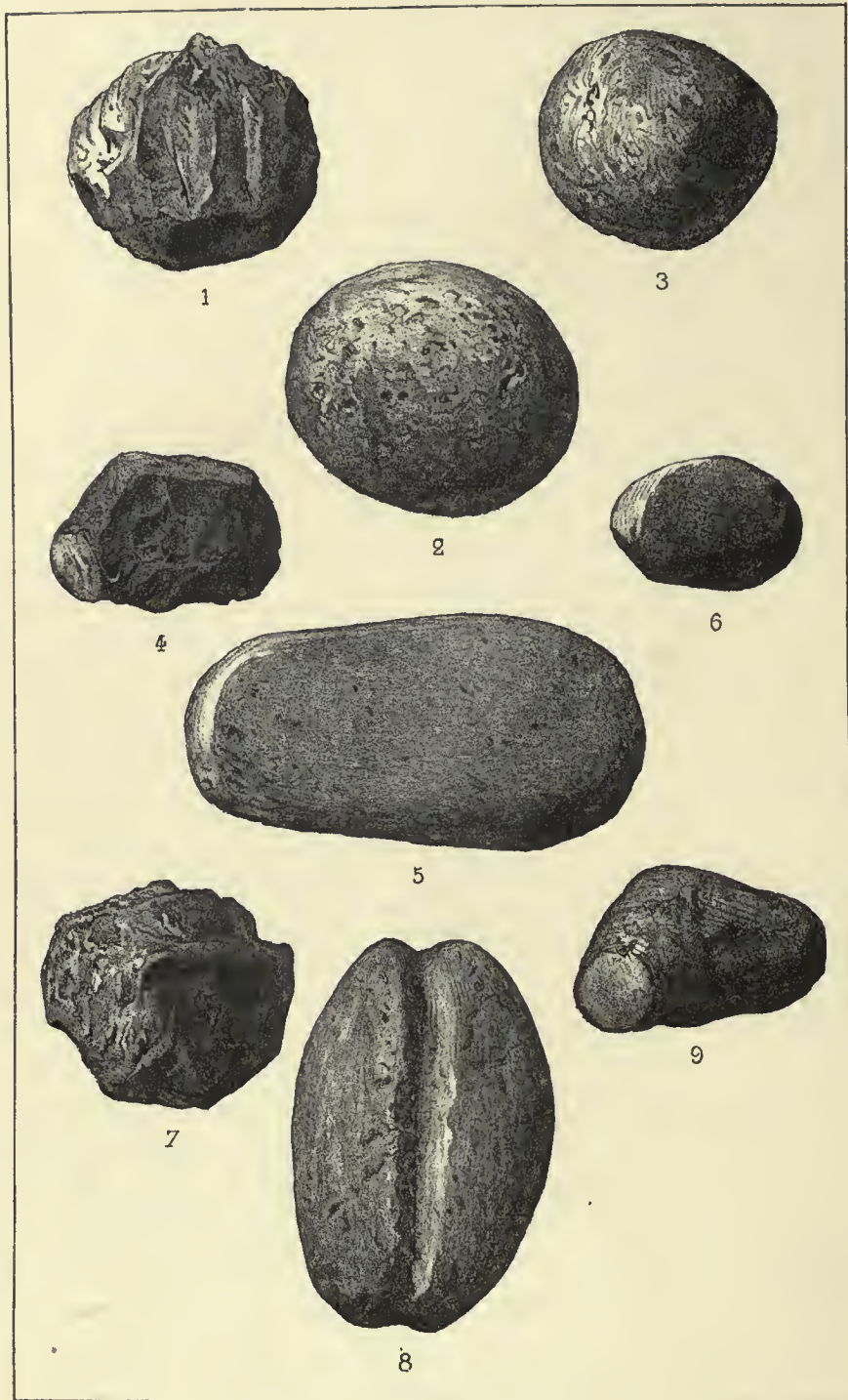
Two metres farther on we came upon the large gateway, 6 m. 70 c. in width, from which a causewayed road of the same width extended south-east towards the Bossenno. In this road, close to the entrance, the passage of the chariots (*biga* and *quadriga*) was clearly indicated by the ruts in the causeway.

This double entrance reminds one of those in the stations on the Roman wall in Northumberland.

The west end of the large gateway is in a good state of preservation; beyond this, however, for a length of 6 m., the lower course of foundation-stones alone remained. Then we came upon another small wall again running at a right angle to the north for three metres, and terminating in a rebate for a door. To the west of this little wall was a fireplace similar to the one last described, and as usual accompanied with charcoal, ashes, and fragments of roofing-tiles.

From this point the great wall continues, but in a better state of preservation, having five or six well-laid courses and a breadth of 2 m. 20 c., until it joins the western talus at the south-west angle of the camp.

The following enumeration contains the description of



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the different objects collected during the exploration of the southern talus.

Between the elbow in the wall and the first fireplace:—

- Pl. X. No. 9. Whetstone, 0 m. 07 c. in length, in schist.
 Pl. IX. „ 7. Stone hammer formed of quartz.
 „ „ 5. Flat implement formed of granite, highly polished on one face, 0 m. 16 c. in length.
 Pl. X. „ 2. Flat implement in schist, polished on one side, length 0 m. 05 c. We have found similar tools in the alignments of Menec, in different dolmens, and in Gallo-Roman constructions.

Fragment of a vase in red sigillated ware.

„ of an amphora in red paste.

- Pl. XI. „ 9. Large fragment of a coarse gray vase, hand made, and having a circular hole perforated in the neck.

Several other fragments of Gallo-Roman pottery, red, yellow, gray, and plumbago.

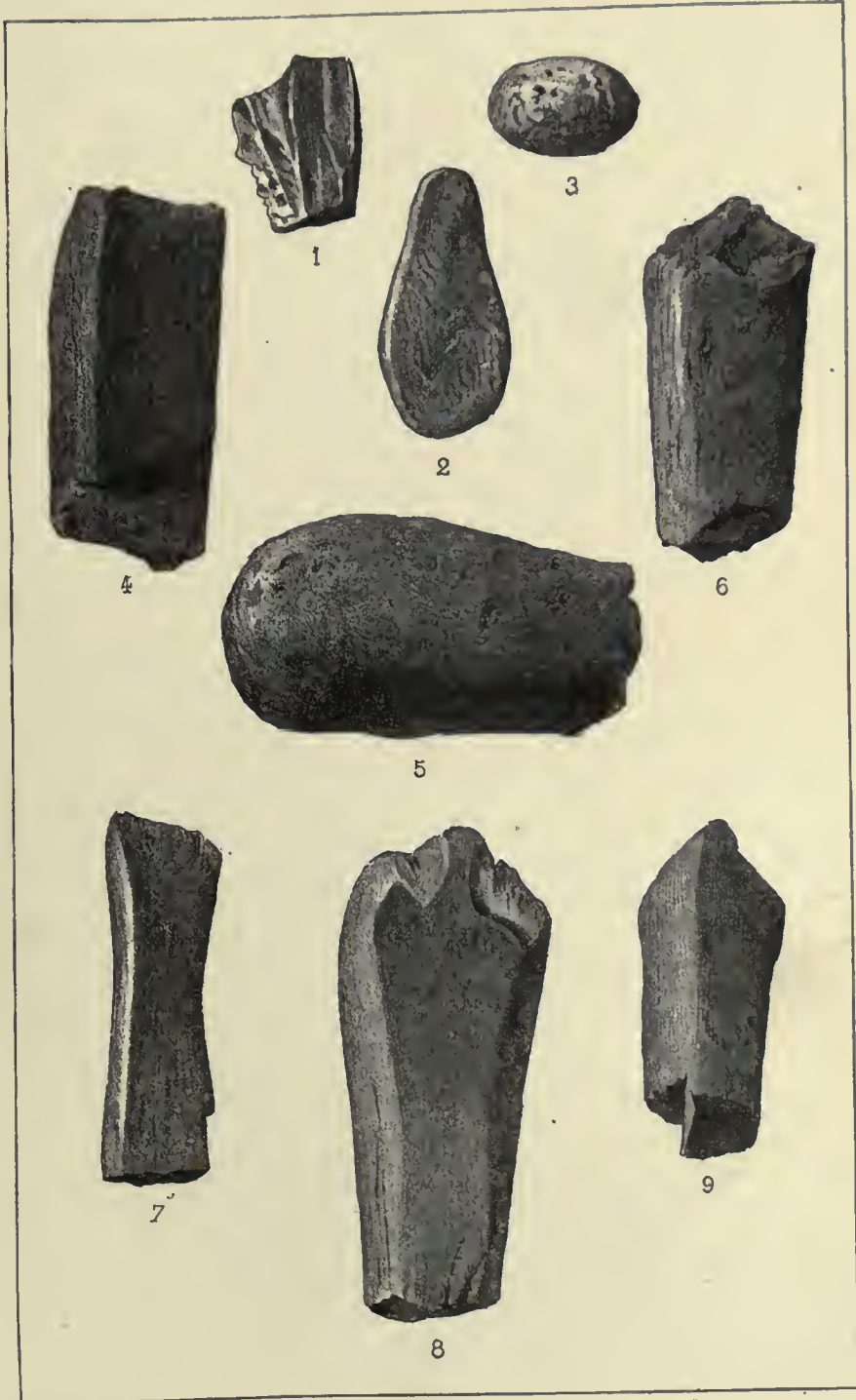
In the vicinity of the first fireplace:—

- Pl. IX. No. 1. Two stone hammers, in quartz, nearly alike.
 „ „ 9. Stone rubber in quartz, length 0 m. 10 c.
 „ „ 6. „ „ in granite, polished, and of a fine grain; length 0 m. 08 c.
 „ „ 3. Globular stone in quartz, polished; diameter 0 m. 08 c. A similar stone was found in our subsequent excavations (Gallo-Roman), at Kerléarec.

- Pl. IX. No. 2. Another globular stone in granite, polished; diameter 0 m. 10 c.
- Pl. X. „ 7. Whetstone in schist, used on all its faces; length 0 m. 11 c.
- Pl. XI. „ 11. A weight in brick-earth; length 0 m. 11 c., diameter 0 m. 05 c. at the base, 0 m. 03 c. at the summit; perforated by a circular hole in the upper part, and having a cross engraved on the top across the angles.
- „ „ 10. Several other weights similar to the preceding, but not having the cross.
- „ „ 12. Another similar weight, having the angles rounded off; length 0 m. 13 c.
- „ „ 5. Fragment of a large-necked Gallo-Roman vase, in black, lustrous ware, having vertical sides, a collar on the exterior of the rim, ornamented with three zones formed of small hollow lines produced by stamping.
- Several similar fragments were found at the Bossenno.
- „ „ 2. The larger part of a bowl in a yellowish-brown paste, with a small base and overhanging sides. Similar pottery was found at the Bossenno.
- Fragment of an amphora in a red paste.
- Some fragments of common red and gray pottery.

On the south side of the talus, facing the first fireplace :—

- Pl. X. No. 6. A square-shaped tool, polished, in micaceous schist.



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- Pl. IX. No. 4. Stone hammer in granite, diameter 0 m. 07 c.
 Fragment of a vase, in red sigillated ware.
 „ of a large gray vase.
 Bottoms, rims, and other fragments of
 various Gallo-Roman vases.

- Pl. XI. „ 8. Upper part of a phial, 0 m. 065 mm. in
 breadth, in green glass, having two
 handles.

At 15 metres from the elbow on the south side :—

Large fragment of an amphora in red
 paste.

Fragment of the rim of a bowl in red
 sigillated ware.

Fragment of the bottom of a large gray
 vase.

Some other fragments of common coarse
 Gallo-Roman pottery.

On the north side :—

- Pl. XI. No. 3. Fragment of a vase in a grayish-brown
 paste, having an ear for suspension.
 Vases of this form are still made at
 Quimper, and are used for carrying food
 to the working classes by their wives
 and children.

At the small entrance, on the south side :—

- Pl. XI. No. 1. Several fragments of coarse gray pottery,
 bearing the prints of the potter's fingers.
 Fragment of an earthen pan in a grayish-
 yellow paste, surrounded with super-
 posed lines.

E

Fragment of a yellow earthen water bottle.

