

## CHAPTER III

### Interior Buildings of the Fort: The Principia

#### Introductory

SUCH knowledge as we possess of the buildings to be found within a Roman fort comes chiefly from the plans recovered by excavation. Of the small permanent forts like Newstead no description survives in the works of military writers. Hyginus, who, as we saw above, is believed to have written in the beginning of the second century A.D., gives a series of rules for the laying out of the encampment of a great army in the field,—a force composed of three legions with auxiliary troops, and numbering upwards of 30,000 men. This force, it need hardly be said, is purely hypothetical. The opportunity for excavating such a camp as Hyginus describes cannot arise. We have, however, various examples of the permanent camps, or, as they may perhaps more correctly be termed, the fortresses occupied by legionary troops. Of these Carnuntum, Novaesium, and Lambaesis are the most completely excavated. Novaesium was constructed to hold 9222 fighting men—roughly a modern division. Carnuntum is much smaller—the proportion is roughly 3:2. Lambaesis again is larger than Carnuntum, but this is perhaps only due to the fact that the legionaries now had more comfort and more room. As has already been pointed out, the essence of the difference may be that in the former case the auxiliaries were brigaded with the legionary troops. In all these there occur certain main features which are characteristic of the Hyginian plan. Some of these features we can still recognise in the more restricted area of the fort at Newstead, and even in those of smaller size. In short, the laying out of camps was evidently a recognised science. Thus, although the plans known to us in Britain, as well as on the Continent, exhibit considerable variety, the same general scheme was adopted nearly everywhere.

## The Hyginian Camp and its Modifications

The Hyginian camp was rectangular, being greater in length than in breadth, and having the corners rounded. It had four gates. One of these, the *Porta Praetoria*, occupied the centre of the front which faced the enemy, while the corresponding gate, or *Porta Decumana* occupied the same position in the rear. On either side were the *Portae Principales*, with a broad street running between them—on the right the *Porta Principalis Dextra*, on the left the *Porta Principalis Sinistra*. These latter gates lay directly opposite each other, and nearer to the front than to the rear, so that the road which passed between them, the *Via Principalis*, divided the whole camp into two unequal portions. In the centre, facing the *Porta Praetoria*, at the point where the street leading to that gate crossed the *Via Principalis*, lay the *Praetorium*, or quarters of the commander. Behind the *Praetorium* a third street, known as the *Via Quintana*, ran parallel to the *Via Principalis*. The section of the camp lying in front of the *Praetorium* was called the *Praetentura*. The spaces on either side of the *Praetorium* were the *Latera Praetorii* while the section lying between the *Via Quintana* and the *Porta Decumana* was termed the *Retentura*. All round the camp a clear space or *intervallum* separated the rampart from the tents of the soldiers. In the three main sections into which the camp was divided, the different corps forming the army had each its place allotted to it.

When we pass from the hypothetical camp of Hyginus to the plans of actual fortresses such as Novaesium we find that, while (as already indicated) the main features of the Hyginian scheme are reproduced, the conditions of a permanent settlement and the reduction in the number of troops to be accommodated have so far modified the plan that we are no longer able to apply it for the identification of the various buildings. The same plan, still further modified by reason of its smaller garrison, reappears at the fort at Newstead. But in an area so small, and with no definite information to guide us as to the exact nature of the garrison, we cannot draw from the Hyginian scheme anything more than a few general indications as to the character of some of the buildings, nor can we be quite certain that the technical terms employed by Hyginus to describe the main parts of his camp were used in dealing with a small permanent fort.<sup>1</sup>

1 Professor Haverfield has stated clearly the manifest distinction between the *Praetorium* of the Hyginian camp and the central building which constitutes so invariable a feature in the forts of the second and early third century. The latter has usually been spoken of as the *Praetorium*, but it is probably more correct to call it the *Principia*. *The Roman: Fort of Gellygaer*, p. 99, Appendix I.

PLATE VIII. THE EASTERN EILDON HILL FROM THE SITE OF THE  
PRINCIPIA

The view is taken from the Red Abbeystead field, near the site of the Principia looking to the south-west. In the distance rises the Eildon Hill showing some trace of ancient earthworks round its summit. In the foreground on the left is the hut used by the excavators.



Again, in most of the small permanent forts that have been excavated, the plans of the various structures which covered the interior are obviously incomplete. Any tents which may have housed the garrison can have left no indication of their position. Buildings of wood and even of stone have often disappeared completely, so that in many cases, especially in the forts of the German Limes, we find little remaining but the central Principia. And yet, as fort after fort is excavated, the gaps in our knowledge are gradually being filled in, so that we can lay down the plans of the various buildings with some approach to completeness, and can recognise certain definite types, each designed for some special purpose.

In Britain, at least, these types are fairly constant. We find them more or less perfectly reproduced at Birrens, at Camelon, at Ardoch, and at Lyne, just as at Housesteads and at Gellygaer. The Principia occupies a central position opening upon the Via Principalis. On either side of it, in the spaces corresponding to the Latera Praetorii of the Hyginian camp, we have a number of buildings, evidently of an administrative character, grouped together. In the space lying in front of the Principia—corresponding to the Hyginian *Praetentura*—we have barracks for the soldiery. The space behind it—corresponding to the *Retentura*—is similarly occupied. The same general plan was employed in the larger area of the Newstead fort.

