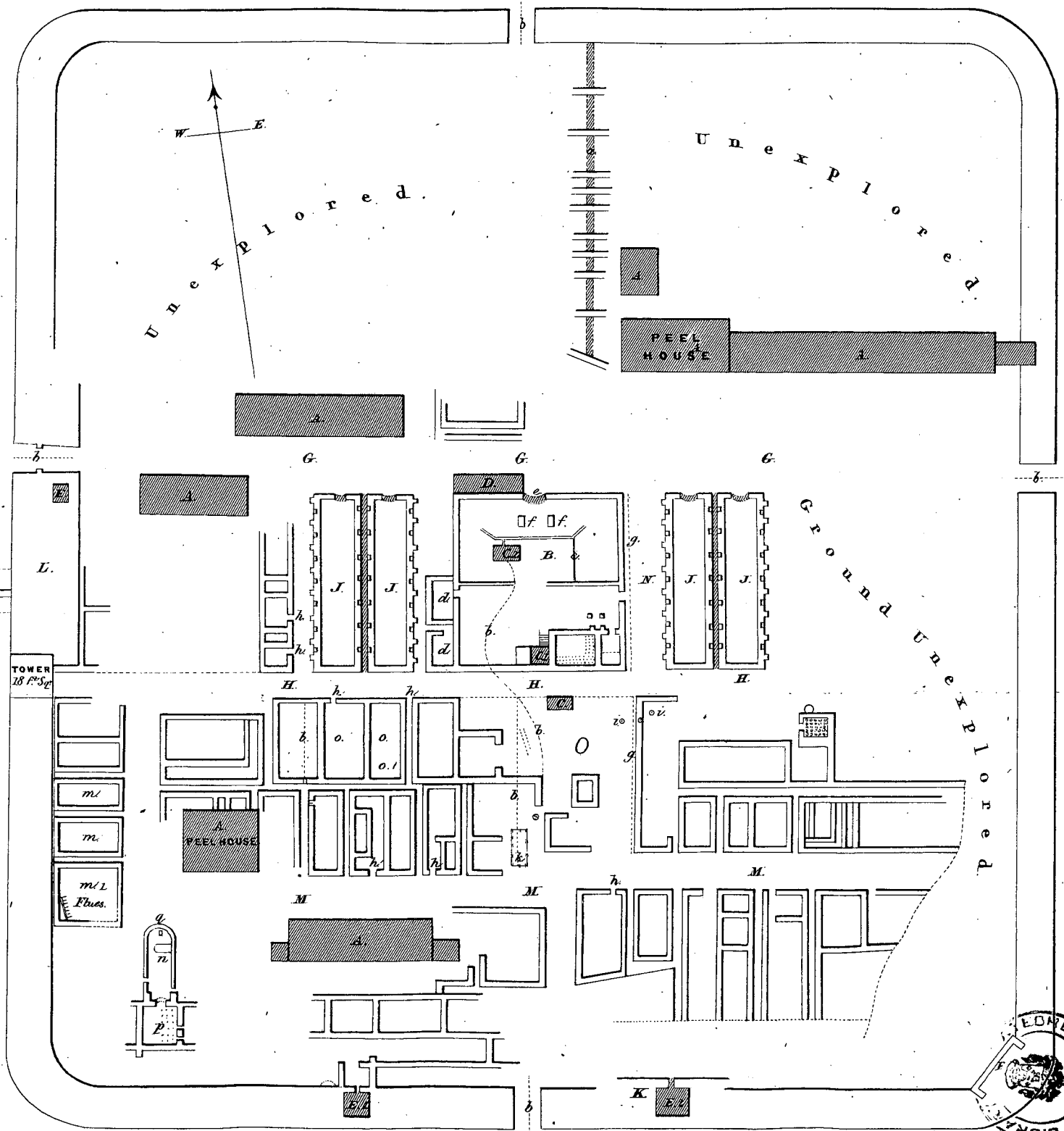
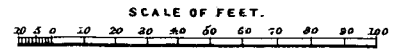


# BREMENIUM.



Geo. G. Bell.

REID LITH. N. CASTLE







AN ACCOUNT OF THE EXCAVATIONS MADE AT THE ROMAN  
STATION OF BREMENIUM DURING THE SUMMER OF 1855.

IN giving an account of the excavations which have been carried on during the last summer at BREMENIUM, at the instance of this Society, it will be necessary to revert to some facts previously ascertained.<sup>1</sup>

The Station of BREMENIUM has probably been planted on its present site in order to guard the Watling Street in its passage across the river Rede, and through the mountain pass which it traverses shortly after attaining the north bank of the river. The advantages of its position are well shown in Mr. Mac Lauchlan's very accurate and beautiful Survey of the Watling Street.<sup>2</sup> The Station stands, as he has ascertained, at an elevation of 950 feet above the sea. Its position, although considerably exposed, is yet sheltered to some extent by the still higher elevations which on every side environ it. Its capabilities of defence are great. On the north the ground rapidly sinks from it; on the west it slopes into the valley of the Sills burn; on the south it falls into the valley of the Reed, and "is rocky and strewn with large loose stones." Its eastern side is the weakest; but in ancient days this was in part defended by a marsh, which is now drained.