Several fragments of rims belonging to large vases, in a gray paste.

Other fragments of common Gallo-Roman pottery.

On the north side of the double entrance :—

Pl. X. No. 5. Part of a pestle, in granite, broken; length 0 m. 10 c.

Part of a rod formed of brick-earth, 0 m. 07 c. in length.

Neck of an amphora, in yellow earth.

Some fragments of the rim of a large vase, in gray paste.

Other fragments of diverse kinds of Gallo-Roman pottery, comprising bottoms, rims, handles, etc., in red, yellow, gray, and black paste.

At the large entrance on the south side :—

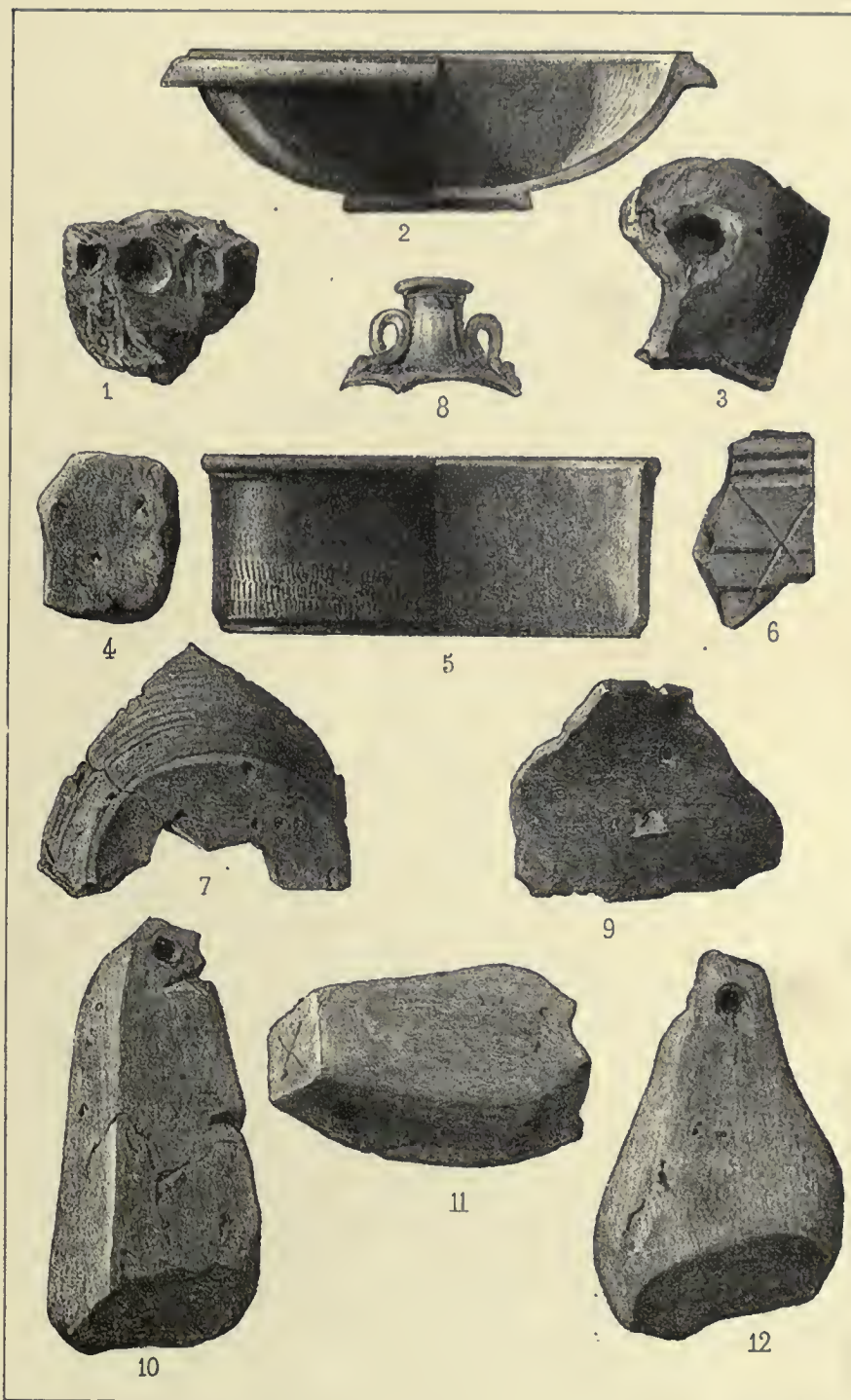
Pl. X. No. 8. Whetstone, formed of sandstone, 0 m. 15 c. in length.

„ „ 3. A small projectile in granite, probably a sling-stone.

Fragment of the bottom of a vase, in black lustrous ware.

Fragment of a bowl, in black lustrous ware.

Pl. XI. „ 6. Fragment of a brown vase, ornamented with hollow horizontal bands, and black striæ; this fragment has two lines in



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the form of a St. Andrew's Cross, which had been engraved on it after it had been fired.

Two fragments of rims in a black paste, covered with plumbago.

Fragment of the handle of a yellow earthen water bottle.

Several fragments of an amphora, in yellow paste.

Other fragments of Gallo-Roman pottery, various.

At the exterior of the second fireplace, on the east side :—

Pl. IX. No. 8. A weight formed of granite, of an oval form, 0 m. 14 c. in length, by 0 m. 09 c. in breadth, having a groove cut lengthways, and weighing 1 kilo. 150 g.

The quantity of oxide remaining in the groove proves that it had been strapped with iron. Similar weights were found at the Bossenno.

Four weights in brick-earth, similar to those of the first fireplace.

Two more weights were reconstituted from fragments. These objects are generally classed in museums as having been used by weavers, but we consider that here they had been used in the fireplace for supporting the culinary vessels.

Several fragments of common Gallo-Roman pottery.

On the north of the second fireplace :—

Fragment of the bottom of a vase, in red sigillated ware.

Fragments of the neck and handle of a grayish-brown earthen water bottle.

Pl. XI. No. 7. Fragments of a yellow earthen pot surrounded by superposed horizontal bands.

Fragments of a flint flake.

Fragments of bottoms, rims, and other parts of Gallo-Roman pottery of various kinds.

At five metres west from the second fireplace, on the north :—

Stone hammer in granite, 0 m. 08 c. in diameter.

Pl. XI. No. 4. A small square tile in brick-earth, 0 m. 05 c. in diameter, similar to the one found in the alignments.

Fragment of an amphora in yellow paste.

Fragments of common Gallo-Roman pottery, red and gray, weighing three kilos.

At five metres west from the second fireplace, on the south side :—

Pl. X. No. 4. Broken whetstone, in sandstone ; used.

Fragment of an amphora in red paste.

Several fragments of red and yellow pottery.

At the south-west angle of the camp :—

Fragment of a triangular implement formed of a black stone, and polished.

THE WEST WALL.

At the junction of the south with the west talus, the great wall describes an arc, and is formed of large stones reddened by the action of a violent fire, proof of which was found in the large heap of charcoal and ashes at their base.

In pursuing our explorations along the talus to the north, we found that it covered a large wall similar in construction to that last described, and in a dilapidated state at the outset, but in a better state as we advanced. We could only excavate on the east side of this wall, a modern boundary-wall, partly superposed, preventing our doing so on the west side. It was on the west side of this wall that we observed the small bit of roofing-tile which led to our making these researches.

At 18 m. from the south-west angle we came upon a menhir, 1 m. 90 c. in length, which had been overthrown and built into the wall by the constructors. This would appear to have been the tenth of the eleventh alignment. Its small size, in comparison with the others, would have rendered the displacement a work of no great difficulty, the distance being only ten metres. A circular fireplace, formed of one course of dry stones, full of charcoal and ashes, was situated at the base of the wall in face of this menhir, and founded on the rock. In front of the fireplace, a cavity had been formed in the rock, which, as usual, was full of ashes. A large quantity of broken roofing-tiles (*tegulae et imbrices*) was strewed around the fireplace.

The discovery of this fireplace was soon followed by that of two others, situated respectively at four and ten metres farther on.

The second fireplace, hollowed out in the rock, is sheltered

on the north by a menhir two metres in length, overthrown so as to form an angle with the base of the wall. This menhir, which had been buried for centuries under the earth, had on its south end deep grooves and weather markings. In the concluding part of this work I shall revert to this stone, as it appears to me to throw a special light on that contested question, the age of the alignments of Carnac. In doing so, I shall call it the eleventh menhir of the tenth alignment, thereby counting as the tenth menhir that which is built into the wall.

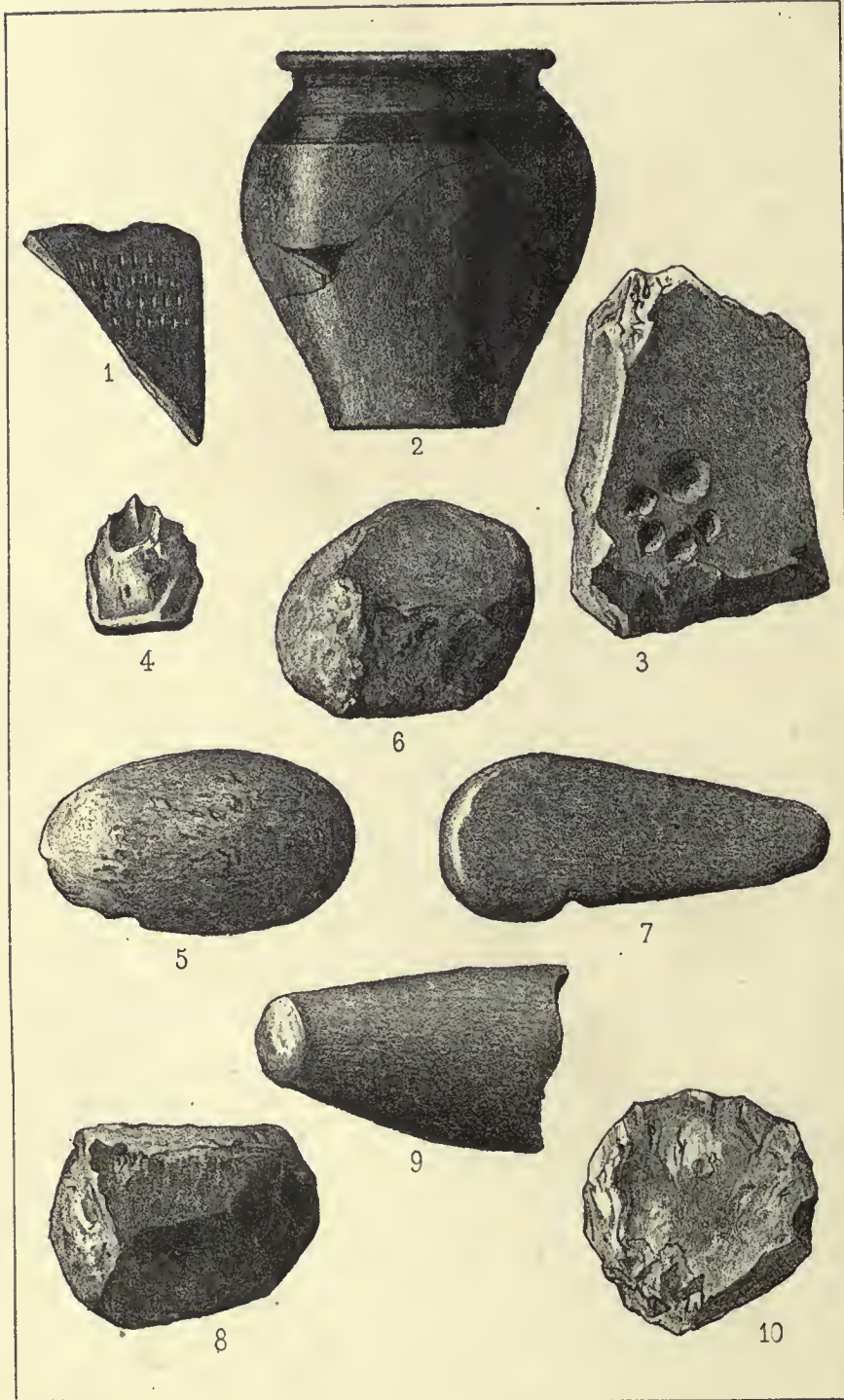
The third fireplace did not differ from the others, save in being hollowed out in the ground.