### **Streets and Drains**

Of the streets which divided the fort, the Via Principalis, running between the gates on the north and on the south, was the broadest. In width it seems to have occupied a space of from forty-five to sixty feet, but no kerbs or definite margins were discovered. The parallel street to the west was less wide. It measured about forty feet, and this was also the width of the street running from the Principia to the east gate. A carefully devised system of drainage carried off the surface water from the low-lying portions of the fort. A stone-built drain ran from the south-east corner of Block XIII westwards. Crossing the Via Quintana, it followed the line of the inner ditch of the early fort, into which it had been carefully built, to a depth of eight feet. It was one and a half feet wide and was covered with large slabs of stone. Into this drain was carried the surface water from the streets running north and south between the barrack blocks of the Retentura. A second main drain ran from the east side of the Via Principalis, and, crossing the street, passed along the north side of Block XIII. Into this drain was led the

water from the west side of this block, as also the water from the Courtyard of the Principia. Another large drain was traced between Blocks XVII and XVIII running westwards through the Retentura. It passed beneath the reducing wall, where its structure was well preserved and where it had a depth of eighteen inches and a width of fifteen inches (Plate VII., Fig. 2). All of these drains were probably brought together and carried into the inner ditch on the west front, passing beneath the wall of the fort in a strongly built channel, having an opening two feet eight inches high by two feet broad (Plate VI., Fig. 2). With the exception of a drain running along the south side of the street near the east gate no drains were noted in the Praetentura. The ground here was higher and less liable to be flooded.

### **General Condition of the Buildings**

Before dealing more particularly with the various buildings, it may be noted that, throughout the excavations, the remains of their stone-work were so scanty as to make it almost impossible to recover any of their details. Long centuries of cultivation and systematic quarrying had well nigh brought about their utter destruction. Walls were in most cases reduced to foundations. Hardly a doorway of any kind could be traced. Search for such masonry as may be seen *in situ* at Chesters and Housesteads, or in the impressive buildings recently exposed at Corbridge on Tyne, was vain. As a matter of fact, the only building within the fort which was laid bare in anything like its entirety was the Principia. The rest were merely outlined by following the walls, diagonal trenches being cut across any chambers which were discovered. This method has many drawbacks, and it should be avoided wherever circumstances permit of more thorough exploration. But the cost involved in removing the earth from the large area to be dealt with at Newstead made it impracticable to proceed otherwise.

### **The Principia**

Of the various buildings which once occupied the area of the smaller Roman forts the Principia is the one of which excavation has recovered the greatest number of plans. That this is so is probably due to the fact that it was usually erected in stone. And it is as common a feature of the forts in Germany as of those in Britain. Nearly all of the plans conform to a general pattern, although there are variations in detail. The best specimens of the building as we find it in Britain are at Birrens, Housesteads, and Gellygaer. In all of these we have an outer courtyard surrounded by pillars, which was entered from the Via Principalis, and also an

inner courtyard from which access was obtained to a row of chambers, varying in number, placed against the back wall. The building of this type at Newstead measured 131 feet in length by 104 feet in breadth, and is the largest of the kind we know in Britain. The Principia at Chesters approaches

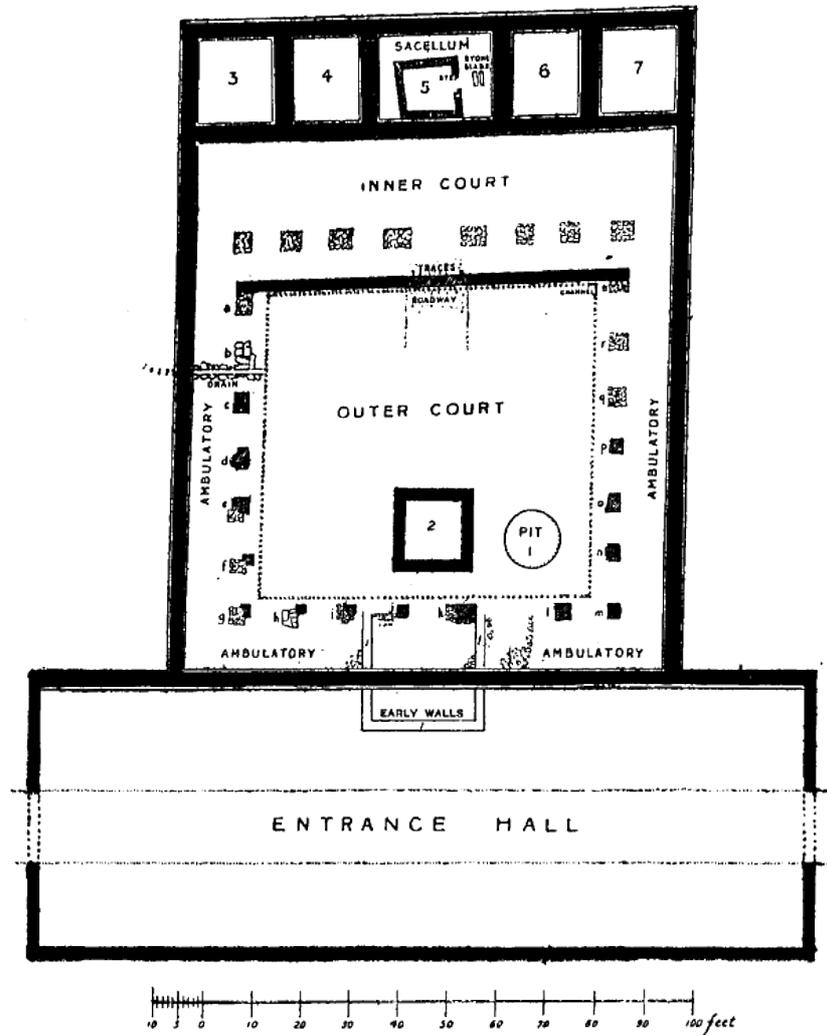


FIG. 2. PLAN OF THE PRINCIPIA.

it in size, measuring 123 feet long by 97 feet broad. Birrens, on the other hand, is only 70 feet long by 80 feet broad, and Gellygaer 80 feet by 69 feet. To this main building, which may be taken as representing the normal plan in Britain, there was added, at Newstead, a long entrance hall or portico extending across the Via Principalis in front of the building and measuring

160 feet in length by 50 in breadth. One side of it was formed by the front wall of the Principia, which was prolonged at either end so as to touch the adjoining buildings to the north and south.