An earthen rampart, with a corresponding moat, has been drawn around its whole area; but on the eastern and southern sides, on account of their greater liability to attack, three lines of rampart and fosse have been formed instead of one. These are still visible, and are shewn in Mr. Mac Lauchlan's plan.

The area of the station is 4 acres 2 roods 33 poles, including the walls. Its form is nearly that of a square, rounded off as usual at the corners.

The walls form one of its peculiar features, and to them considerable attention has been paid during the recent examinations. They are formed of large well dressed freestones, strongly cemented with mortar of excellent quality. No bonding-tiles are used, as is usually the case

<sup>1</sup> See an Account of the Excavations of 1852, in the Newcastle volume of the Archaeological Institute, and "The Roman Wall," 2nd edition, p. 450.

<sup>2</sup> Map of the Watling Street from the River Swale to the Scotch Border, from a Survey made in the years 1850 and 1851, by direction of his Grace the Duke of Northumberland, with an accompanying Memoir.

in the Roman work of the Southern counties; but occasionally a layer of thin slaty stone is inserted between the ordinary courses. The eastern wall has suffered from the hand of the spoiler more than the others, but even of it distinct traces remain. The western wall stands nine or ten feet above its foundation, and in some parts eight or nine courses of the facing stones remain undisturbed. The walls bear marks of having undergone repairs at some period subsequent to their original formation. This is well shewn at the north-west angle, which was exposed by Mr. William Coulson a few years ago, stones of a larger size than the original wall being inserted near the base.

The mass of *débris* encumbering both sides of the walls renders it difficult to ascertain their exact thickness. To this point the Committee of Exploration turned their attention. The thickness of the south wall, west of the gateway, was found to be  $16\frac{1}{2}$  feet, which may be assumed to be the general thickness of the curtain wall throughout its whole circuit. There are some portions, however, which exceed even this great thickness; thus the south wall, east of the gateway, was at one place (K in the plan) found to be 20 feet, and the west wall (L), south of the gateway, 28 feet thick. The walls do not consist of solid masonry throughout their entire thickness, there being a mass of solid clay in the interior. This body of clay, which is 4 feet thick at a yard above the foundation, is nearer the inside than the outside of the wall, there being  $9\frac{1}{2}$  feet of solid masonry on the exposed side of the wall, and only 3 feet on the inner side. To what height the clay was carried there are no means of knowing. If the wall diminished in thickness as it rose, as Mr. Mac Lauchlan with much probability conjectures, the clay would probably die out. As far as the excavators could observe, it did so.

None of the Stations upon the Roman Wall are known to have walls at all approaching in thickness those of BREMENIUM. The walls of CILURNUM and AMBOGLANNA, both of them large and important forts, are only 5 feet thick; the walls of BORCOVICUS are 8 feet thick. The exposed situation of BREMENIUM—upwards of twenty miles to the north of Hadrian's Barrier—is probably the reason of the great strength of this part of the fortification.

Remains of the four gates by which the Station was entered exist; all of them, however, are nearly destroyed, except the west gate, which is perfect as far up as the springer of the arch.

An opinion has been entertained, that there were two gateways on the eastern and western sides of the Station, as is the case at AMBOGLANNA. The recent excavations have proved that this was not the case. No trace of a second gateway could be found in the western rampart at least.

Before leaving the walls, one or two additional facts must be noticed. In the thickness of the south wall, about midway between the gateway and the west angle of the fort, a small chamber (E, 1) was found. Its length from east to west is 8 feet 2 inches, and its breadth 7 feet 8 inches. It is entered by a door from the inside of the camp. The threshold is much worn, but the doorway has been built up before the abandonment of the Station. The walls of this chamber are standing in one place 9 feet 6 inches high, and, up to nearly the top of the existing remains, are formed of peculiarly massive blocks of stone, well fitted together. The chamber is not exactly in the middle of the wall, a thickness of 5 feet being left on the outer or exposed side of it, and 3 feet only on the inner. The upper courses of the walls of the chamber consist of stones of the ordinary size and character. The use of this cavity in the wall can only be matter of conjecture. A large quantity of rubbish was found encumbering the floor of it; and as this was of a character similar to that which covered the whole station, it may be well here to introduce the remarks which the very careful superintendent of the excavations, Mr. Edward Milburn, has recorded in his journal respecting it. "Commencing at the top, the rubbish was composed of soil, stones, and lime, until nearly half way down, when wood ashes or similar burnt material became mixed with the other matter. At the bottom of these ashes, and on a level with the scarcement, was a layer of gray slates, in several of which the holes for fastening them remained. Below the slates, the rubbish was thickly mixed with ashes; so much so indeed, that in some parts the matter consisted almost entirely of them, to the thickness of about a foot. Next a bed of lime was met with, about a foot thick, and below this another bed of ashes, three inches thick, blacker than those formerly noticed, and thickly mixed with small pieces of charcoal. The ashes last mentioned had the appearance of having been those of burnt heath or brushwood. There was a great quantity of bones mixed with the other rubbish throughout the whole of the apartment." Let us, before proceeding further, attempt to account for these appearances. The lowest layer of ashes was doubtless caused by the means adopted by the Romans to prepare the site of the Station for the buildings they were about to erect. A similar layer of ashes has been found at a low level in other parts of the Station. It was found beneath the foundation course of the west wall, near the gateway. It was also found when a deep drain (a) was cut, in 1852, from the north wall of the Station to the vicinity of the *via principalis*. It is not improbable that the ancient Britons had a settlement on this advantageous spot before the Romans took possession of it. If their huts resembled those of the Gauls, as shown on the column of Antonine, fire would afford the readiest