As usual, these two fireplaces were encumbered with charcoal, ashes, and fragments of roofing-tiles.

At thirty metres from the south-west angle, the wall suddenly stops for an opening of two metres, after which it recommences and goes on for four metres, always in the same direction. An overthrown menhir, 2 m. 80 c. in length, the seventh of the ninth alignment, is built into this portion. After this, another interruption of the wall takes place for five metres; then the wall again recommences, and has another displaced menhir built into it, and continues on, but in a dilapidated state, to the north-west angle of the camp. I consider these two openings in the wall as the west entrance of the camp.

At two metres to the north of the latter opening, a menhir two metres in length,—the sixth of the eighth alignment,—is set up against the wall, and shelters a fourth fireplace, similar to the preceding ones, constructed at its base on the rock.

The following objects were found during the excavation of this talus :—



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At the south-west angle :—

Pl. XII. No. 2. Numerous fragments of a gray vase, 0 m. 22 c. in height, reconstructed. This vase is similar to the one (see Pl. III. No. 9) found in the angle of the wall in the field Lann Mané Kermario.

At ten metres north from the south-west angle :—

Several fragments, which served to reconstruct the upper part of a common gray vase.

Pl. XII. No. 1. Fragment in a red paste, ornamented with horizontal bands composed of elongated hollows made by the potter's nails.

Small fragment, in brown paste, ornamented with bands composed of small lozenge-shaped depressions.

Several projectiles in granite.

In the first fireplace :—

Pl. XII. No. 3. A large quantity of broken roof-tiles, one of which bears the print formed by the foot of a dog, which had passed over it when the clay was in a soft state. Similar bricks have been frequently found in all our Gallo-Roman excavations.

Small dice-shaped piece of brick, similar to those already mentioned.

Fragment of the bottom of a coarse gray

KERMARIO.

vase, bearing the prints of the potter's fingers.

Two fragments of ornamented red lustrous ware.

Other fragments of common Gallo-Roman pottery,—gray, red, and others coated with plumbago.

Pl. XII. No. 6. A stone hammer, in quartz, 0 m. 09 c. in diameter.

In the second fireplace :—

Pl. XII. No. 5. A rubbing-stone in granite, of an oval form, 0 m. 12 c. in length, having one face polished by use.

Large iron nail, very much oxydised.

Several fragments of amphoræ in a yellow paste.

Handles, rims, bottoms, and other fragments of gray vases.

Fragments of fine black lustrous ware, of red sigillated ware, and others coated with plumbago.

„ „ 7. Implement in schist, of a flat celt-like shape, 0 m. 13 c. in length.

In the third fireplace :—

Rim of a vase in fine black lustrous ware.

Fragments of others, in gray and black paste.

Stone hammer in quartz.

Pl. XII. No. 4. Chip of yellow flint,

In the fourth fireplace :—

Handle of an amphora in red paste.
Fragments of common Gallo-Roman
pottery.

All the pottery found in this talus is Gallo-Roman. The quantity of broken roofing-tiles found in and about the different fireplaces indicates that these had been roofed over.

On excavating round the overthrown menhirs in the interior of the camp, near to the west entrance, we collected four kilos. weight of fragments of common Gallo-Roman pottery, associated with charcoal and ashes.

After having explored the four sides of the camp, we discovered, at the exterior of the south-west angle, that the west talus is prolonged to the south, but in a dilapidated state. This is probably owing to its materials having been used in the construction of a modern wall, which, partly superposed, runs along, and eventually crosses it at 7 m. 50 c. from the angle.

At nine metres from this angle another talus joins on, extending at right angles and covering a wall of two metres in breadth, and also in a dilapidated state. This wall extends thirty-one metres to the east and twenty-nine metres to the west. On the south side of the latter wall, at 12 m. 50 c. west from the junction, we discovered a fireplace of an oval form, 1 m. in its greater and 0 m. 70 c. in its lesser diameter, built of dry stones, and, like the preceding ones, full of charcoal and ashes; amongst these, however, we remark the absence of roofing-tiles.

The following objects were collected along this talus :—

On the east of the fireplace, south side of the wall :

A rubbing stone in granite 0 m. 17 c. in length—face polished.

Pl. XII. No. 9. A stone celt, length 0 m. 10 c., broken across the middle, bearing marks on the head of hammering.

Two stone hammers in quartz.

Several projectiles in granite.

On the west of the fireplace, on both sides of the wall :—

Several fragments of coarse Celtic pottery.

Pl. XII. No. 10. Two stone hammers in quartz, one of which, of a flat circular shape, measures 0 m. 08 c. in diameter and 0 m. 03 c. in thickness.

„ „ 8. Stone hammer, in granite.

Several hand-projectiles, in granite, of different sizes.

It is to be observed that no Roman objects were found in the exploration of this talus.

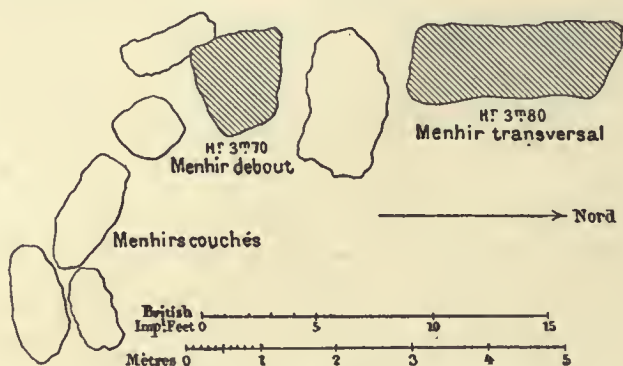
FIELDS OF THE LITTLE MÉTAIRIE.

THE GROUP OF MENHIRS BEFORE THE FARMHOUSE.

Having finished our researches in the camp of the Little Métairie we next directed our attention to the fields situated to the east of it. At 19 m. from the end of the north talus and nearly in the same line, several displaced menhirs lay prostrate on the ground. Farther on numerous menhirs and fragments of menhirs are built into a modern wall running in the same direction. At 128 metres this wall joins two large menhirs standing erect—the one, of an obelisk form, 3 m. 70 c. in height, the other, of a flat form, 3 m. 80 c. in height and placed transversely to the direction of the alignments. We have already mentioned that four of the alignments converge towards this menhir set up transversely. The question at once suggested itself why this menhir was thus set up in an exceptional way, if it were not to indicate some other monument in its vicinity or to serve as a demarcation for one section or division of the alignments. Referring to the former hypothesis, we may compare it with the menhir in the vicinity of the quadrilateral monument of Mané en Uïeu and others which will be described in a succeeding work, and we shall see farther on in this work other menhirs which tend also to confirm it.

In excavating round the base of this menhir we found it packed with large stones for a depth of 0 m. 80 c. At that depth it stood upon a bed of gravel 0 m. 15 c. in thickness, below which was the rock. Around its base we collected two flint chips, a fragment of coarse micaceous pottery, a fragment of a circular millstone or quern in granite; and in hollowing *under* its base we extracted some small pieces of charcoal.

Between these two menhirs another, two metres in length, lay overthrown on the ground in an east and west direction.



GROUP OF MENHIRS BEFORE THE FARMHOUSE.

In carrying our trenches around the obelisk-shaped menhir we discovered five others overturned, lying flat and forming a curve towards the west. This group of menhirs would appear to have belonged to a monument once of greater importance and extent, but probably destroyed during the clearing of the surrounding field.

The obelisk-shaped menhir is packed in a similar manner to the transverse menhir. Near its base we collected some flint chips and fragments of Gallo-Roman pottery.

In excavating these trenches, and in working round these menhirs, we observed that the earth had the appearance of having been formerly dug. This was sufficiently proved, for, on the rock at the bottom of our trenches we came upon some fragments of modern pottery and of glass bottles of the present era, which had been left by our predecessors.

From this group of menhirs a talus, five metres in breadth, extends still in the same direction eastward to the neighbouring field, where it is cut by the modern boundary wall. In this talus, which we did not excavate, we remarked several menhirs overthrown lying on its surface.

IV.

LANN ER VELEIN.

LANN ER VELEIN.

PASSING over the boundary wall, we enter another desolate moorland, named in the Cadastre *Lann er Velein* (the moorland of the mill), extending in a north-easterly direction up to the windmill of Kermaux, and thence on to *Lann er Houarem*. There are but few menhirs where we enter the field; as we proceed on to the windmill they become more numerous. On examining the old wall alongside the servitude road to Kerlescant, the numerous small menhirs and fragments of others built into it show how some of the missing ones had been utilised.

The talus we alluded to in the end of the last chapter as cut by the boundary wall still continues on in its easterly direction in this moorland. As we recommenced our excavations here, we have designated it in the map by the letter A.

Working along this talus, we experienced great difficulty in disclosing a wall 88 m. in length and 1 m. 60 c. in breadth, rudely constructed in undressed stones without mortar. It appeared to be older than the walls of the camp, and certainly was in a more dilapidated state. We remarked that the earth on both sides of the wall attained a greater depth than in the other parts of the field. At the west end and on the northern side, a bed of ashes mixed with charcoal, 10 c. in depth, extended along the base for 2 m. 50 c. Other parcels of charcoal were found scattered all along the base on both sides.

The following objects were collected along the Talus A :—

Several stone hammers in quartz.

Several projectiles in granite.

Pl. XIII. No. 1. Fragments of implements, in various kinds of stone.

„ „ 3. A celt-shaped tool, in diorite, 0 m. 08 c. in length ; found in the field 10 m. 0 c. south from the talus.

„ „ 2. A choice polished stone, 0 m. 05 c. in length.

„ „ 4. A choice highly polished stone of an oval form, 0 m. 06 c. in length. These stones are both similar to those we have found under the menhirs, and also in the dolmens and circular sepultures.

„ „ 5. Part of the handle of an amphora. Rubbing-stone, 0 m. 16 c. in length, and 0 m. 05 c. thick, in granite, polished by use.

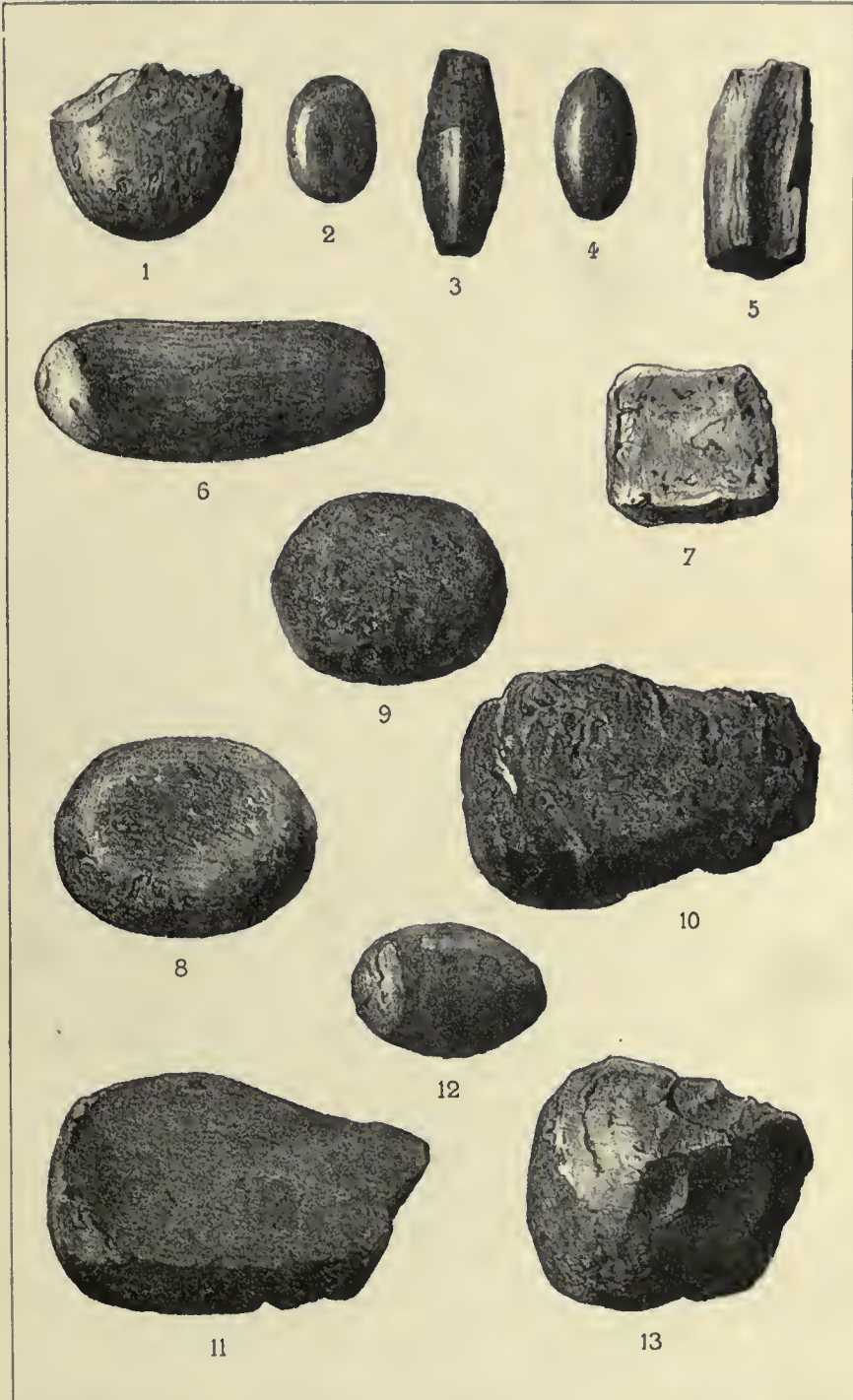
Fragment of coarse red pottery.