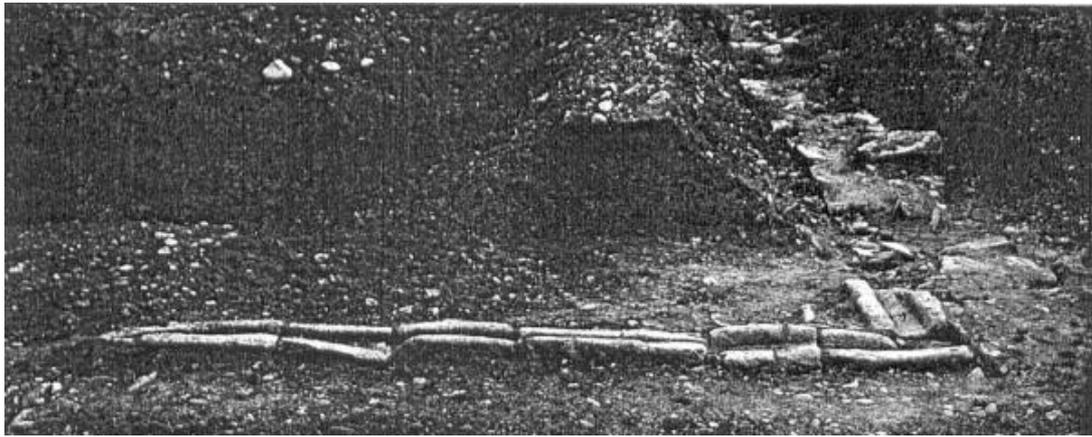
Very little of this last mentioned structure remained. Even the cobble stones of its foundations had entirely disappeared in some places. The best preserved portion was the wall at the north end, and there the line of the roadway entering the building was quite distinct. Nothing was found to throw light on the details of its construction, no tiles or other roofing material to suggest that it had been covered in. But that part of the front wall of the Principia which was continued towards the north, for the purposes of this portico, as may be seen from the photograph reproduced in Plate IX., Fig. I, had its foundation laid on a very much higher level than the other portion or than the main north wall which abutted directly upon it, thus conveying the impression that the long hall had not been erected at the same time, but was an addition made towards the end of the occupation of the fort.

Fragmentary though the traces of the entrance hall were, they added greatly to the interest of the building, as nothing of the kind appears yet to have been found in Britain. In the German Limes forts, on the other hand, such a hall is a common feature. There, as at Newstead, it is usually long and somewhat narrow, having not only doors at the end, but also wide openings in the sides. In Germany the name *Exercier-Halle*, or Drill Hall, is usually given to this building. But it is very doubtful whether there is sufficient evidence to support the use of such a term, or to show the purpose of the structure. The so-called Praetorium at Lambaesis, probably the most complete military building which has come down to us from Roman times, provides a parallel. Here also we have a hall thrown across the *Via Principalis*. Unlike the corresponding buildings in Germany and at Newstead, however, it has its longer axis at right angles to the *Via Principalis*. On each side is a wide arched doorway, large enough for the entry of wheeled vehicles, and flanked by smaller doorways for foot passengers. It is altogether a building of greater architectural pretensions than anything that seems to have existed in the smaller forts. M. Cagnat<sup>[1]</sup> describes it as a triumphal arch of considerable size with four façades. It seems at Lambaesis to have formed a stately approach to the Principia. Possibly it may have served a somewhat similar purpose at Newstead.

<sup>1</sup> Cagnat, *Les Deux Camps de la Légion III<sup>e</sup> de Lambèse*, p. 22.



1. Junction with wall of 'Exercise Hall' on north side



2. Gutter in outer courtyard



3. Pillar base and paving of ambulatory on south side of entrance

PLATE IX. THE PRINCIPIA

## The Outer Courtyard

From the hall just described, access must have been obtained to the outer courtyard of the main building. No trace of the doorways could be found. All the stones of any value for building purposes which lay near the surface had disappeared, and little remained of the court itself save the lower foundations of the walls. On the east, adjoining the outer hall, absolutely nothing but this substratum was left. The method employed had been to dig a trench down to the subsoil, and to lay in it a bed of river cobbles about one foot in depth and four feet in width. Next came a scarcement course of stone—usually the metamorphosed sandstone from the Eildon Hills—of the same width and six inches in height. On this again was built the wall, two feet six inches in thickness. The only portion showing both faces was found on the north side of the courtyard. It measured two feet in length, and consisted of two courses of hammer-dressed masonry bedded in lime, standing fourteen inches above the scarcement.

The court walls enclosed a wide space sixty-three feet by seventy feet, covered with gravel and open to the sky. Around it on the north, south, and east ran an ambulatory, supported on pillars. The fourth, or west, side was bounded simply by its wall, through the centre of which a gateway would in all probability give entrance to the inner court. The ambulatory had a width of ten feet. It appeared to have been slightly higher in level than the courtyard, and to have been flagged with sandstone. Its roof, which was probably a single span set against the outer walls, must have sloped inwards, as was clearly proved by the remains of a stone gutter, found still in its original position, at the north-west corner of the court, Plate IX., Fig. 2. This gutter doubtless surrounded the margin of the courtyard, receiving the water from the roof, which passed into a stone drain, eleven inches wide and ten inches deep, lying just beneath the paving of the ambulatory on the south, and so into the large drain running to the west. The roof was probably covered with red tiles, though the number of pieces found was small when compared with those which lay in the chambers at the back. It had been supported on twenty pillars of stone placed at regular intervals of about eight feet.