means of destroying them. This is the most satisfactory way of accounting for the first layer of ashes. If so, it is the silent chronicler of woes undescribed by the pen of the historian. Should this theory not be admitted, we must suppose that the ashes resulted from the combustion of the brushwood which naturally covered the site. The thick layer of lime, above this, was probably the original floor of compost formed by the builders of the Station. The bed of ashes above the floor most likely resulted from the roof and timbers of the chamber when enveloped in flames, for the first time, by the enemies of Rome, probably in the time of Commodus. The gray slates lay on the top of these ashes. Next we have another layer of ashes, not so thick as the former, indicating the subsequent destruction of a roof less solidly formed than the other, and probably thatched. On the top of this layer lay soil and stones and lime—the remains of the walls which, after the conflagration, fell in upon the mass of ruin. Shall we be wrong in supposing that the Station was repaired under the auspices of Severus, and that it fell into final ruin during the usurpation of Carausius?

The mixture of bones with the other *débris* is a thing of constant occurrence in the Stations in the North of England, and can only be accounted for on the supposition that the inmates of the chambers threw the refuse of their food on the floor, and suffered it to remain there among the straw or rushes which probably covered it.

Since the discovery of the chamber now described, another (E, 2) in the same wall, but to the east of the gateway, has been ascertained; it is of larger dimensions than the other, but has not been so carefully explored.

For about 50 feet south of the west gateway, and probably also for some little distance to the north of it, the wall (L) is 28 feet thick. The clay in the interior of this part of the wall is about five or six feet thick. Where the wall resumes its ordinary thickness the remains of a square tower of solid masonry were found. This tower is built of larger and better dressed stones than the rest of the wall, the rubble of its interior is more thoroughly embedded in mortar, and its ruins still rise a little higher than the adjacent parts. Again, somewhat to the south of this tower, a flagged way may be traced leading to the tower. Has this been a covered path leading to the tower, protected on the one side by the internal buildings and on the other by the battlements of the wall?<sup>3</sup> Unfortunately, the main wall, on its western side, has been robbed to too great an extent to allow of a satisfactory solution of the question.

<sup>3</sup> The buildings (m, m, m) which come up to this wall, are quite independent of it.

This part of the camp presents yet another feature of interest. On the outside of the wall, midway between the gateway and the square tower, are the remains of a strong building abutting upon the wall. Only the party-walls of it are left, but they are very strong, being between three and four feet thick. Have we here the traces of another tower, giving additional security to the western gateway? A tower projecting beyond the wall would give the advantage of a flank fire. This, however, is an unusual feature in the *castra* of the North of England.

It is not easy to assign a special use for all the peculiarities of this part of the western wall. Perhaps, however, we see in some of them provision made for the planting of the *ballistæ* or other engines for projecting stones and heavy missiles against a foe.

Two inscriptions found at this station make mention of a *ballistarium*. One of these was found this summer outside the western wall; the other was found in the interior of the Station in 1852. A considerable number of roughly rounded stones of a large size, and such as we may suppose would be prepared for the *ballistæ*, have been found in the Station. One, found on the outside of the west wall, was 4 feet 6 inches in circumference. We have certain information that the Romans projected stones from their *ballistæ* with prodigious effect. It is perhaps not too bold a statement to suppose that one of the towers we have described was a *ballistarium*. A considerable number of flat rounded stones, an inch and a half or two inches in diameter, have also been found inside the west wall. The workmen, on coming upon them, saw that the occurrence of so many stones of the same character was not a mere casual occurrence, and at once pronounced them to be sling stones. Can the unusually broad part of the wall have been intended as a station for a body of slingers?

But still the question recurs, Why was the western wall fortified to a greater extent than the others? It is by no means the weakest or most exposed side. A reference to Mr. Mac Lauchlan's plan may perhaps solve the difficulty. On the western side of the Sills Burn we see two camps, with earthen ramparts. One of them is of a large size, and has the circular traverse which is supposed to be peculiar to the camps of the 9th Legion. Within it is a smaller, but more perfect fortification. It is highly probable that this was reared by the garrison of BREMENIUM, and was used by them as a summer residence. To have remained the whole year, cooped up within the narrow compass of the camp, would have been highly prejudicial to the health of the cohort. The site of this earthen encampment is a very advantageous one; it is not so high or so exposed as that of BREMENIUM, and yet it commands

an extensive prospect down the valley of the Rede and along the line of the Watling street.