Several fragments of coarse black pottery.

A flint chip.

THE TALUS B.

The Talus B is separated from the preceding one by an opening of 9 m., and extends for 40 m. nearly in the same direction. This talus also covered a wall of the same dimensions rudely constructed with unhewn stones and with earth. It was in such a ruinous state that we had great difficulty in following it.



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Near the base we collected, on the south side :—

A few pieces of charcoal.

Pl. XIII. No. 6. A kidney-shaped tool in quartzite, 0 m. 13 c. in length, having one face polished and bearing the marks of percussion at the ends.

„ „ 7. A square piece of terra cotta, very friable, 0 m. 06 c. in breadth.

THE TALUS C.

The Talus C is separated by an opening of 8 m. in width from the Talus A, and by another 9 m. in width from the Talus B, and extends northwards for 55 m., covering a wall similar to the preceding ones but in a much better state of preservation. At this point it went under a modern wall, which prevented our following it farther. A menhir of 1 m. 70 c. in length is built into the southern end, though otherwise the stones used in its construction have an average size of 0 m. 40 c. by 0 m. 20 c. We remarked also, as at the preceding talus, that all along the base of this wall the earth was much richer and much deeper than in any other part of the field; at intervals we came upon patches of charcoal and ashes on both sides.

The following objects were collected along the Talus C :—

Several fragments of roofing-tiles (*tegulae et imbrices*).

Bottom of a Gallo-Roman vase in a yellow paste.

Other fragments of Gallo-Roman pottery in yellow, black, and red paste; some of these are covered with soot and blackened by fire.

Several flint chips without any special character.

A whetstone, 0 m. 14 c. in length, used on one side.

Part of a mortar in granite, similar to those found in the Bossenno.

- Pl. XIII. No. 11. Part of a mortar or rubbing-stone, face flat and polished.
- „ „ 9. Several hand-projectiles in granite, from 0 m. 09 c. to 0 m. 10 c. in diameter.
- „ „ 10. A celt-shaped tool in quartz, 0 m. 13 c. in length, having marks of percussion at the extremities.
- „ „ 8. A rubbing-stone 0 m. 12 c. in length, in fine grained granite, oval in form, and having one face flattened and polished by use.
- „ „ 12. A tool in quartz, 0 m. 07 c. in length, and bearing marks of percussion at the extremities.
- „ „ 13. Several stone hammers in quartz, 0 m. 13 c. in length.

PRIMITIVE CONSTRUCTIONS NEAR THE WINDMILL.

The windmill of Kermaux is situated on a height 44 m. to the north-east of the end of the Talus C, where we left off excavating. From this height we enjoy a fine panoramic view both seaward and landward, commanding also the main body of the alignments from Le Menec to the commencement of the stone alleys of Kerlescant. One feels immediately that this is a dominant position. Twice it has occurred, when walking with military officers amongst these stone alleys, that on arriving at the windmill of Kermaux, they made the same observation: "These alignments occupy the most advantageous position that a general could select for



PRIMITIVE CONSTRUCTIONS NEAR THE WINDMILL OF KERMAUX.

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(From a Drawing by James Miln.)

disposing his troops." And in fact we have the material proof of combats having taken place on this height at some remote epoch, in the quantity of projectiles in granite and pieces of broken stone celts which lie scattered about on the moorland.

It is also worth remarking that in this field of Lann er Velein, out of the large number of menhirs forming a part of the alignments five alone remain erect.

Independent of the emotions awakened by the view of these battalions of gray stones echeloned along the country, their presence excites the imagination to picture the events which have passed in history since their erection; and one is tempted to ask how it is that the Romans, the masters of the world, came and disappeared, whilst the race of the rude constructors still remains. Such questions as these, and many others which they suggest, augment the interest one always experiences in visiting the alignments.

At 12 metres north from the windmill was a mound crossed by a modern wall, which embraces three menhirs laid lengthways, and another standing erect 1 m. 25 c. in height.

In excavating this mound we brought to light the foundations of a series of primitive constructions, similar to those we discovered at the head of the alignments in the field Lann Mané Kermario.

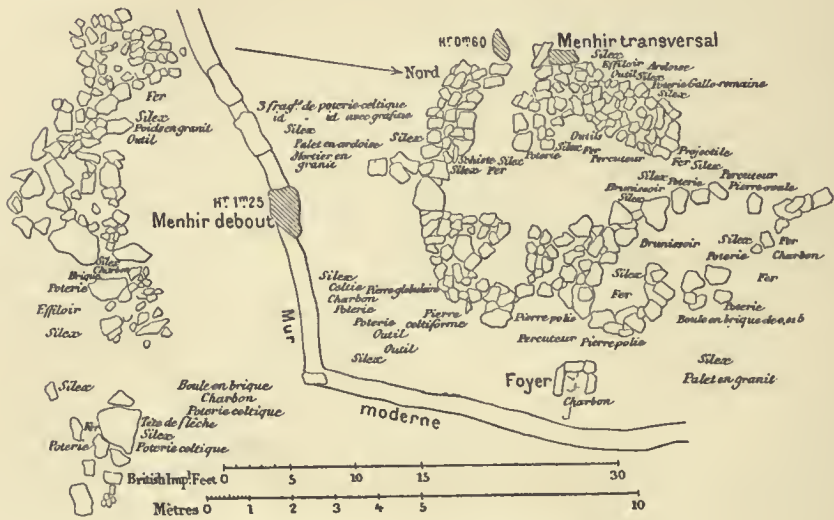
These ruins appear as a confused heap of stones strewn about in the greatest disorder; in the middle part one makes out some compartments of a nearly circular form, flanked on the west by two little menhirs standing erect (one of which, it is to be remarked for the second time, is set up transversely to the direction of the alignments), and on the east side by a square fireplace formed by four large stones set up on their edges on a rude pavement of other flat stones.

A reference to the subjoined plan will give the reader a better idea of these constructions than any description.

The objects described in the following list were collected in these constructions :—

Some parcels of charcoal all about, but principally in the fireplace.

Two fragments of brick.

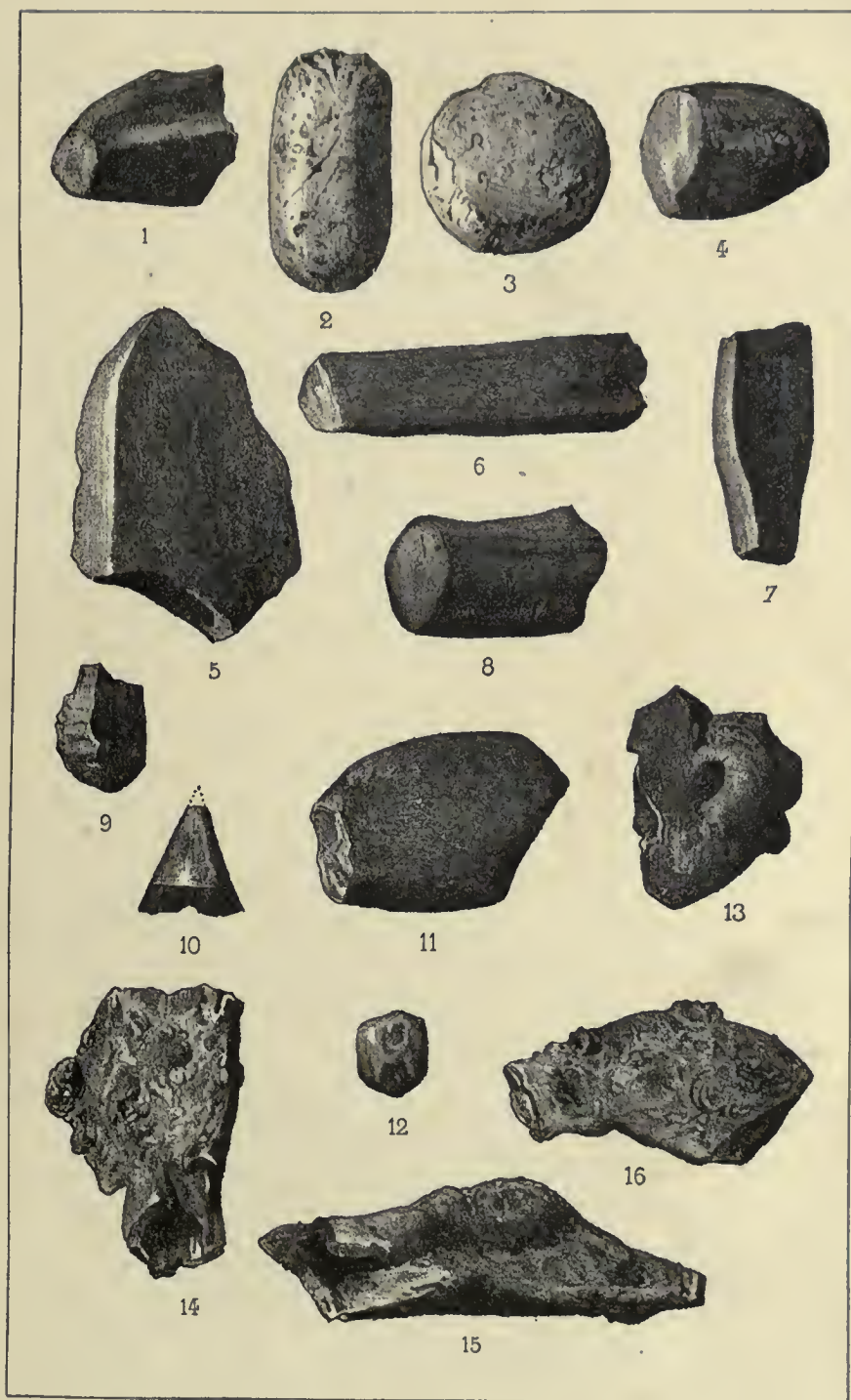


PLAN, PRIMITIVE CONSTRUCTIONS.

Pl. XIV. No. 12. Small portions of brick cut in the form of dice, 0 m. 02 c. in breadth, similar to those already described so frequently.

Five fragments of Gallo-Roman pottery in black and in yellow paste.

The upper portion of a large Celtic vase, in a brown paste, straight neck, and measuring 0 m. 32 c. across the rim.



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Pl. XIV. No. 13. Handle of a vase in brown paste.

Several other fragments of Celtic pottery in brown paste.

A small vase in granite, 0 m. 12 c. in diameter, similar to those we found afterwards in the dolmen of Mané er Gragueux and in the Gallo-Roman constructions of Ker-ic, near the Trinité sur Mer.