In most cases nothing was left of these pillars except the cobble foundations on which they had rested. At the south-east corner, however, the remains gave a more definite clue to the original appearance of the ambu-

latory. There the heavy sandstone base of the corner pillar (g) was still *in situ*. It measured twenty-five inches by twenty inches, and stood nine inches high. It was splayed on three sides. On the fourth, or south, side it was only roughly hammer-dressed, as though that portion had been imbedded in the paving of the ambulatory. On the top of this base was a single stone of the pillar itself, sixteen inches square and seven inches deep. On the south side of the ambulatory, again, only the pillar lying immediately to the west of the corner-stone had left any traces. Here was a heavy base (f), twenty-two inches by twenty-three inches by ten inches, splayed carefully towards the north, less carefully on the west, and left quite rough on the other two sides. Upon this base lay a single stone of the pillar it had supported. This measured fifteen inches by fourteen inches by seven and a half inches, and was of dressed sandstone. On the north side hardly anything was found but the circular settings of cobble stones on which the bases had been set. On the east side the evidence obtained was more important. The base of the first pillar from the south-east corner (h) was *in situ*. It resembled those already described, and was splayed on the north, south, and west, but rough on the east. The next base immediately to the north (i) consisted simply of a large sandstone block, very roughly shaped, and measuring twenty-two inches by twenty-one inches by twelve inches, lying on a slightly larger flat undressed slab of sandstone, five inches thick, which appeared to rest on cobbles. The place of the next base towards the north (j) was marked by a single squared block twenty inches by sixteen inches by ten inches. None of the other remains gave much indication of details.

### **Indications of Alteration**

The impression left by these bases was that the pillars had been rude in execution, and that old material had been employed in their construction, while it seemed quite evident that the pillars on the south side of the entrance had, during some process of alteration, been moved from their original positions, probably with a view to widening the ambulatory. On the south-east, beside the corner base (g) already described, an older foundation was brought to light. It was roughly square in shape, measuring forty-two inches by forty inches, and consisting of two layers of cobble stones embedded in clay. The sandstone base rested partly on the corner of this foundation, partly on disturbed soil. Precisely similar conditions were observed on the site of the second pillar on the south side (f), while in the case of the first pillar from the corner on the east side (h) the older cobble foundation lay immediately to the south. The possibility of the bases having

been pulled off their original foundations during the demolition of the building was negated by the fact that in the last instance the older base was covered with a couple of courses of roughly laid flat sandstones, in all eight and a half inches deep, which came to the level of the edge of the splay of the stone base, and which must have formed part of the paving of the ambulatory (Plate IX., Fig. 3). It is extremely important to note these details, as they furnish evidence of one at least of the changes which the building had undergone, a change which must have taken place when it was last reconstructed.

### **Small Chamber**

The floor of the courtyard had been covered with gravel; at the entrance the gravelled road leading into the building was very distinct. Standing within the courtyard, immediately beyond the entrance, was the foundation of what appeared to have been a small chamber (2), (Plate X., Fig. 1). It measured internally eleven feet two inches square, and the wall of red sandstone was two feet five inches thick. It was carefully built with hammer-dressed stones about one foot long by six inches deep, of which the first course and a single stone of a second remained. The north, south, and east sides lay on cobbles, the west wall on hard impacted gravel, perhaps an old road. Gravel lay above the wall, and it seemed possible that the building had been pulled down and its foundations covered over in the last period of occupation. The plans of forts in Britain do not furnish any parallel to this chamber. Something of the same kind, however, is to be seen at the Saalburg, where a square foundation occupies a Site against the ambulatory in the outer courtyard. A similar foundation occurs at Butzbach,<sup>1</sup> but there also the building stands at the side against the ambulatory. In neither of these cases did excavation give any detail which enabled the purpose of the building to be inferred. At Newstead it was carefully cleared out, but beyond some fragments of melted lead no remains were found within. The position of this small building in the outer courtyard appears to be unique. It may have formed part of an older Principia that looked west. But there is also the possibility that it may have been a shrine.<sup>2</sup> According to Hyginus, an altar appears to have stood in a similar position in front of the general's quarters in a field encampment.

### **The Well and its Contents**

To the right of the small chamber was a deep pit. This occupied a

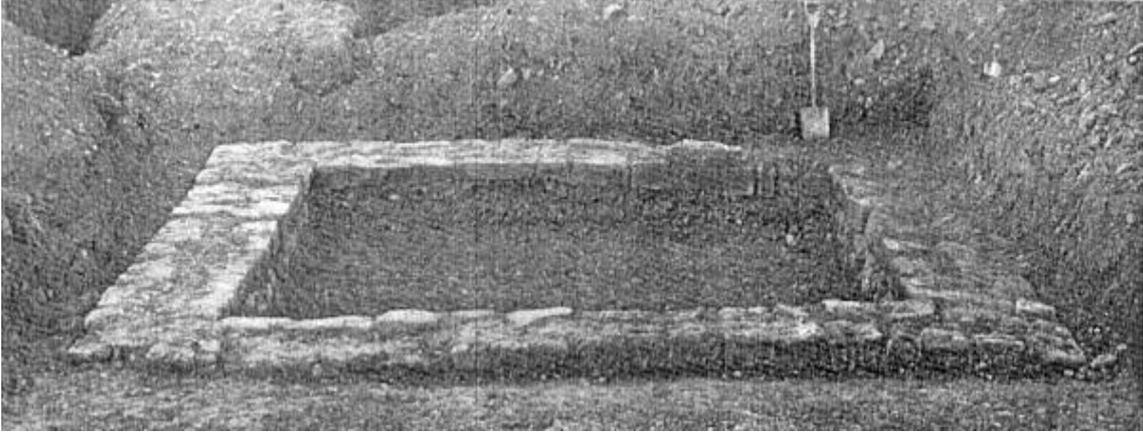
1 *Der Obergermanisch-Raetische Limes*, Lief. I, Kastell Butzbach, p. 7.