Is it not possible that the western wall of the Station of BREMENIUM was supplied with additional fortifications, in order the more thoroughly to command the space which separated it from the summer encampment? The theory is not without difficulties—the chief of which are, that the summer encampment is scarcely within range of the *ballistæ* of BREMENIUM, and that no traces of a road connecting the two camps have been found, though Mr. Mac Lauchlan carefully examined the ground with the view of ascertaining them—still no better explanation has been suggested.

We now enter the interior of the Station. The first thing that strikes us on inspecting the excavations or examining the plan of them, is the extreme economy of space which has been exercised. Every part of the area which has been explored is covered with buildings. These are for the most part small and crowded together. The main streets vary in width from  $14\frac{1}{2}$  feet to 10 feet; the subsidiary ways leading to the several habitations are usually less than three feet wide. The houses are strongly built, having stone walls of from two to four feet thick. It is probable that windows were very sparingly used, very little window glass having been found among the ruins.

One of the first things which a garrison drawn from southern Europe would demand would be warmth. For this the internal arrangements of the camp have provided. When the houses, with their low, thick, stone walls, stood in their integrity, clustering together in a mass, as they did, the winter tempests, broken in the first instance by the outer ramparts of the Station, would howl over them without finding chink or cranny by which to gain an entrance. The impression made upon the minds of some of the Committee of Exploration, when lingering in the narrow streets of this city of adventurous warriors was, that it would have many of the advantages of an under-ground encampment. The great difficulty would be to carry off the water which fell upon the conglomerated stone huts; this seems to have been provided for by the complete system of sewerage which was adopted.

The Station resembles, in its main features, the plan of a Polybian camp, though it does not adhere to it. One main street has no doubt originally gone from the northern to the southern gateway; another has crossed from the eastern to the western (G, G, G); all the other streets are made to run parallel with these. On looking at the plan it will be seen that the original design of the Station has been at some time subsequent to its original formation interfered with. The roadway from the northern to the southern gateway has been in part blocked up with buildings. Some of the streets are not continued in the same straight



line (*e. g.* that marked M, M, in the plan): Other irregularities show themselves. The truth seems to be, that the streets, as they now appear, are the work of two if not of three periods. On more than one occasion the city has been visited with devastation. Each reconstruction was inferior to the former, and appears to have been performed in a hasty manner. Wherever the excavations have gone deep enough, at least two sets of foundations and paved ways have been found, having a mass of rubbish between them. On rebuilding the city (or portions of it) it is not at all improbable that the original symmetry of the plan was departed from.

It seems needless to enter upon a detailed description of the buildings which the city contains. Such observations only will be given as may serve to render the plan more instructive.

The northern portion of the Station has not been examined (as it is private property), with the exception of a single line of cutting (a), having been made in the direction of the gateway. Here several walls were met with, showing that the buildings have been as closely clustered together in this as in other parts of the Station. A square block of building in the centre of the Station has probably been dedicated to some public purpose. For want of a better name it has since its exhumation received that of the Prætorium. It contains no less than three tanks. One (D) on the face of its northern wall, one in its interior (C 2), and one against the face of its southern wall (C 1). Another tank (C) has also been found on the other side of the street (H, H, H) that runs past its southern side. It is difficult to divine the use of these tanks. Water is abundant in the neighbourhood; and these receptacles would furnish but a short supply to a numerous garrison. One of them, which has a flight of steps descending into it, has also a somewhat wide circular sewer leading off from the bottom of it which does not seem to have been provided with a gate or sluice for closing it. This tank has been arched over. Can this underground receptacle have been a place for storing away the treasures of the city, or preserving some of its most valuable but least perishable effects? Places in which the salted provisions for winter could be stowed would be required—these tanks seem suitable for such a purpose. The only one into which a water conduit (b, b) is seen to go is that in the centre of the Prætorium (C 2).

The street on the east side of this square block of buildings (N) is carefully paved; and is provided with a flagged footpath (g) on its west side, raised above the level of the street by the thickness of the flags. The footpath is about a yard wide; it is worn hollow in the middle by the tread of passengers.

The buildings (J, J, J, J) on each side of the central structure are of excellent masonry; and have been provided with a thorough system of flues for maintaining within them an equable temperature.<sup>4</sup>

The street (H, H) on the south of the central range of buildings now hastily described, is 10 feet wide. Throughout the greater part of its course it is well flagged; the western portion of it is paved. Generally speaking, the streets of earlier formation are flagged, those of later paved. On walking along, it is interesting to notice the thresholds (h, h, h) of some of the houses remaining, on which the soldier had often gladly trod when returning from his cold and dreary station on guard, or from doing perilous battle with his foes in the Wastes to the north. There is a space (O) on the south side of the street and nearly in its middle which is comparatively clear. There are some stone pedestals (i, i, i) in it with a dowel-hole in each for receiving uprights. Can this space have been the market-place of the camp; and may we infer, from the presence of uprights, that the *forum* of BREMENIUM, has been provided with a piazza? Similar arrangements were noticed in the interior of the station of HABITANCUM. In the bass-reliefs on Trajan's column piazzas form by no means an unimportant part of the camp structures.