- „ „ 1. Head of a stone hammer, 0 m. 07 c. in length, in quartzite, with marks of percussion.
- „ „ 2. A broken pestle in granite, polished, 0 m. 10 c. in length.
- „ „ 3. Several projectiles in granite, from 0 m. 06 c. to 0 m. 10 c. in diameter.
- „ „ 4. Stone hammer in quartz, used at both ends, 0 m. 07 c. in length.

Pl. XV. No. 1. Globular-shaped hammer in granite, having marks of percussion, 0 m. 06 c. in breadth.

- „ „ 3. Whetstone, much worn by use, 0 m. 06 c. in length.

Pl. XIV. No. 5. Whetstone, flat, in schist, much worn by use, 0 m. 12 c. in length.

- „ „ 6. Whetstone, much worn by use, 0 m. 13 c. in length.
- „ „ 7. Whetstone, much worn by use, 0 m. 08 c. in length.

Five fragments of implements in schist.

Pl. XIV. No. 8. The middle part of a whetstone in schist, of a cylindrical form and worn by use.

- Pl. XIV. No. 9. A scraper formed of gray flint, 0 m. 04 c. in length.
- „ „ 10. Triangular arrow-head in gray flint, 0 m. 035 mm. in length.
- Thirty flint chips without any special character.
- „ „ 11. An oval-shaped tool in quartzite, broken at the ends.
- „ „ 14. A fragment of an iron weapon, having a socket, 0 m. 08 c. in length.
- „ „ 15. A fragment of a similar weapon, 0 m. 13 c. in length.
- „ „ 16. A fragment of a similar weapon, 0 m. 11 c. in length.

Nine other pieces of iron.

- Pl. XV. No. 2. An oval-shaped implement in quartzite, having marks of percussion at the extremities, 0 m. 07 c. in length.
- „ „ 4. Head of a celt-shaped implement in granite, broken and bearing marks of percussion.

THE TALUS D.

The Talus D commenced at the angle of the wall to the eastward of the constructions which we have just described, and extended in a north-easterly direction for 86 m.

This talus covered the remains of a wall, having an average breadth of 1 m. 60 c., built of dry unhewn stones. It was in a very dilapidated state, having interruptions at intervals. About half-way along the base on the south side, we came upon a rudely-constructed fireplace containing

ashes mixed with charcoal; other parcels of charcoal were found at intervals all the way along near the base.

The following objects were collected here :—

Some fragments of brick.

Part of a large celt in diorite.

Pl. XV. No. 6. A burnisher in quartzite, shaped like a truncated cone, and having one part flattened by rubbing, 0 m. 05 c. in length.

„ „ 7. Several projectiles in granite, from 0 m. 08 c. to 0 m. 10 c. in diameter.

„ „ 5. Small celt in fibrolite, 0 m. 035 mm. in length.

THE FIELD OF LANN ER HOUAREM.

TRANSVERSE MENHIR AND CONSTRUCTIONS.

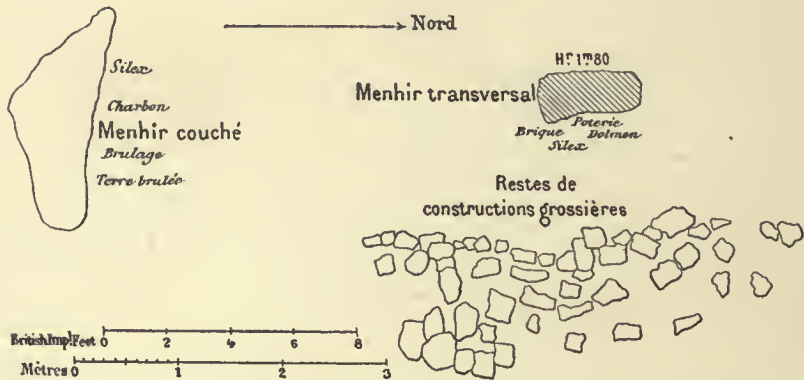
We then passed over to the neighbouring field named in the Cadastre *Lann er Houarem*—the moorland of the warren.

In this field, at a distance of 116 m. east from the end of the Talus D, is a menhir standing erect, 1 m. 80 c. in height, and set transversely to the direction of the alignments. Having excavated round the base, we came, at a distance of 1 m. from the east side, upon the ruins of a construction in unhewn dry-built stones. This is the third time we have seen constructions in the vicinity of a menhir set transversely to the alignments.

Near the base of the menhir, at a depth of 0 m. 70 c., we came upon a large quantity of charcoal, some fragments of brick, two fragments of Celtic pottery, and two flint chips.

At a distance of 6 m. to the north-east, we found, on the surface of the ground, several flint chips and a small polished celt in fibrolite.

The excavations we made round an overthrown menhir, at 4 m. to the south, gave no results save a little charcoal and a flint chip.



CONSTRUCTIONS AT THE TRANSVERSE MENHIR IN LANN ER HOUAREM.

In this field we remark that there are more than a hundred menhirs, of small size, overthrown and lying on the ground; three only remain standing erect. The overthrown menhirs are, in some places, displaced into groups, thus giving the alignments a confused appearance. Many of the menhirs have been built into the modern boundary walls of the adjoining fields. Deeming it useless to continue our researches amongst these menhirs, we proceeded to examine a talus situated in the adjoining field to the north.

THE FIELD OF PARC CHELIBERT.

THE TALUS E.

This field is also a piece of moorland, named in the Cadastre *Parc Chelibert*, and separated on the south from *Parc er Houarem* by a modern stone wall.

In the middle part of the field a talus, indicated in the plan by the letter E, runs across it northwards, forming a diagonal with the alignments. This talus, having an average breadth of 3 m. and a length of 62 m., commences at the modern wall in the south side of the field, and terminates at the north, where it is cut by the servitude road leading to the village of Rosnual. An interruption occurs near the north end, 2 m. in width. The construction of this talus differs from those previously described in its being formed principally of earth which supported a range of large stones, some of which measured a metre in cube and others even more.

List of objects collected along this talus :—

A good deal of charcoal all along the talus on both sides, but principally near a menhir in the southern part overthrown lengthways in the talus, several fragments of roofing-tiles (*tegulæ et imbrices*).

Pl. XV. No. 13. A twisted handle of a Gallo-Roman vase, in a yellow paste, 0 m. 06 c. in length.

A large fragment of a Gallo-Roman vase, having a straight neck, in yellow-red paste.

KERMARIO.

Bottom and other fragments of Gallo-Roman vases, in fine black lustrous ware.

Bottom and similar fragments in yellow paste.

Rims and other fragments of similar ware, in red, gray, and brown paste.

Neck of an earthenware water bottle, in reddish-yellow paste, Gallo-Roman.

Fragments of pottery in a black paste coated with plumbago, also Gallo-Roman.

A fragment of coarse brown Celtic pottery.

Pl. XV. Nos. 9, 11. Two scrapers in gray flint.

„ „ 10. Piercer or boring tool in yellow flint, 0 m. 03 c. in length.

Several nodules and twenty flint chips.

„ „ 12. Thirty projectiles in granite, from 0 m. 07 c. to 0 m. 11 c. in diameter.

„ „ 14. Twelve sling-stones in granite, from 0 m. 04 c. to 0 m. 05 c. in length.

Two rubbing-stones in granite, faces flat and polished.

Stone hammer in granite.

Two pieces of whetstones in schist.

Flat, oval-shaped tool in schist.



To face page 74.

THE FIELD OF LANN ER GOAYEUX.

THE TALUS F.

So soon as the excavations of the Talus E were finished, we proceeded to examine a large piece of moorland south of Kerloquet, named in the Cadastre Lann er Goayeux (moorland of the streamlets).

In the northern part of this field the remains of two taluses were visible, running nearly east and west, and separated by an interval of about 4 m. in width. Having excavated the first of these, which is situated in the east portion of the field, we found that it covered a wall constructed in a very irregular fashion with rough unhewn stones and earth. Its breadth varied from 1 m. 20 c. to 2 m., with a length of 27 m.

List of objects collected along the Talus F :—

Ashes mixed with charcoal, at intervals.

Two fragments of brick.

Fragment of a large coarse vase, in a yellow paste.

Seven fragments in yellowish-red paste, and two in coarse red paste.

Nodule of flint from which chips had been struck off.

Several flint chips.

A broken stone hammer, in quartz.

Several projectiles in granite, from 0 m. 07 c. to 0 m. 11 c. in diameter.

Pl. XV. No. 15. Fragment of a whetstone, worn by use on three sides and cut in a chisel point at one end, 0 m. 06 c. in length.

Pl. XV. No. 16. Whetstone in granite, om. 15c. in length;
used on two faces.

„ „ 17. Part of a whetstone, om. 07c. in length,
with one face worn away; concave,
and similar to those we found in the
dolmens of Kermario and of Grah-tri-
men, which may possibly have been
used for sharpening stone celts.

The second talus was of similar dimensions to the one just described. We did not deem it worth excavating. On looking over the field we remarked some faint indications of substructions, but their appearance was not sufficiently promising to induce us to continue excavating. Our researches amongst the menhirs were here brought to a close.

V.

SUMMARY & CONCLUSIONS.

SUMMARY & CONCLUSIONS.

HAVING described, in the preceding chapters, the results obtained from our excavations amongst the alignments of Kermario, we now proceed to take a retrospective view of our proceedings, and to draw conclusions from the evidence obtained from these operations:—(1) In regard to the defensive works and the primitive constructions; (2) In regard to the age and destination of the alignments;—concluding with a few remarks as to the correlation of the alignments, cromlechs and dolmens. Where documentary evidence is wanting, that supplied by sepulchral and ancient monuments is accepted by the Courts of Law; and it is from the evidence afforded by the exploration of such monuments that the archæologist will, always and everywhere, obtain his most reliable conclusions.

It will be sufficiently obvious, from the details given in the preceding chapters, that between Kermario and Kerloquet we have a long stretch of defensive works erected by the Celts at a period anterior to the Roman invasion; that the Romans on their arrival had occupied some of these, and in the more advantageous positions had constructed other works of greater solidity.

From the rudeness of construction, from the objects found, and from their containing no traces of the Romans, the following works may be considered as Celtic—viz. the long

talus extending to the west in the field Pen Mesqueu, those in the north and in the south parts of the field Lann Mané Kermario, the Talus ABD in the field Lann er Velein, and the Talus F in the field Lann er Goayeux. It would seem probable that the Talus B had once extended on to the Talus F, and that this portion had been subsequently destroyed by the cultivation of the intervening fields.

The defensive works of better construction, containing Roman objects, and which we conclude to be of Roman origin, are the talus in the west part of Lann Mané Kermario, the camp in the field of the Little Métairie, the Talus C in the field of Lann er Velein, and the Talus E in the field Parc Chelibert.

The following quotations may perhaps assist us in drawing conclusions as to these works:—

According to Polybius, the Romans always followed the excellent maxim, which often proved to be their safeguard, of intrenching themselves in their camps, even when they had only to pass a single night in them. Thence the expression so common in the Latin authors,—*primis castris, secundis castris*,—expressing the order of their day's march.

The temporary camps were named *subita, temporanea, tumultuaria castra*, whilst those in which they had to pass some time were called *stativa castra*.

As soon as a good position was found, where the soldier, safe from surprise, could procure wood, forage, and water, the enceinte of the camp was traced, and the intrenchments were thrown up, their solidity being regulated by the time to be spent there.

The intrenchment (*vallum*) of the temporary camp had barely three feet of height; it was formed of turf, behind which was thrown the earth dug from the ditch, whose depth varied from six to seven feet, by eight to nine in width.

Stakes of four and a half feet in length (*sudes*), which the soldiers carried with them on the march, formed, when united with flexible branches, a palisade on the top of the rampart.

On applying the above quotations, may we not be permitted to consider the Talus E in the field Parc Chelibert as the remains of what had once been a Roman temporary camp, probably constructed on previous Celtic works? Water and wood were there at hand, and a position safe from surprise. A stream runs past Kerloquet, and although this region is now rather bare of wood, we have the testimony of ancient writers that all the coast of Brittany was then well wooded.