2 Professor Bosanquet makes the interesting suggestion that the building may have served as a guard-house.

position in which it is common to find a well or cistern. Thus at Birrens, at Bar Hill, and at Gellygaer, the well was in a similar situation to the left of the entrance. At the Saalburg there are wells in the outer courtyard on either side of the entrance. It is therefore probable that the Newstead pit had originally been constructed for the storage of water. Its discovery in September 1905 gave the first indication of the possibilities of the site. It proved to be circular, having a diameter of twenty feet at the surface. At the bottom, which was reached at twenty-five feet six inches, it had narrowed to a diameter of six and a half feet. From a depth of about twenty feet from the surface it was filled with a confused mass of red sandstone blocks, for the most part of small size, such as might have been employed for the masonry of walls or the sides of a well. A few of these showed the diamond broaching which is frequently met with in buildings of the period. Stones dressed in this way occurred here and there among the buildings at Newstead, but on the whole their use was less common there than that of simple hammer-dressed stones.

Over forty cartloads of these smaller stones were taken from the pit.<sup>1</sup> Mixed with them were a number of much larger blocks. In all some twenty-four of the latter were brought to the surface from various depths,—one or two from the very bottom. It was quite plain that the majority of them had been used as building material. All had been more or less shaped, perhaps unfinished; some were carefully tooled. One large block nineteen inches broad, twelve inches high, and twenty-two inches in depth had been cut for the rebate of a door. The front of this was tooled with diamond dressing. Another stone, twelve inches long by twelve inches deep, was shaped like a pilaster or a rounded cope for a wall. The lewis hole employed to lift it into position was visible upon the face. A third was carefully tooled in a manner which recalled the work to be seen on the lids of Roman sarcophagi such as those that lie in the Church of St. Ursula at Cologne. Yet another, and this a block of considerable size, bore on its side, roughly incised, the figure of a boar, the symbol of the Twentieth Legion, while a much smaller stone had the same symbol in relief. One of the large blocks found in the bottom was shaped like the bases of the pillars already described.

1 The building stones from the pit, together with the gutter stones from the courtyard of the Principia, were removed by Mr. Roberts to Drygrange, where they are now erected in the form of an arch. The pit was filled up with modern rubbish.



1. Foundation of square building in courtyard



2. Masonry of back wall, Chamber no. 6



3. Foundations of Treasure Chamber beneath Sacellum  
PLATE X. THE PRINCIPIA

Progress in cleaning out this mass of heavy material was slow, and the upper levels did not yield much return for the labour involved. A fragment of an inscribed tablet lay near the surface. At eight feet down a human skeleton was exposed. It appeared to be crushed among the stones, the head towards the south. Beside it were a fine bronze pen annular brooch and four small glass beads decorated with gold foil, the latter having evidently formed part of a necklace. Work had been proceeding for some days, and a depth of twelve feet had been reached, when on 14th September, 1905, a hurried message told that an altar was being uncovered. It could be seen from above lying face downward among the black earth, and there was an anxious moment as it was carefully turned over by the men, and the earth cleared from the inscribed face. The possibilities of the great pit had passed into certainties, and the workmen dug on expecting many things from its dark recesses. Beneath the altar was a first brass coin of Hadrian, and in the damp earth, now growing blacker in colour, bones of animals began to make their appearance. Presently the skull of an ox, the *Bos Longifrons*, and some leather, reached the surface. Several of these skulls, with skulls of horses, pieces of antlers, and many fragments of leather and of broken amphorae, were recovered as the work went on. At twenty feet two fragments of antler, fixed together so as to form a pick-like object, were uncovered. At twenty-two feet was a human skull lying beside portions of scale armour, an iron bar, the necks of two large amphorae, and the bottom of a cup of red ware, the last having the stamp PROBVS, also a portion of a second human skull. At twenty-five feet came a quern stone, two knives (one with its horn handle), a sickle, many pieces of amphorae, fragments of an iron cuirass with brass mountings, a linch pin, and portions of an oak bucket. Bottom was touched on 23rd September. The material taken from the lowest level was carefully washed, when it produced a number of small objects of interest—armour scales of brass, pieces of iron chain-mail, the umbo of a shield, a brass coin of Vespasian, several iron arrow heads, and many nails.

### **The Inner Courtyard**

The outer courtyard was separated from the inner one by a wall, two and a half feet thick. A wide doorway had evidently occupied the centre, as the cobbling of the road that had passed through it was distinctly visible. None of the stonework of the door itself remained. The inner court measured 100 feet long by 30 feet wide. Along its east side, and parallel with the wall dividing it from the outer court, were eight circular settings of cobbles, which had evidently formed the foundations of a series of pillars.

There was a corresponding row of moulded column bases in the inner court of the Principia at Housesteads, where they were interpreted as indicating the line of a colonnade which had been supported against the wall separating the inner from the outer court.

### **Its Five Rooms**

Entering off the inner court was a row of five rooms just as we find at Birrens, at Chesters, and at Gellygaer. Hardly anything remained but the whinstone cobble foundations of the dividing walls. In Plate X., Fig. 2, we have a portion of the main outer wall of the second chamber from the north side of the building (6). It exhibits the formation of the cobble substratum. The different character of part of the masonry is probably due to some subsequent alteration of the building. The foundations of the walls on either side of the central room were four and a half feet wide, the others only four feet. A few stones of the scarcement course of the north wall of the central chamber remained in position, from which it seemed probable that the wall itself had originally been three and a half feet thick. The wall resting on the four feet foundation may have been about three feet. This distinction in thickness of the walls has been noted elsewhere, and is no doubt due to the fact that the central chamber formed the Sacellum, and contained the shrine of the standards, while beneath its floor was preserved the military treasure, often placed in an underground vault. Over the ruined floors of the four outer chambers lay a stratum of fine gravel, and in the debris were many fragments of large red flanged tiles which had fallen from the roof above.