Just within the northern margin of the next street (M), proceeding southwards, and near its middle, are remains of an apartment which must be described. It has been formed by flags set upright, having their ends let into a groove prepared to receive them. The flags have been supported in their places by stone uprights which are grooved in their sides. To what object this apartment or trough has been appropriated does not appear. It has however been a place of great resort, for the flags outside it are much worn. Has the chief of the commissariat stored up his provisions there previous to making a distribution of them to the troops? A chamber similar to this was discovered last spring in the Station of CILURNUM by Mr. Clayton. The CILURNUM chamber had, however, in addition to the arrangements noticed here, a gutter running all round the enclosure, just within the upright flags, and making its escape at one angle.

The other buildings on the line of this street are chiefly remarkable for some very small rooms which they contain, and the network of very narrow lanes by which they are approached. These narrow passages are all either paved or flagged. They are for the most part about a foot and a half below the level of the floors of the houses. This arrangement

<sup>4</sup> The buildings (J, J) on the east of the Prætorium have not been laid bare, they have however been examined to a sufficient extent to assure us that they in all respects resemble those on the west side.

## EXCAVATIONS AT BREMENIUM.



would contribute to the dryness of the habitations, but would by no means promote the comfort of foot passengers during a heavy fall of rain.

The buildings in the south-east corner of the Station are inferior in their construction to most of the others in the camp, and are supposed to be of later date.

Little need be said of the houses near the vicinity of the mural chamber (E, 1). They are of two dates, the one series being built upon the uncleared ruins of the former. Below the lowest foundations stone gutters for the conveyance of water were found. The drainage and the water-supply of the *castrum* must have been the first thing attended to by the engineer. Thoroughly, however, to understand the course of the drains and the fresh water gutters, it would have been necessary to have upturned the whole city from the foundations. At present we have but hints of the completeness of these arrangements.

One of the principal buildings of the Station has been in the south-west angle. Some portions of it are undoubtedly of the earliest period. The walls of the chamber (p) are four feet thick, and of excellent masonry. Its floor is supported upon pillars. A flue, formed of a tiled arch, has brought the heated air from an adjoining apartment or furnace, which has not been explored. The tiles forming this arch are wedge-shaped. The practice of moulding bricks of such a form as that they naturally arrange themselves in an arch has only recently been re-introduced into this country. The floor of the building has been covered with the usual thick coating of concrete, and the walls carefully plastered.

The semicircular apse at the northern extremity of the building will be noticed. The doorway which led from the room (p) into the adjoining apartment (n) has been arched; one of the springers now remains. The apartment (n) is of two dates, the upper building being of inferior workmanship to the one on the ruins of which it stands. It is a pity that the means at the disposal of this Society did not allow of the explorations in this part of the camp being completed.

Against the western wall several barracks (m, m, m) have been placed. A somewhat similar arrangement prevails at *BORCOVICUS*. In one of these apartments (m, 1) a range of flues was found, reminding the spectator of what in modern times is known as a "flat" for drying earthenware before it is sent to the kiln.

We may now attend to the miscellaneous antiquities discovered during these investigations. It is not a little remarkable, considering the large surface of ground explored, the hopeful nature of many of the spots, and the numerous and important inscriptions which previous excavations have yielded, that only one lettered stone has been discovered on

the present occasion. This is, however, one of considerable historical interest.<sup>5</sup> The inscription is imperfect; what remains of it, (the ligatures being resolved) assumes the following form:—

IMP. CAES. M. AV. . .  
 . . . . . PTO. F. . . .  
 TRIB. POT. . COS. . . .  
 P. P. BALLIST. A. SO. . .  
 VARDVL. . . . .  
 TIB. CL. PAVL. . . . .  
 PR. PR. FEC. . . . .  
 P. AEL. . . . .

and may be read in the following manner:—

To the emperor Cæsar Marcus Aurelius Antoninus, the Pious and Happy, invested with tribunitian power and consular dignity for the third time, the Father of his Country, this ballastarium [is dedicated.] It was reared from the ground by the first cohort of the Varduli during the proprætorship of Tiberius Claudius Paulinus [under the superintendence of] Publius Ælius. . . . .

The emperor here referred to is no doubt Heliogabalus. He assumed the same titles as Caracalla; but the character of the letters, and the evidently intentional erasure of the distinctive part of his name, indicate the later rather than the earlier monarch. Fortunately the erasure in the second line has not been so effectually performed as to prevent the word ANTONINO being discernible.