We come to a similar conclusion for the Talus C in the field Lann er Velein. These two camps may possibly date from the first arrival of the Romans in the country; unfortunately we have not sufficient evidence to fix an exact date.

Advancing westward to the field of the Little Métairie, a more dominant position, we there have a small camp more solidly constructed, possessing cooking-houses, roofed in with tiles, built along the walls, and which, we may conclude, had been occupied by the Roman soldiery for some length of time.

In the walls covered by the talus in the west part of the field Lann Mané Kermario, we may recognise the remains of a similar small camp. The menhirs built into the walls of these camps lead us to remark that the Romans must have been cognisant of the alignments of Carnac, and had no scruples in utilising them; and yet their historians, including even the great soldier and skilful writer, "*divus Julius*," make no distinct mention of them.*

* La Tour d'Auvergne, in his *Origines Celtiques*, says, "Tacite appelle ces sortes de monuments Druidiques 'rudes et informes saxorum compages.'"

But in the enumerations given in the preceding chapters, we have constantly seen numerous objects called prehistoric associated with Roman remains. Now, it cannot be supposed that the Roman conqueror made use of such objects, or that he would have encumbered his camp with them. May we not look for the explanation of this strange medley in this conclusion, similar to that which was drawn from the results of our researches at the Bossenno, that after the fall of the Roman Empire, when, as the best accredited writers state, the civilisation brought by it had disappeared, and was replaced by a state of complete barbarism, and when the country was subject to frequent invasions, the inhabitants had repeatedly taken refuge in these defensive works, and thus left their traces in them? Viewed in this light, such remains become evidence of the correctness of the statements made by these writers, and the millstone built into the upper course of the angle of the wall in Lann Mané Kermario becomes an indication that, threatened by the approach of the enemy, the wall, which may then have been some centuries old, had been repaired with the first materials that came to hand.

We borrow from De Caumont* a few quotations which bear on the Roman works along the seaboard of Armorica.†

The Notice of the Dignitaries of the Empire mentions that the general who commanded the troops guarding the Armorican coast (*Dux tractus Armoricani et Nervicani*) had under his orders ten cohorts, having their depôts in ten different places. These furnished detachments for guarding the defensive works echeloned along the coast; and these

* *Architecture civile et militaire* by M. A. de Caumont, pp. 377-8. Troisième édition. Caen: Le Blanc Hardel, 1869.

† Armorica is evidently the Celtic words Latinised,—*ar mör ik*, the little sea; and Morbihan has the same signification, from *mör* sea, and *bihan*, little.

works must have been numerous for the effectual protection of a line so extended.

A historian of the fifth century, Paulus Orosius, states positively that these works were all the more numerous as they were of no great size and cost but little to construct.

In an edict issued to Nomus, *magister officiorum*, Theodosius and Valentinian order that officer to render every year an exact report of the number and state of the camps and frontier works (*clausuræ*), similar to the return which he had made of the number of soldiers. This demand indicates the multiplicity of these defensive works.*

In another edict issued on the same day and to the same officer, the two emperors above mentioned order the commandants on the frontiers not to absent themselves from the country entrusted to their care, and to inspect and repair the defensive works.†

We shall describe in a succeeding work some of the numerous remains of Roman defensive works, which are situated at short distances from each other along the coast between Carnac and Locmariaquer.

The primitive constructions near the head of the alignments in the west part of the field Lann Mané Kermario gave us the impression, as we have already stated, of having been made in haste and in the rudest manner.

* Quemadmodum se militum numerus habet castrorumque ac *clausurarum* cura procedat, quotannis significare nobis propria suggestione procuret. (*Cod. Justinian.* lib. i. tit. xxxi. De officio magistri officiorum. Edition in fol., 1618, p. 290.)

† Duces limitum, et præcipue quibus gentes quæ maxime cavendæ sunt, appropinquant, in ipsis limitibus commorari et milites ad proprium redigere numerum imminentibus magisteriis potestatibus diuturnisque eorum exercitationibus inhærere præcipimus. *Castrorum quin etiam refectionis illustrationisque curam habeant*, etc. etc. (*Cod. Justin.* tit. xlvi. lib. iv.)

The fireplace in one of the divisions, with its charcoal and ashes surrounded by fragments of pottery, indicates that this division had been used as a place for preparing food. Of food remains, however, we remark in the adjoining divisions only oyster-shells and a few horse-teeth; but it is to be remembered that we are here upon a granite soil, which, from its porous nature, would tend to disintegrate bones rapidly.

The small size of some of the other buildings would seem to indicate their having served as a shelter for small animals.

On considering the numerous objects found in these constructions, we find horse-bells of bronze and Roman pottery associated with stone weapons and Celtic pottery. From this we come again to the conclusion, which we are unavoidably forced to repeat, that the inhabitants of the country, when pressed by some invasion in the troublous times succeeding the fall of the Empire, had there found a refuge for themselves and their animals. We come to a similar conclusion for the other primitive constructions in this field, and for those near the windmill of Kermaux.

How terrible these repeated invasions had been to the Bretons, may be realised from the fact that even during the present century, the petition, "A furore Normanorum libera nos Domine," formed part of the Litany sung in the churches.

It may at first sight seem difficult to admit that a nation like the Veneti should have fallen into such a state of barbarism, seeing that they were a highly organised and commercial people,* possessing even before the Roman invasion the arts

* Hujus civitatis est longe amplissima auctoritas omnis oræ maritimæ regionum earum, quod et naves habent Veneti plurimas, quibus in Britanniam navigare consuerunt, et scientia atque non nauticarum rerum reliquos antecedunt. (*De Bello Gallico*, lib. iii. c. viii.)

of enamelling, soldering, and working in metals; the knowledge of constructing iron-fastened vessels built more solidly than the Roman ones,* and furnished with chain cables and anchors in iron. But we have not to go far to see the state to which misery reduces a people, and that arts and inventions may be disused and forgotten, even by the most civilised people. In England chain cables for ships were only introduced in the end of the last century, and in France during the commencement of the present one. Up to 1834 every vessel of the fleet of the East India Company carried a hemp cable, and this was considered the last and best resource, which might hold after the chain cables had parted. Have we not at the present time even in the highest period of our civilisation, in the islands of the Hebrides,† and in some parts of Ireland, people existing in constructions of the most primitive description, and making and using implements and utensils of the most archaic type?

We now come to consider the alignments, under the four points of view—1, of their character; 2, of their age; 3, of their destination as sepulchral monuments; 4, of their correlation with the cromlechs and dolmens.

The alignments of Kermario consist of ten rows of undressed stones called menhirs.

These menhirs are composed of a close-grained granite, of a grayish colour, which changes into red when exposed to the action of a strong fire. This indicates the presence of iron; and we find it confirmed by the action of a compass, the needle of which, placed on them, becomes sluggish.

* *De Bello Gallico*, lib. iii. c. xiii. Ancoræ pro funibus ferreis catenis, revinctæ.

† *The Past in the Present: What is Civilisation?* by Arthur Mitchell M.D., LL.D. Douglas: Edinburgh, 1880.

Having frequently remarked that the numerous visitors who come to Carnac, expressed a belief, which we could never entertain, viz. that the menhirs are of a granite not found in the country, and had been brought from a distance, we asked several contractors and stone-masons for their opinion. Their reply was, "These are the stones of the country, for the grain of the granite is that of this district." The menhir at Plouhinec, 5 metres in height, still standing erect, and the huge overthrown menhir of Locmariaquer, form exceptions; they are of a different grain, having veins of quartz interspersed.

The greater part of the menhirs have the cubic and quadrangular forms natural to the cleavage of granitic rocks, others, which are of a fusiform or pear-like shape, are sometimes set up as if balanced on their pointed end, and would seem to be in some cases boulders, in others, rolled stones from the sea-coast, where similar ones may still be seen. It has been said that the monuments of all peoples were intended to convey a lasting impression of power and force, and some archæologists have seen in these fusiform menhirs the expression of an allegorical lesson.

In using the term sea-coast, we must not fall into the error of considering the line of coast of the present time as coinciding with that of the Roman occupation. The proofs of this are visible to any one who examines the seaboard, where it is evident that there has been a considerable subsidence from the mouth of the Loire to Finisterre. What is now the Bay of Quiberon must then have been very nearly all dry land, if not entirely so. We find the proof of this statement (1) on the Quiberon side of the bay, by the alignment of menhirs there extending below high-water mark; (2), on the Carnac side, by two Gallo-Roman potter's furnaces, now also within high-water mark; (3), in the bay itself, by the

trunks of trees dragged up by the fishermen. We shall refer to this subsidence of the coast in another work, when we come to speak of the bay of Saint Philibert. Dr. Closmadeuc has already proved it for the island *El Lanic*, in the bay of the Morbihan, where two cromlechs are in like manner covered by the sea.

In the alignments of Menec, Kermario, and Kerlescant, we remark that the largest menhirs are in the head of the alignments, and that they become less as they extend to the eastward. This diminution is irregular, being broken at intervals by stones of a greater height. The peasants, when telling you the legend of the soldiers of Saint Cornély, call one of these, situated in the alignments of Menec, the Colonel, another on the adjacent height the General.

Besides the three great alignments of Menec, Kermario, and Kerlescant, others of less importance are to be seen scattered over the country in a zone, which extends over a large territory, viz. from near the Trinité sur Mer to the environs of Auray, Landevant, and Plouhinec.

Having finished these summary remarks as to the composition of the alignments, we proceed to examine the evidence given by our excavations as to their age. This is a point on which there are widely different opinions; for whilst some writers assign the origin of these stones to some vague period amongst fabulous ages, others more precisely place their date about the sixth century.

In the preceding chapters we have frequently mentioned our having discovered menhirs belonging to the alignments built into walls, which are obviously of early Roman origin. In this fact alone we have the proof that the alignments are older than the walls, and consequently anterior to the Roman

occupation. But the evidence of their being much older comes out more decisively from the data furnished by the eleventh menhir of the tenth alignment. I therefore specially beg the attention of the reader to this overthrown monolith.*

We find in the deep grooves and weather-markings on the south end of this menhir the proof of the following statements:—(1) That it had stood erect at a certain period; (2) that that period must have lasted for several centuries; (3) that during these centuries the southern extremity of the stone was uppermost; (4) that it had been overthrown from north to south; (5) that the time required to produce these markings gives an approximate date for the alignments. It is obvious that these deep groovings had been produced by an exposure for centuries to atmospheric action. It is equally obvious that these grooves, which exist on the south end alone, could not have been produced during the period of its position on its side lengthways and covered with earth. The conclusion therefore is inevitable, that it must have stood erect for many centuries before the construction of the west wall of the Roman camp, and that period, if we could ascertain it, would indicate the date of the alignments.

The grooved weather-markings on the summit of many of the menhirs standing erect in the alignments are more or less deep, according to the grain of the stone. For, unfortunately, the granite of which they are composed is not all homogeneous. If it were homogeneous, the depth of the markings would serve in some measure as a basis for calculating their age. It is, however, impossible by this procedure to arrive at any exact result. We find that this impossibility is strikingly illustrated by the following facts which have come under our observation.

* See p. 54, *antea*.

Not far from the alignments of Kermario is a cross formed of a coarse-grained granite, erected on the spot where M. René le Baron, rector of Carnac, was killed during the Revolution. This cross was erected in the beginning of the present century, and already weather-markings are visible on its surface.

On the other hand, on examining the parish church and steeple of Carnac, built in 1639, from a granite of a finer grain, closely resembling that of the greater part of the alignments, we find neither grooves nor weather-markings.*

Although it may be impossible at present and by this mode of reasoning to obtain a precise date, the fact is nevertheless established that the alignments date from an epoch long anterior to the Roman invasion. This does not imply, however, that menhirs were not erected here during the Roman occupation. At the Bossenno, for instance, there were, as we have already stated, fragments of Roman roofing-tiles and pottery amongst the stones which served to prop up the menhirs.

But there can be nothing wonderful in that if we are to credit the following statements, which we give on the authority of several authors who mention that menhirs were erected at a much more recent date :—

(1.) In Ireland for stone worship in the time of Saint Patrick, that is during the fifth century.†

(2.) In Scotland, at Largs, a menhir commemorative of a battle, said to have been erected in the thirteenth century.‡

* There is a tradition in the country that the menhirs were utilised for the construction.