### **The Strong Room**

Within the central room were the foundations of a small inner chamber which appeared to have been set into it (5), and which measured about eleven feet square. It did not appear to belong to the original plan of the building, for the walls, which were about a foot thick, had been built of old materials, and did not run parallel to those of the room in which they had been placed. Moreover, in digging a foundation for the east wall of the interior chamber the cobble foundations of the wall of the larger room were exposed, showing that the smaller chamber had been sunk lower than the flooring of the original room. This is clearly shown in Plate X., Fig. 3, in which the foundations are viewed from the west. In the centre of the north wall were the remains of a stair. The courses on one side of the entrance remained to a height of twenty inches, and showed the rebate for the door, which must have opened inwards. The lower step of the stair which remained was about three feet long. The masonry was rough. The

floor of this treasure chamber was covered with a thick bed of clay six inches deep lying on cobbles and flags. Two tiles were embedded in the clay with the upper stone of a much worn quern. Below the clay were found the neck and handle of an amphora bearing the stamp SER·B.<sup>1</sup>

The only other objects which came to light in the excavation of these rooms were a well-preserved fibula,<sup>2</sup> and—from the room on the north side (7)—a number of fragments of thin bronze which had formed part of a cuirass.<sup>3</sup> But in the excavation of the courtyards of the Principia were found some sixteen coins, a number of fragments of pottery, among which were pieces of early decorated bowls of Terra Sigillata, many small bronze objects such as fibulae, mountings of girdles, and hanging ornaments, as well as playing 'men' of bone and of vitreous paste. Under the colonnade of the outer court on the north side lay a considerable quantity of grain.

### **General Impression**

The impression left by many visits during the progress of the work was that the buildings at Newstead, as might have been expected in an outpost planted beyond the permanent frontiers of the empire, showed little of refinement in their construction, and that the masonry had not much of that massive solidity that is so apparent at Corbridge. In dealing with the fortifications attention has already been drawn to the evidence of change. Similar evidences were writ large in the buildings, and in none of these more clearly than in the Principia. Those furnished by the moving of the pillars of the outer courtyard, and by the addition of the long hall over the street in front, have already been dealt with. It remains to speak of the wall dividing the outer from the inner courts.

### **The Dividing Wall**

This did not appear to have formed part of the original plan of the building. It was two and a half feet thick, but its cobble foundation lay on disturbed soil—a layer of clay five inches thick, mixed in places with charcoal, and having one foot of gravel below—the whole suggesting an earlier floor level. On the other hand, the pillar bases lying within the inner court were founded on the subsoil, the foundations being of river cobbles and two feet deep. Now the existence of a cross wall separating the outer from the inner court of the Principia is a common enough feature of Roman forts, as, for example, at Housesteads. But in some forts, which may be dated approximately to the end of the first century, there is no trace of anything of the kind. Thus at Wiesbaden, built about the year A.D. 83, we have but a single courtyard with an

1 Plate lii. Fig. 9.

2 Plate lxxxvi. Fig. 15.

3 Plate xxiii.

ambulatory running round all the sides save that facing the Via Principalis At Gellygaer again, there is no sign of a wall separating the outer from the inner courtyard, but simply a single row of pillars. Even at Birrens, which probably does not date from an earlier period than the reign of Pius, a single row of pillars formed, in the original plan, the boundary between the outer and the inner courtyard. It was only at a subsequent period that the space between them was filled up with masonry. There is thus reason to believe that the type of Principia such as we find at Housesteads, with a wall and roofed passage separating an outer from an inner courtyard, is later than the type in which the outer courtyard is terminated by an arcade of pillars, and, further, that at Newstead one type was succeeded by the other.

### **Various Periods**

The evidence we possess at Newstead does not, however, enable us to identify the Principia, of which the outlines were recovered, as belonging even in its earlier form to the first century, or, in other words, to the fort established during the period of Agricola's advance. On the contrary there is ground for supposing that the Principia of the Agricolan fort faced in the opposite direction towards the west. Those changes in the fort which point to this conclusion will be dealt with later. In the meantime it will suffice to say that, from the remains of the building itself, it seems plain that in the alterations detailed above we have definite marks of two distinct periods, while beneath lie the traces of a still older occupation. The most definite of these traces were observed at the east end of the outer courtyard. Here, flanking the entrance, were the foundations of two walls of red sandstone (1), one foot ten inches in thickness. They consisted of broken sandstone embedded in clay, the usual river stones being absent. It was noted that the main east wall of the central building had cut through these earlier walls, and they were traced beyond it for a distance of six and a half feet under the later roadway and 'Drill Hall.' Here the two walls had been joined together by a third (1), twenty-five feet eight inches long, having a width of two feet six inches, and founded in the same way. The three walls may have enclosed the Sacellum of an earlier Principia facing the west. The suggestion that the enclosure had formed part of an older fort was confirmed by the discovery of another building, built in the same fashion and placed in alignment with it, lying beneath the adjoining buttressed building on the south. A further evidence of this older occupation was obtained in cutting through the ambulatory on the south side of the later Principia. Here, at a depth of two feet below the surface of the

cobble foundation two coins were found, a denarius of Vespasian and a legionary denarius of Mark Antony.