A slab was discovered during the excavations conducted in 1852 by direction of the Duke of Northumberland, which contained the word BALLIS. As such a word had not previously been met with, some doubt was entertained whether it represented *vallis*, or *balneis*, or *ballis[tarium]*. This new inscription containing one more letter of the word, (a. r.) settles the question. Again, the former slab, which is broken into at least ten pieces, contains the name of a legate which is only partially legible. The latter part of the name of the proprætor is wanting in the new slab, but a comparison of the two stones enables us with some confidence to supply the deficiencies of each.<sup>6</sup> The name of Claudius Paulinus now for the first time takes its place on the list of Roman proprætors in Britain. At Vieux, a village about six miles from Caen, in Normandy,

<sup>5</sup> It was found outside the west wall with its face downward. All the inscribed and sculptured stones discovered in 1852 were found with their faces to the ground. This stone is now preserved in the Museum of British Antiquities, in Alnwick Castle, where it is placed side by side with its kindred inscription.

<sup>6</sup> A comparison of the two inscriptions does not remove all the difficulties attending the reading of the name of the Proprætor on the slab found in 1852; but if the name of this dignitary be not (Tiberius) Claudius Paulinus, it is difficult to say what it is.

the pedestal of a statue was dug up some years ago, having an inscription on three of its sides. The inscription on one side commences in this manner, "Copy of a letter from Claudius Paulinus, imperial legate and proprætor of the province of Britain, to Severus Sollemnis." Until the discovery of this shattered slab outside the walls of BREMENIUM no British memorial confirmed the statement of the Vieux stone, and bore testimony to the fact that a Roman named Claudius Paulinus had once held high office in this island. To Mr. C. Roach Smith English antiquaries are indebted for having brought under their notice the Vieux inscription.<sup>7</sup>

Next in importance to this inscribed slab are the coins which have been met with. Those discovered during the recent excavations amount to about ninety in number, but about one third of them are quite illegible. The following classified catalogue includes the coins found during the excavations of 1852, which our most noble Patron, his Grace the Duke of Northumberland, has presented to the Society, together with several other objects of interest found at BREMENIUM on the same occasion. A common observer, on looking at the coins, would suppose that it was impossible to extract from them any fact of importance. Mr. C. Roach Smith,<sup>8</sup> on examining them, was struck with the absence of the coins of the Lower Empire, particularly those of the Constantines. From the time of Otho down to the days of Carausius, there exists a tolerably complete list of Roman Emperors, but here the series ends. He naturally deduced the inference that, during the usurpation of Carausius, the garrison was withdrawn from BREMENIUM, and never again restored. A few years ago some extensive excavations were made in the Station of HABITANCUM, situated, like BREMENIUM, considerably to the north of the Wall, and on the line of the Watling Street. The only records that have been preserved of the coins discovered on that occasion, warrant us in supposing that, here too, there was an absence of coins of the Lower Empire. The following are the notices given of them in the *Archæologia Æliana*.<sup>9</sup>—"A copper or plated coin of Geta, three brass Coins of Gallienus, a first brass coin of Hadrian, two third brass coins of Victorinus, a plated coin of Valerian, a first brass coin of Antoninus Pius, a silver coin of ditto, four silver or plated coins of Julia Domna, two third brass coins of Claudius, and a first brass coin of Faustina." Afterwards, it is recorded "There were two silver coins of Julia Domna, wife of Antoninus, and four or five brass Roman coins

<sup>7</sup> See *Collectanea Antiqua*, vol. iii. p. 95, where several interesting particulars are given respecting Paulinus and his connexion with Britain.

<sup>8</sup> Formerly of London, now of Temple Place, Strood, Kent. To this gentleman's kindness, and skill in numismatics, I am indebted for the description of the coins.

<sup>9</sup> 1st Series, Vol. iii. pp. 155, 158.

found, but the latter were so much corroded as not to be made out." Now as on the line of the Roman Wall itself coins are found extending down to the latest period of the Roman occupation of Britain, the conclusion is by no means a forced one, that the more exposed forts were abandoned several years before those which were occupied by the troops which garrisoned the Wall.

THE COINS FOUND IN BREMENIUM IN 1852 AND 1855.

OTHO.

A denarius.

*Obv.* . . . . OTHO C . . . . Head to the left.

*Rev.* SECVR . . . . Female figure, standing.

VESPASIANUS.

Four denarii.

(1) *Obv.* . . . . STVS VESP . . . . Head of Vespasian.

*Rev.* Two capricorns back to back; above, a buckler; below, a globe.

(2) *Rev.* A soldier with a trophy.

(3) . . . A sedent figure.

(4) . . . Detrited.

(These denarii of Vespasian are of good silver.)

DOMITIANUS.

A denarius.

*Rev.* Pallas. Titles.

A middle brass.

*Rev.* A group of arms.

A second brass? detrited.

HADRIANUS.

Four large brass.

(1) *Obv.* HADRIANVS AVG. COS. III. P. P.

*Rev.* FORTVNA AVG. S. C. Fortuna with cornucopia and rudder, standing.

(2) *Obv.* As the preceding.

*Rev.* s. c. Diana with bow, standing.

(3) *Rev.* A galley.