† *Les vies de tous les Saints de France*, par M. Ch. Barthelemy, t. v. chap. lxii. p. 829.

‡ *Rude Stone Monuments*, by Jas. Fergusson, p. 58. London, 1872. Murray.

Even towards the middle of the sixteenth century, according to Olaus Magnus, Archbishop of Upsal, who wrote about 1555, menhirs were erected by the Swedes to indicate the places of combats or of family sepultures, and to perpetuate the memory of victories gained on or near the place of their erection.*

Another question arises from the consideration of the grooved weather-markings on the menhirs: How long will these granite monoliths last?

The hand of man has certainly destroyed an immense number, but other causes have also contributed to their destruction. The droppings left by birds on their summit, for instance, are dissolved by rain and increase the chemical action, while after the grooves have attained a sufficient depth, small stones and gravel are blown in by the furious westerly gales and remain fixed. Under the effect of frost and sunshine, these, acting as wedges, eventually split up the menhirs.† On many of the menhirs this process may be seen going on; we give as an illustration of this the sixth menhir of the second alignment.

The names of the three great alignments of Carnac, in all probability transmitted from age to age since a very remote period, may be considered (without attaching great importance thereto) as indicating a sepulchral destination. These are named *Kerlescant*, corrupted probably from *Kerlosquet* (burnt town or town of burning), by allusion to cremation. *Kermario* (village of the dead), and le Menec (the place of the stones).

It is the same for analogous monuments in other parts of

* *Historia de gentibus septentrionalibus*, pp. 8 and 9 of the abridged edition, published at Antwerp in 1692.

† Diodorus Siculus mentions the furious north and south-west winds in Gaul. Lib. v. c. xxvi.

the country; thus, near the town of Dol, there is a menhir situated in a field, called the stone of the field of lamentations. In Auvergne the menhirs are called *Plourouses*. In Finisterre there are alignments called *Carnoel* (ossuary).

In an indirect way also the legends attached to the alignments bring their evidence to bear in favour of this destination. According to Cayot Délandre,* the remarkable alignments, not only of Carnac, but also of Erdeven,



SIXTH MENHIR OF SECOND ALIGNMENT.

Plouhenec, and Languedic, are all commonly called the Soldiers of Saint Cornély, and are situated in the neighbourhood of churches dedicated to that saint. In fact, the peasants relate to all who come there that these stones were once an army of pagan invaders thus metamorphosed by a miracle wrought by Saint Cornély. Does not this story suggest the idea of battles and of death followed by sepulture?

Another legend giving the name of Cæsar's Camp to the

* *Le Morbihan son histoire et ses monuments*, par Cayot Délandre, p. 525, Vannes, 1847. Cauderan.

alignments of Kermario, where, as has been already told, we have discovered so many vestiges of Roman defensive works, affords a striking proof of the persistency with which traditions are handed down from one generation to another by the Bretons, and gives rise to the thought that we may find in all their other legends, as in this one, if we can decipher them, the echo of some long-forgotten event.

The orientation of the alignments, varying from east to E.S.E., that is in the line of the equinox and of the solstices, is held to indicate their having been places of assembly for sun-worship. According to Cambry,* the celebrated La Tour d'Auvergne states, in his *Origines Celtiques*, "that the constant tradition of the Bretons was that the alignments were the principal temple of the Druids, and that Armorica was always regarded as their privileged land."

But this destination as a place of assembly and for sun-worship in no way interferes with their being sepulchral monuments, for are not our parish churches still situated in the midst of cemeteries? To this day certain ceremonies akin to phallic worship are performed on the night of the full moon at the base of menhirs in some parts of Brittany. On the summit of some of these menhirs we have remarked a cross either in wood or in stone, probably placed there by the clergy to hinder idolatrous practices.

Ashes, charcoal, flint chips, pottery, and other objects, are the invariable accompaniments in the dolmens of the rites of sepulture, whether by inhumation or by cremation; and it has been clearly shown by the numerous excavations of the Polymathic Society of the Morbihan, that the dolmens, whether covered with a tumulus or otherwise, are sepulchral monuments. Now we have seen in the preceding enumera-

* *Monuments Celtiques*, par M. Cambry, p. 266. Paris, 1805.

tions that we have found all of these objects at the base of the menhirs; we have seen that the names given to the menhirs and handed down from a remote period are suggestive of sepulture, and their orientation also is the same as that of the dolmens. We may thus conclude regarding the destination of the alignments that they may also have been erected as sepulchral monuments.*

Whether isolated or in small groups, some of the menhirs may well be considered as commemorative monuments erected on a battlefield, but we are prevented from regarding these as belonging to one event by the great extent of the alignments. The most that could be assigned would be a battle or series of combats sustained on the advantageous positions occupied, as we have already stated, by some of the alignments.

We come now to examine the correlation existing between the alignments, cromlechs, and dolmens.

In the head of each of the alignments of Menec and Kerlescant the large menhirs form a cromlech. These cromlechs, from their forming an integral part of the alignment,

* This conclusion, drawn from different inferences, has been already stated by M. Rozenzweig, the learned archiviste of the Morbihan, in the following passage, extracted from a paper read by him before the meeting of learned societies at the Sorbonne in 1868:—"Pour nous, dit il, les menhirs quelles que soient leurs dimensions, qu' ils soient isolés ou groupés, disposés en cercles (cromlechs) ou en alignements, sont des monuments funéraires. Pour essayer le démontrer, etudions, comme pour les dolmens, les différentes faces de la question. Les sculptures sur les menhirs sont rares; nous en connaissons cependant: le menhir de Kermarquer en Moustoir-ac porte en relief deux petites tiges recourbées comme des houlettes; sur un menhir de la commune de Crach on aperçoit des arcs de cercles concentriques traversés par une ligne verticale. Or si l'on rapporte ces figures de celles des dolmens, l'analogie est frappante."

and from their stones being of the same composition and character, must necessarily be regarded as having the same destination, with this distinction, perhaps, that they may have been reserved for a particular class; and we see, on again referring to Olaus Magnus, that in Scandinavia the cromlech represented a family tomb.* Do we not still see, in our cemeteries, parts reserved for the clergy, mausoleums for the wealthy, and the graves of the poorer classes arranged in rows like the menhirs in the alignments?

From Erdeven to the Trinité sur Mer numerous dolmens, flanking both sides of the alignments, continue through the territory round Locmariaquer and along the peninsula of Rhuys. One point in regard to these merits attention, viz. that they are generally accompanied by menhirs even when isolated from the alignments.

Many are covered by tumuli or cairns, others are uncovered; everywhere they have been either explored by antiquaries or destroyed for the purpose of obtaining building

* This author, in the 16th chapter 1st book, speaking of the erection of megalithic monuments by the Goths and Swedes, his contemporaries, mentions some interesting facts, which are so allied to our subject that we may be permitted to quote from the abridged edition in the chapter entitled "De bellicis Gothorum obelescis, et erectis saxis."—

"Veterum Gothorum ac Sueonum antiquissimus mos erat, ut ubi acriores in campis seu montibus instituissent et perfecissent pugnas, illic erectos lapides quasi Ægyptiacas pyramides collocare soliti sint. Sed hæ pyramides seu columnæ, apud Helsingos plures quam alibi reperiuntur in aquilone. Obelisci vero, seu sublimia saxa viribus gigantum et pugilum erecta, nullibi frequentius, quàm apud Ostrogothos, et Vestrogothos, ac superiores Sueones in biviiis seu triviis conspiciuntur, atque etiam in vastis solitudinibus. Habent itaque hæc in plerisque locis erecta, longitudinem X vel XV XX aut XXX, et amplius, ac latitudinem quatuor, vel sex pedes, mirabili situ, sed mirabili ordine, ac mirabilissimo caractere, ob plurimas rationes collocata; literato, rectoque, et longo ordine videlicet pugilum certamina, quadrato turmas bellantium, et spherico familiarum [*sic*] designantia sepulturas: ac cuneato equestrium, ac pedestrium acies ibidem, vel propè fortunatius triumphasse."

materials; so that there now remain in all this region only one or two tumuli which seem to cover intact dolmens.

The enormous size of the covering stones in the dolmens of Locmariaker and in many others gives rise to feelings of wonder as to how such ponderous blocks could have been handled, and the huge tumuli which cover the dolmen there and on the Mont St. Michel at Carnac are works of great labour which come under the same category as the alignments.

The names given to the dolmens are also, in some places, significant of sepulture. Amongst others, we cite—

1. An "*allée couverte*," with a menhir close to it, near the village of Net in the Commune of Saint Gildas de Rhuys, in a field called *Clos er Bé*—The Field of the Tomb.

2. Between the villages of Bod er Barz and Gouvello in the Commune of Cleguerec, a road called *Hent er Bé*—the Road of the Tomb. A field on the side of this road is called *Parc er Bé*—The Field of the Tomb, and contains the ruins of an *allée couverte* 12 metres in length.

3. In the Commune of Langoélan, ruins of a dolmen on the summit of a mamelon situated in a moorland which has been called, from time immemorial, *Lann en Danl vien* (moorland of the stone table)—registered in the Cadastre as *Lann en Dolven* (the moorland of the dolmen). This proves that the name *Dolmen* given to these monuments is not a recent invention, as some writers have tried to make out.

4. In the Commune of Languedic, a village called *Kernec* (the place of, or where there is, a cairn or tumulus). Near this village is a mound of considerable height, formed of numerous small stones—in fact a cairn. The same etymology applies for Carnac, where we have the cairn on the Mont St. Michel.

5. Near the village of Belz, a large dolmen in ruins, quite close to an old manor, called *Ker lutu* (the village of ashes).

In the Morbihan the orientation of the dolmens—a general

rule which has only two exceptions—is to the east, the same as that of the alignments. In other countries, however, this rule does not obtain, for they are found facing in all directions. As we have already seen for the menhirs that very few are ornamented with sculptures, so it is with the dolmens.

The exceptions to this general rule are to be found, in this region, in the dolmen at Kercado, at Keriaval, and in some dolmens near Locmariaquer. In some cases the sculptured marks continue round the support and between the support and its covering stone, thereby proving that these marks had been executed before the erection of the monument; in others they have been supposed to have been done afterwards, and that a fresh marking was added for each successive sepulture.

These sculpturings are of the rudest kind, representing concentric figures, zigzag lines, cup-markings, and stone axes.

It has been held by some archæologists that these sculpturings could not have been cut without the use of iron tools, but others, however, have of late years succeeded in reproducing similar markings on granite slabs, using solely stone implements, and in doing so they found that diorite and other such tough stones cut the granite better than flint. This corresponds with the practice of the stone-cutters of the present time, whose steel tools for cutting granite are of a much softer temper than those they use for cutting sandstone.

The great sculptured stone of Montezuma in Mexico, a cast of which is in the museum of the Louvre, is a striking proof of the extent to which granite can be sculptured with stone implements. Gama, in his work describing this stone, states that Montezuma II., being desirous of augmenting the worship of his false gods and of perpetuating his memory, ordered a sacrificial or commemorative stone (*ara*) of large size to be made. This stone was an enormous block discovered at Aculco. Ten



GREAT SCULPTURED STONE OF MONTEZUMA.

thousand Indians were employed in transporting it to the city of Mexico, where it was sculptured by thirty workmen with stone axes (*con picos de pedernal*). These stone axes would probably be of jade, for which and other tough stones the word *pedernal* is used, more frequently than for flint.*

* "Moctheozoma Segundo, deosose de aumentar el culto de sus falsos dioses, y de perpetuar su memoria como su antecesor Ahuitzotl, mandó fabricar una ara para el templo mayor de Mexico, que fuese mayor dos codos, y una braza mas ancha de la que servia para el sacrificio ordinario. Encontrose el pedrón de que debia construirse en Aculco, adelante de Ayotzinco. Para sacarla al campo y poderla labrar, se ocuparon diez mil indios. Treinta oficiales con picos de pedernal, concluyeron en breve la labor á quienes mantuvieron los de Chalco."—*Descripcion Historica y Cronologica*, par Don Antonio de Leon y Gama, p. 112. Secunda editio. Mexico, 1832. Alejandro Valdéz.