### **The Character of the Principia**

The Praetorium of the Hyginian camp appears to have extended from the Via Principalis back to the Via Quintana, and to have been divided into three parts—in the rear a portion termed the *posticum*, in the centre the quarters of the general, and in front an open space in which, occupying the most important position, before the door of the general's tent, was placed the altar on which he sacrificed; on the right of it was the spot where he took the auguries, on the left the tribunal from which he addressed the army.<sup>1</sup> Probably the Principia of forts such as that of Newstead preserves something of this plan. But it seems clear that the building had ceased to be the quarters of the commandant, and that the structure with its pillared courtyard had a certain affinity to the Forum of a city.

Between the Forum at Silchester and the Principia at Newstead there is a resemblance which is obvious. The latter must have formed the administrative centre of the fort. That it was no longer a dwelling is shown by the excavation of the Principia at Lambaesis, a building infinitely more complex than the one at Newstead or any of those to be found in the Limes forts in Germany. There, after passing through the archways overhanging the Via Principalis, we enter a great paved court surrounded on three sides by an ambulatory whence access was had to a series of chambers. Beyond is an inner courtyard slightly higher in level, and surrounded in turn by a second series of chambers. From the inscriptions found in these latter, M. Cagnat shows that they were occupied as *scholae*, or special rooms, by associations formed of the officers of different grades who were serving in the Third Legion, and that the central chamber, about which they were grouped, contained the shrine of the standards.<sup>2</sup> Just in the same way that in this legion's Principia the shrine, with its standards and other precious emblems, occupied the central position, facing the entrance as does the altar in a great church, so the Sacellum must have stood in the Principia of the smaller forts—the object of veneration, the symbol of command. As a matter of fact, in most of the *castella* that have been excavated we find one chamber distinguished from the others—the Centre of five as at Newstead, or the centre of three

1 Hyginus, *Liber de Mun. Cast.* p. 54.

2 Cagnat, *Les deux Camps de la Légion III<sup>e</sup> Auguste à Lambèse*, p. 33 ff.

as at Gellygaer—by having its walls of greater strength. Sometimes the room ends in an apse as at Kapersburg<sup>1</sup> and Feldberg.<sup>2</sup> Occasionally it merely projects a little beyond the back line, as at Gellygaer or the Saalburg.

### The Sacellum

Not infrequently we find beneath the floor, as at Newstead, a sunk compartment or vault, in which was deposited the military treasure. One of the earliest discoveries which gave a clue to the purpose of this vault was made at Bremenium or High Rochester, where an underground receptacle or vault, with a flight of steps leading into it, was found in the rear of the Principia. The entrance at the foot of the stairs was closed by a stone slab which moved in a groove upon iron wheels.<sup>3</sup> In the vault was lying an altar dedicated to the genius of the Emperor and of the standards of the First Cohort of the Varduli and of a numerus of pioneers at Bremenium.<sup>4</sup> This altar must originally have stood in the shrine above, and with it the standards and the imperial images.<sup>5</sup> Many inscriptions upon altars to Jupiter, to Mars, to Victory, and other gods of the army, which must have had a place in these shrines of the standards, might be cited. One from Niederbiber is of special interest: a standard-bearer and an image-bearer dedicate a standard, with its shrine, and a votive tablet of marble, in honour of the deified imperial house and the genius of the standard-bearers and image-bearers.<sup>6</sup> Of the imperial images which must have stood within the shrine we have a trace at the Saalburg in the fragments of a bronze statuette of the Emperor Antoninus Pius. Remains of a similar figure were found in the ruins of the corresponding chamber at Theilenhofen.<sup>7</sup> At Lambaesis sacred images of gold are mentioned in one of the inscriptions.<sup>8</sup>

In all probability the treasure deposited beside the standards included not merely the military pay chest, but also certain monies that were actually the property of the soldiers. According to Vegetius, the latter comprised

1 *Der Obergermanische-Raetische Limes*, Lief. 27, Kastell Kapersburg.

2 *Ibid.* Lief. 25, Kastell Feldberg.

3 Bruce, *The Roman Wall*, p. 318.

4 GENIO D(OMINI) N(OSTRI) ET SIGNORUM COH(ORTIS) I VARDULL(ORUM) ET N(UMERI) EXPLORATOR(UM) BREM(ENIENSIIUM) GOR(DIANORUM) EGNATIUS LVCILIANVS LEG(ATVS) AVG(VSTI) CVRANTE CASSIO SABINO TRIB(VNO). *C.I.L.* vii. 1030.

5 *Aquilas et signa Romana Caesarumque imagines adoravit*. Suetonius, *Caligula*, 14. For many other references to Latin texts, see Von Domaszewski, *Die Religion des römischen Heeres*, p. 9.

6 Von Domaszewski, *Op. cit.* p. 13.

7 *Der Obergermanisch-Raetische Limes*, Lief. 24, Kastell Theilenhofen, p. 7.

8 Cagnat, *Les deux Camps*, p. 37.

one half of the donativum or imperial largesse,<sup>1</sup> which was employed to provide for those who through sickness or other misfortune had to abandon the service prematurely, while the legionary soldiers at the same time contributed to another fund, which was also kept there and from which was defrayed the cost of their own burial.<sup>2</sup> The standard-bearers thus became the custodians of the regimental funds, and naturally the men who filled the office were chosen not only for their fidelity but also for their education.<sup>3</sup> To protect the sacred emblems and the treasure of the Sacellum a special guard was posted. An inscription from Aquincum commemorates the restoration of a guard-room for the men guarding the standards and the sacred images,<sup>4</sup> while at Ostia the name of M. Mikenius Julius, trumpeter of the Seventh Cohort 'attached to the guard' was found scratched upon a stone near the shrine.<sup>5</sup>