(4) Oxidized.

ANTONINUS PIUS.

A denarius.

*Rev.* COS III. A female figure, standing, holding a pair of scales and a cornucopia.

Two large brass.

(1) *Rev.* A Quadriga. (2) . . . .

A middle brass; in bad preservation.

FAUSTINA SENIOR.

A large brass.

## FAUSTINA JUNIOR.

A large brass; oxidized.

## MARCUS AURELIUS.

A denarius; detrited.

Two large brass.

- (1) *Obv.* . . . . AVG. TR. P. X. . . . Laureated head of M. Aurelius.  
*Rev.* SALUTI . . . S. C. A female figure feeding a serpent rising from an altar.
- (2) . . . .

## VERUS.

A large brass.

## COMMODUS.

A denarius.

*Rev.* Titles; in the exergue LIB. AVG. The Emperor seated upon an estrade, with two attendants, dispensing the *liberalitas*.

## SEPTIMIUS SEVERUS.

Seven denarii.

- (1) *Obv.* SEP. SEVERVS AVG. IMP. Laureated head.  
*Rev.* Titles. A female figure, seated.
- (2) *Obv.* IMP. CAES. SEP. SEV. AVG.  
*Rev.* FELICITAS PVB. An ear of corn between two cornucopias.
- (3) *Obv.* SEVERVS PIVS AVG. Laureated head of Severus to the right.  
*Rev.* RESTITVTOR VRBIS. Rome seated upon a shield.

Two others are badly preserved.

## JULIA DOMNA.

Two denarii.

- (1) *Obv.* IVLIA AVGVSTA. Head of Julia Domna to the right.  
*Rev.* PVDICITIA. A veiled female figure, seated.
- (2) . . . Broken.

A large brass.

*Obv.* IVLIA AVGVSTA. Head of Julia, wife of Severus.  
*Rev.* HILARITAS. S. C. A female figure holding a cornucopia; a branch before her.

## CARACALLA.

A denarius.

*Obv.* ANTONINVS PIVS AVG. Laureated head of Caracalla.  
*Rev.* CONCORDIA FELIX. The Emperor and his wife Plautilla, standing, joining hands.

## DIADUMENIANUS.

A denarius.

*Rev.* PRINCEPS IVVENTVTIS. The young Cæsar, standing, and three military standards.

## ELAGABALUS.

Two denarii.

- (1) *Obv.* IMP. CAES. ANTONINVS AVG. Laureated head to the right.  
*Rev.* VICT. ANTONINI AVG. Victory with wreath and palm branch,  
 marching to the right.
- (2) Illegible.

## JULIA SOAEMIAS.

A denarius.

- Obv.* IVLIA SOAEMIAS AVG. Naked head of Julia Soaemias.  
*Rev.* VENVS CAELESTIS. Venus, seated.

## JULIA PAULA.

A denarius.

- Rev.* CONCORDIA AVGG. A female figure, seated, holding a globe and  
 cornucopia.

## ALEXANDER SEVERUS.

Three denarii.

- (1) *Obv.* IMP. C. M. AVR. SEV. ALEXAND. AVG. Laureated head to the right.  
*Rev.* VICTORIA AVG. Victory with wreath and palm branch, marching.  
 (In good silver.)
- (2) *Obv.* Idem.  
*Rev.* VIRTVS AVG. Rome seated on armour.
- (3) *Rev.* VICTORIA AVG. Victory, marching.

A large brass.

- Rev.* VIRTVS AVGVSTI. S.C. A military figure with his right foot upon  
 a helmet; in his right hand a globe; his left arm resting upon  
 the *hasta pura*.

## MAMAEA.

Two denarii.

- (1) *Obv.* IVLIA MAMAEA . . . . .  
*Rev.* VENVS. A figure, standing.
- (2) *Rev.* IVNO CONSERVATRIX ET VESTA.

## GORDIANUS.

A denarius.

- Obv.* IMP. GORDIANVS PIVS FEL. AVG. Laureated head to the right.  
*Rev.* SECVRITAS PVBLICA. Type of security seated.

## PHILIPPUS.

A denarius.

- Rev.* SECVRIT. ORBIS. A female figure, seated.

## VALERIANUS.

A denarius

- Obv.* IMP. VALERIANVS P.F. AVG. Radiated head of Valerian.  
*Rev.* ORIENS AVG. The Sun, with right hand extended, and holding a  
 whip in his left, marching.



- Six small brass. GALLIENUS.
- A denarius. VALERIANUS JUNIOR.  
*Rev.* PIETAS AVGG. Sacrificing vessels.
- Three small brass. POSTHUMUS.
- A small brass. VICTORINUS.  
*Rev.* VIRTVS AVG. A soldier with spear and shield.
- Two small brass. TETRICUS.
- Two small brass. CLAUDIUS GOTHICUS.
- A small brass. TETRICUS JUNIOR.
- A small brass. Pax type. CARAUSIUS.