We are indebted to M. Bofan, antiquaire, Rue Sommerard, Paris, for drawing our attention to this curious fact and for the use of Gama's work.

As a short summary of the different objects found in the dolmens, we mention human bones incinerated and not incinerated, flint chips, flakes, scrapers, knives, and axes, polished celts, and other stone implements or weapons, objects in gold and bronze and in iron. Various kinds of pottery, some of which would seem to have been destined for funeral rites, others which are certainly domestic culinary vessels resembling those still in use in Brittany; and besides these objects there have been found, and more frequently of late years, Roman coins and fine Roman pottery.

The researches of the Polymathic Society have proved that in some of the dolmens of the Morbihan the sepulture had been by cremation, in others by inhumation, and in some few cases the evidences of both rites were found in the same dolmen. Cæsar speaks of cremation, of magnificent funerals, and of the most cherished objects being thrown on the funeral pyre.* If it is not ascertained when the practice of cremation commenced, there can be no doubt about its having continued up to the introduction of Christianity; and that there had been great difficulty afterwards in weaning the people from this and from the worship of trees; stones, and fountains, is shown by the edicts against these practices. There is another edict, so late as the eleventh century, against the practice of burying at the roadsides.†

The results of the researches made in the dolmens by the

* *Funera sunt pro cultu Gallorum magnifica et sumptuosa ; omniaque quæ vivis cordi fuisse arbitrantur, in ignem inferunt etiam animalia ; ac paulo supra hanc memoriam servi et clientes, quos ab iis dilectos esse constabat, justis funeribus confectis, una cremabantur.*

† Since these lines were written, the Abbé Luco has suggested to us that this may account for the extraordinary number of crosses which one everywhere sees along the roadsides in Brittany.

Polymathic Society are to be seen in their museum at Vannes; the richness of these may be said to verify the accuracy of that part of Cæsar's description which refers to cherished objects being consigned to the tomb. Amongst these treasures we remark gold ornaments and magnificent polished stone axes in fibrolite, tremolite, diorite, and jade. These last objects give rise to a curious question, and one not yet resolved, as to where the jade came from. M. de Limur has, however, discovered some rocks in the bay of Rogheda, near Vannes, which have been pronounced to be jade.

In the Roman coins and fine red lustrous ware some archæologists see the proof of the Roman having violated the dolmen, but Mr. Fergusson has already furnished the reply to this.

Other archæologists assume that these are the proofs of Romans having been buried there. If we have been unwilling to admit that the Roman had adopted the manners or customs of the Celts during his life, we are equally unwilling to admit that after his death his sepulture took place in a Celtic tomb. Do the English in India adopt the manners and customs of the natives, or are they there buried according to native rites?

If the Roman did not adopt the manners and customs of the Celts, have we not a striking proof that some of the Gallo-Romans had adopted some part of the religion of their conquerors, in the curious altar erected by the mariners of Paris (*nautæ Parisiaci*),* now in the museum of the Hotel de Cluny, Paris.

This monument has already been frequently figured and

* *Catalogue, Musée des Thermes et de l'Hotel de Cluny*, par E. du Sommerard. Paris, 1861.

Inscriptions Gauloises, par Adolphe Pictet. Paris, 1867. Didier & Cie.

described, but it bears so closely on our subject that we offer a few remarks regarding it.* The 16th March 1710 or 1711, according to M. Dulaure, when excavating under the choir of the cathedral of Notre Dame de Paris, in order to make a tomb destined to receive the mortal remains of the archbishops of that metropolis, there were found in the excavations nine fragments of sculptured stones offering on each of their vertical faces a different subject, and accompanied with inscriptions.

Amongst these fragments the two forming the altar of Jupiter and Esus are in the best state of preservation. This altar, according to the description and drawings of M. Jorand, has a height of three feet and a half.

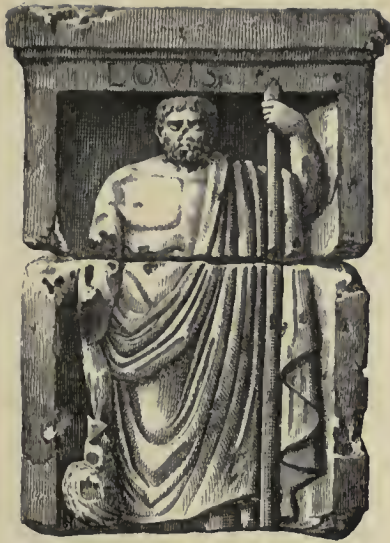
On the first face of the altar Jupiter is represented erect, holding in the left hand a javelin without a head, and having the left part of the body covered with a drapery; above the head, on the cornice, LOVIS is inscribed. M. Jorand supposes that at some later period, by an awkward piece of flattery, the initial letter I had been transformed into L, thus changing IOVIS into LOVIS.

The figure of Vulcan is represented on the second face, having a blacksmith's cap on his head, a hammer in one hand and the tongs in the other: above is the inscription VOLCANVS.

On the opposite face is the god of war of the Celts—Esus—with the right arm elevated, and holding an axe with which he is striking a tree placed before him.

The fourth face represents a bull standing in a forest and bearing three cranes, one of which is placed on his head: above is the inscription TARVOS TRIGARANVS.

* *Mémoires de la Société Royale des Antiquaires de France*. Tome quatrième, p. 502. Paris, MDCCXXIII.



GALLO-ROMAN ALTAR FOUND AT NOTRE-DAME, PARIS.

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According to M. Pictet, the legend TARVOS TRIGARANVS, in Celtic *tarw trigaran*, serves to explain the sculptured figures.

As for the seven other fragments, they are the remains of altars more or less incomplete, but on these also the names of Roman and Celtic divinities can be distinguished.

May we not infer that when Roman coins and pottery are found in a dolmen, they indicate the sepulture, not of a Roman, but of a Gallo-Roman?—and may we not also infer, that, as menhirs continued to be erected at the Bossenno until a comparatively recent period, so also dolmens may have been constructed to a period quite as late? At least there is no evidence to the contrary.

In considering, from the details given in the preceding chapters, the association of menhirs, alignments, cromlechs, and dolmens, we then come to the conclusion that these are the mutilated remains of an immense necropolis, the construction of which had extended over a long period, and must necessarily have required a great amount of organised labour and skill; but nothing is known as to the appliances used in moving some of these huge monoliths. Those used in the elevation of the obelisk in the Place de la Concord at Paris are inscribed in gold on its pedestal; but there is no record as to how or by whom a greater monolith, the huge menhir of Locmariaquer, had been erected.* M. Cayot Délandre states

* Cayot Délandre, p. 168.—“Pour qui n'a pas vu Locmariaquer il est difficile de se faire une idée de l'enormité des blocs qui forment les monuments druidiques. A quelques centaines de pas du village du Nelut, se trouve le plus colossal de tous les menhirs connus: geant de 21 metres de hauteur et de 4 metres de largeur, renversé par le foudre ou par quelque ébranlement terrestre, car je doute que la main des hommes, tout habile qu'il soit a la destruction, eut réussi à cet ouvre. Ce magnifique peulvan, ce roi de tous les monuments druidiques qui furent si nombreuse

that this menhir is 78 feet in length by 13 feet in breadth, and weighs about 240 tons.

It would seem that the alignments of Kermario had never been completed. We find the indication of this in the accumulations of menhirs lying in confused heaps in the field Pen Mesqueu, and in Lann Mané Kermario, and thus recalling the early edicts of the Church against the irregular practices of burying out of consecrated ground.

In considering the immense numbers of Celtic funeral monuments which extend along the seaboard of the Morbihan, the question naturally arises—Why are these monuments concentrated in this region? The abundance of blocks of granite in the district is at once suggested as a probable cause of this result, but we would rather look for the explanation in the Celts having chosen this region (and other people have done similarly) as a *terra sacra* or necropolis, destined to receive from generation to generation the ashes of their families. To the present time, strangers are so impressed by the manners and customs, and also by the costume of the present inhabitants of this region, all differing from the other parts, that they are at first led to mistake the women for sisters of a religious order. As an instance, I have heard even French tourists addressing Breton women as *ma sœur*. May not the custom which still prevails, of wearing ornaments embroidered on their garments, analogous to the signs sculptured on the dolmens, be regarded as a cor-

sur cette partie de littoral de l'Armorique est aujourd'hui, gisant sur le sol brisé en quatre parties séparées les unes des autres avec tant de netteté, qu'on dirait qu'elles ont été tranchées par une lame métallique, si la chose était possible. Le poids de ce colossal obélisque est estimé à plus de 250,000 kilogrammes et si sa chute est difficile à comprendre, les moyens qu'on dut employer pour son erection le sont bien davantage.

roboration of the above hypothesis; and may not the solemn gravity of their manners and customs be due to the vestiges of impressions and habits which living amidst the tombs had engendered in their ancestors?

Amongst all our excavations near Carnac, which now extend over a considerable area, and over a number of years, and in which we have everywhere found Roman remains in abundance, we have not as yet found either stele, columbarium, or funeral pit, to denote a purely Roman place of sepulture. Yet it is certain that during an occupation of four centuries,* many of these must have been constructed. Are we then to conclude that the Roman colonists had generally adopted the mode of sepulture of the Celts? Certainly not. Yet we may conclude that the Celt, whilst adopting some of the civilisation of his conquerors, had still retained more of his ancient customs. It does not even seem improbable that when delivered from the crushing yoke of the Romans, and exasperated by the weight of their long and hard servitude, the unfortunate conquered race had rushed on the tombs of their tyrants, and destroyed them utterly. That they had thoroughly destroyed the Roman stations in this region has been already seen at the Bossenno; in others more recently excavated (as will appear in a subsequent volume) we shall see the same testimony repeated.

The evil reputation which the Romans have left behind them in Brittany is also to be found in other parts of France. In the *Memoirs of the Royal Society of Antiquaries of France*, M. Monnier, correspondent of the society, speaking

* Julius Cæsar entered into Gaul nine years before the Christian era, and took nine years to conquer it. His successors maintained themselves there until Clovis drove them out after conquering Siagrius in the plains of Soissons. The period of the Roman occupation had then lasted for 541 years.

of the people of the Jura, says, "The hatred of the Romans has been transmitted from father to son so persistently, that the name of *Roman* has there become synonymous with *wicked*."

In 1817, a Mayor of the Commune of Cinquétral, having been unseated by the superior authorities, pleaded in his defence that those who denounced him were so little worthy of esteem, and were held to be so wicked, that they had always been surnamed *Romans*.*

Let us now compare Thebes, the great necropolis of the Egyptians, and the alignments of Sphinxes at Karnac, with the necropolis we have just described, and the alignments of menhirs at Carnac in Brittany; and let us also compare the pyramids which contain sepulchral chambers with the cairns which contain dolmens.

For the Egyptian monuments, the theory of the sacred cubit and the time passage, and other meteorological and astronomical theories have been promulgated. For the monuments of the Morbihan, we have the theory of the dracontium and ophiolatry, and the sun-worship, Druidical temple, and astronomical theories. In all of these there may be, for both classes of monuments, some degree of truth, but their destination still remains as sepulchral monuments.

The antiquities of Egypt possess a wide and varied archæological interest, surrounded as they are with antique arts and all the marks of a highly developed community,—arts which reflected their influence on Greece and on Rome, and through them, we know not how much, on modern society. But the antiquities of the old Celtic race have a special interest for people more nearly allied to them. Although the

* *Mémoires de la Société Royale des Antiquaires de la France*. Tome quatrième, p. 339. Paris, MDCCCXXIII.

subject may be more difficult and more obscure, we have felt its attraction, and do not grudge our labour if it should be found either to place enquirers one step nearer the truth, or to afford them any reliable facts which may stimulate future investigations.

Here we finish the conclusions drawn from the results of our researches amongst the Gallo-Roman and Celtic remains in the region round Carnac, and our remarks on such indications as have been found in evidence of the sequence of events in connection with these remarkable monuments of the Morbihan,—monuments which have been a mystery to the unlearned, a source of many theories and speculations to savants, and whose mutilated remains (though fast disappearing) still give rise to wonder how such huge monoliths could have been erected.