While the Sacellum with its standards and its images has everywhere disappeared, the treasure-chamber in many cases remains. A typical vault was recently discovered within the Principia at Brough in Lancashire. It was eight feet in length, and varied in width from five to seven feet, with a depth of eight feet. It was entered at one end by a flight of eight steps. The floor was of cement. In the wall, broken up and used as a building stone, was a portion of an inscribed slab dating from about the year A.D. 158, showing that the vault itself was not earlier than the second half of the second century.<sup>6</sup> At Lambaesis the treasure chamber was about six feet in depth. At Aesica, Chesters, Brementium and South Shields it was also of some depth. On the other hand, at Wiesbaden,<sup>7</sup> at Gnotzheim,<sup>8</sup> and at Murrhardt,<sup>9</sup> its foundations lay near the surface, indicating that at these forts, as at Newstead, the floor of the Sacellum itself must have been raised considerably above the natural surface of the ground, and must have been approached by a flight of steps. It seems probable that in many instances such treasure-chambers were added in the latter part of the second century. Thus the vault at Brough, as we saw above, evidently belongs to a reconstruction of the Principia. This seems to be the case also at Butzbach,

1 Vegetius, 2. 20.

2 Cagnat, *L'Armée Romaine d'Afrique*, p. 457; also Nicole, *Archives militaires du 1<sup>er</sup> Siècle* (Geneva, 1900), p. 18.

3 Vegetius, 2.20.

4 Von Domaszewski, *op. cit.* p. 13.

5 *Ibid.* p. 14.

6 Haverfield, *Victoria County History: Romano-British Derbyshire*, p. 204.

7 *Der Obergermanisch-Raetische Limes*, Lief. 31, Kastell Wiesbaden, p. 25.

8 *Ibid.* Lief. 70, Kastell Gnotzheim, p. 8, Taf. ii. fig. 2.

9 *Ibid.* Lief. 44, Kastell Murrhardt, p. 7.

where the chamber is said to be an insertion of the third century.<sup>1</sup> The irregular shape and inferior material point to the same conclusion at Newstead.

### The other Rooms

It is generally believed that the rooms which flank the central chamber were intended to serve as the regimental offices. Not infrequently we find one or more of them heated by hypocausts. Professor Ritterling assigns the four chambers which adjoin the Sacellum at Wiesbaden to the chief officers of the commandant's staff. One he allots to the *cornicularius* or adjutant, a second to the *beneficarii* or officers of the staff, a third to the *actarius* or officer in charge of the commissariat, and the fourth to the *librarii* or regimental bookkeepers.<sup>2</sup> Possibly the two last might have been installed in one apartment, which would have left a room for the watch. In the Principia at Niederbiber the dedication to the genius of the standard bearers and image bearers, already referred to, was found in the room immediately adjoining the Sacellum on the east, while in the corner room a dedication to the *genius tabularii* by a *librarius* was found, and here also in a small chamber adjoining were the remains of cupboards and locks.<sup>3</sup> In a room occupying a similar position at Lambaesis was found an inscription showing that it had been occupied as the *tabularium* of the legion, and that it had also been used for the meetings of a college of regimental clerks, *librarii et exacti*. In the same college we find a *cornicularius* and an *actarius*.<sup>4</sup>

The store of arms was probably situated somewhere in the Principia, or in its immediate neighbourhood. The association between the two is shown in the well-known inscription from Lanchester which commemorates the restoration of the *principia et armamentaria*.<sup>5</sup> The find of a *lorica* in one of the chambers at Newstead can hardly be taken as sufficient evidence of the locality of the *armamentaria*, although at Housesteads some 800 arrow heads came from rooms in a similar position. At Lambaesis the military stores appear to have been kept in some of the chambers opening upon the outer courtyard. In one of these there were found about 6000 sling bolts of terra-cotta and about 300 stone balls, while in an adjoining room lay an altar dedicated by the *custodes armorum*.

<sup>1</sup> See Bosanquet, *The Roman Camp at Housesteads*, *Archaeologia Aeliana*, vol. xxv. p. 221.

<sup>2</sup> *Op. cit.* Kastell Wiesbaden, p. 27.

<sup>3</sup> Dorow, *Römische Alterthümer in und um Neuwied am Rhein*, cited by Bosanquet, *The Roman Camp at Housesteads*, *Archaeologia Aeliana*, vol. xxv. p. 223.

<sup>4</sup> Cagnat, *Les deux Camps*, p. 37.

<sup>5</sup> IMP. CAESAR M. ANTONINVS GORDIANVE P(IVS) F(ELIX) AVG. PRINCIPIA ST ARMAMENTARIA CONLAPSA RESTITVIT . . . *C.I.L.* vii. 446.

Another dedication from the same part of the building was by an *optio*, who styles himself *curator operis armamentarii*.<sup>1</sup> In several of the Principia of the forts on the German Limes long narrow rooms occupy the position of the ambulatory at Newstead, on either side of the outer courtyard, and these are believed to have been employed as *armamentaria*.<sup>2</sup> Quite recently, indeed, it has been suggested by Professor Ritterling, in his memoir on the Fort of Wiesbaden, that the space beneath the colonnade surrounding three sides of the outer courtyard was partitioned off with wood and employed for stores. This is an arrangement for which we have some evidence at Niederberg, where in the outer courtyard of the Principia we have on one side, in the space corresponding to the ambulatory at Newstead, a long wing divided into four rooms, while on the opposite the front of the corresponding wing is formed by a line of six pillars which had supported a wooden roof, and inside of which were found ballista balls and bolts.<sup>3</sup>

1 Cagnat, *Les deux Camps*, etc., p. 43.

2 See Hettner, *Westdeutsche Zeitschrift*, vol. xvii. p. 347.

3 *Der Obergermaniische-Raetische Limes*, Lief. 12, Kastell Niederberg, p. 2.