In connexion with the subject of coins, it may be mentioned that in one of the buildings on the south west of the Prætorium a hearth was found (o), bearing marks of having been exposed to a great heat, and near to it (o 1) was a pellet of lead, weighing about 10*lbs*. Several smaller pellets too have been found. Some lumps of litharge have also been picked up, precisely similar in appearance and composition to the oxidized matter which is produced in the extraction of silver from its combination with lead, by the modern process of cupellation. From this it would appear that the Romans were not unacquainted with this mode, and that they practised it at BREMENIUM. Can the pellets of lead have been used for the fabrication of spurious denarii, mixed with a greater or less proportion of silver?

We now proceed to the miscellaneous articles.—

Some iron bells have been found; the largest of them, with the clapper adhering to its side, was found on the inside of the west wall. Has its use been to sound an alarm in the time of danger? A bell smaller in size, but similar in shape, has recently been found in CILURNUM.

The handle of a patera, apparently of bronze, two spoons, and some fibulæ, have been found.

A pair of tweezers of a small size, and apparently intended as an appendage to the toilet, is amongst the bronze articles which have been turned up.

Amongst the iron implements may be reckoned some spear and arrow heads, and some keys.

An object resembling a modern trowel was found pretty far down in the heart of the western rampart.

A pick in very good preservation was found.

Some beads and a jet pin, very carefully carved, will excite attention, as well as some rings of jet of a large size.

Under the head of glass may be reckoned some fragments of vessels formed of a very pure material, and "cut;" some window glass, and some fragments of bottles of the ordinary green shade. There are besides some scoriæ of glass; but whether they have resulted from the manufacture of the article, or have been produced by the burning of houses in which glass vessels were, it is difficult to determine.

We meet with all the usual kinds of pottery:—

Samian ware, plain and figured. Some of the figured patterns are rare. The head of a wolf, the mouth of which acts as a spout to a patera, is ingeniously formed, and is less common than the corresponding device of the lion's head. One piece of Samian ware bears marks of having been cut upon the wheel after the manner of glass. Another specimen of this manufacture, but more elaborate, was found in 1852, and is now in the collection at Alnwick Castle. Some very good specimens of Caistor ware,<sup>8</sup> exhibiting light coloured embossed figures, upon a dark ground, have been met with. There is some pottery of the same kind in which coloured lines are substituted for the embossed figures. Some portions of vessels, of a dark metallic hue, very light, and exhibiting proofs of skilful manufacture, have been found. Several of these have had their sides intentionally bulged in. Others, of a reddish brown colour, show us that what we call the "engine-turned" pattern is at least a thousand years old.

Again, we have vessels of various shades of gray and brown, which owe their colour to their having been "smoked" in the kiln during the process of firing.

We have also some vessels of red clay, which have probably been formed in Britain, in imitation of the Samian. They are destitute of the peculiar glaze of the Samian. Some of them are rudely embossed, in imitation of the Samian patterns. These specimens show that the clay has been rudely pressed into the mould, whilst moist, by the application of a finger to the inside.

<sup>8</sup> See Artis's *Durobrivæ*.

Fragments of amphoræ too have been found, inducing the belief that the luxury of Falernian, or other vintages, was not unknown in ancient days on the banks of the Rede.

Several specimens of *mortaria*, vessels partly intended for the trituration of grain, and partly for the maceration of their contents on the hearth, have been produced.

Some vessels of coarse earthen-ware, admirably adapted for standing heat, and which have no doubt been intended for cooking pans, are amongst the spoils.

A great number of whetstones have been found in the Station. As many as ten were exhumed in one day. The Romans, if they had no powder to keep dry, at all events kept their swords sharp. Some of them have been very much used, and consist of stone of the finest grain.

Amongst the animal remains which have been met with, are those of the ox (a small species), the deer, the sheep, and the pig. Besides remains of the full grown pig or boar, the unprotruded teeth of the animal in its immature state have been met with, a tolerably emphatic symptom that the Præfect of the Varduli occasionally indulged in a luxury not unknown on modern tables.

Besides these animals adapted for human food, we have the remains of the rat, the badger, the dog (apparently a mastiff or a large bull-terrier), and the fox.<sup>11</sup>

A portion of the shank bone of an ox has been rudely fabricated for use as a spoon. The core of the horn of an ox, which has probably been used as a goad, or as a hone.

The luxury of an oyster was not unknown to the præfects of BREMENIUM, as is proved by the shells which remain.

Such are some of the results of the recent excavations.

Although the whole Station has not been explored, enough has probably been done to give a correct view of a border fortress in the days of Roman occupation. In order to meet the requirements of those who have wants to satisfy, more pressing than a thirst for antiquarian lore, the excavated buildings have once again been buried beneath the sod, and the whole station has been made to assume a level and verdant surface. The spade and pickaxe will probably not again invade this classic soil; still we may rejoice that these humble implements have, under the auspices of our princely Patron, and of the Council of this Society, educed facts which the historians of our country will not despise.

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<sup>11</sup> To Dr. Embleton, of Newcastle-upon-Tyne, I am indebted for the identification of the animal remains found in the Station.