

CHAPTER IV

Interior Buildings: Storehouses, Dwellings

The Storehouses

ON either side of the Principia there stretched two long narrow buildings supported by heavy buttresses. The actual walls were two and a half feet thick, and the buttresses projected in the building to the south three and a half feet, and in the building to the north two and a half feet beyond. In each case the interior measured one hundred and eighteen feet long by thirty feet wide. The heavy cobble foundations, six feet four inches wide, were carried out to the outside line of the buttresses. Nothing was left to indicate how the roof had been constructed, neither stones nor tiles, but there can be little doubt that the heavy buttressed walls were intended to bear the thrust of an arched roof and that the buildings in question were the horrea, that is, the granaries or storehouses of the fort. The floor was specially constructed to keep the place dry. It was supported on low sleeper walls about seventeen inches thick which ran the whole length of the building. Between each of these walls was a flue or air space one foot in width. Against the west wall of the south building were the remains of a loading platform ten feet long and fourteen inches high. Unfortunately its original width could not be ascertained. The existence of this platform would appear to show that the building was certainly at one period entered from the west. We have a parallel to it in the granaries at Corbridge and Gellygaer, all of which have loading platforms at the entrance.

Near the south-west corner of the building at a distance of two feet two inches from the wall stood a portion of a column with a circular base and a double torus moulding.¹ It is made of the red sandstone common in the fort and was still in an upright position, the top being so near the surface that the ploughs had grated upon it. In Plate XI., Fig. I, it is to be seen with

¹ The column was removed with other stones from the Fort to Drygrange.



1. Block XIV. Pillar and south-west corner of building



2. Block XIII. Chamber with cellar
PLATE XI. REMAINS OF BUILDINGS

the south angle of the granary wall beside it. It rested upon hard impacted gravel without any trace of a special foundation. As no other columns were found in front of the building, it was at first thought that it was no longer in its original place, but had simply been left there in the demolition and removal of the buildings. This view must, however, be reconsidered in the light of the discovery in 1909 at Corbridge, in front of each of the granaries, of the bases of four pillars which had obviously supported a portico. In the case of the north building the foundations alone remained. These gave no satisfactory indication of the position of the doorway.

Masonry of the two Buildings

An interesting distinction was noticeable in the masonry of the two granaries. Both had the same strong cobble foundations. But the remaining masonry of the south building consisted of well-squared blocks of red sandstone showing no signs of alteration, while the north building had evidently been reconstructed. Its walls consisted of sandstone interspersed with blocks of blue greywacke from the river bed, and such old material as pieces of brick and quern stones. It seemed probable that it had been demolished during one of the periods of occupation, and again, at a later period, rebuilt on its old foundation.¹ Neither of the granaries just described can, however, have belonged to the Agricolan fort, for, as was mentioned above, the south building partly covered the remains of a large rectangular block occupying a space 80 feet in width and not less than 115 feet in length, and founded on sandstone chips, a feature which seemed to be characteristic of an early period. A human skeleton lay on the floor of the south building near the east end, and beside it were a denarius of Trajan and a second brass coin of Hadrian, a red veined marble bead, and a button. Probably these were relics of the final abandonment.

In all the British *castella* where stone buildings occur we find one or more of these buttressed storehouses, usually in close proximity to the Principia. We have several examples even in Germany, where buildings other than the Principia have rarely survived. A good instance is that at Weissenburg.² There the buttressed walls had two narrow slits for ventilation, a feature which was noted at Castlecary,³ and at Rough Castle,⁴ and also

1 Much the same feature was noted in 1909 at Corbridge as at any rate very probable.

2 *Der Obergermanische-Raetische Limes*, Lief. 26, Kastell Weissenburg, p. 14.

3 *Proceedings of the Society of Antiquaries of Scotland*, vol. xxxvii. p. 42.

4 *Ibid.* vol. xxxix p. 34.

at Corbridge-on-Tyne. [1] At one end were two small chambers, one of which, with a hypocausted floor, was perhaps an office for the *tabularius horrei*, while the floor of the main building was covered with burnt grain, showing the purpose for which it had been used. A human skeleton was found here too. It should be added the term *horreum* occurs in several inscriptions. Thus at Corbridge one of these buildings contained an altar erected by an officer who styles himself *praepositus curam agens horrei* that is, 'special superintendent of a granary.' [2] At Aesica on the wall of Hadrian we have a record of the rebuilding of a *horreum* by the garrison in 225 A.D., and at Niederbiber there is a dedication by a *numerus* of Britons to the genius of the *horreum*.

The Commandant's House

While none of the buildings dealt with so far would appear to have been constructed to serve as dwellings, the block which adjoins them on the south has the unmistakable characteristics of a dwelling-house. Parallels to can be found difficulty not in the but in towns it without only forts, such as Caerwent and Silchester. It lies between the south buttressed building and the south gate. We find a building resembling it in a similar position at Housesteads and at Lyne, and probably also at Birrens, Castlecary, Camelon, and Rough Castle, while at Gellygaer the corresponding building lies immediately to the north of the Principia. At Newstead the house was almost square, occupying a space of 130 feet in breadth by 122 feet in depth. The main entrance was from the Via Principalis by a passage eight feet wide. This passage gave access to a corridor which ran all round the house, enclosing an open court which formed the centre. On the outer side of the corridor were the doors of the various apartments. Its inner side directly adjoined the court, except at the west end, where an apsed room with two small wings projected beyond it into the enclosure.

Here, as everywhere in the fort, the walls had been reduced almost to their footings, and the floors and the sills of the doorways had all disappeared. It was possible, however, from the jambs to trace three entrances from the corridor into the central court, as well as the doorways of the entrance passage. At the south-east corner of the courtyard, close to one of the entrances from the corridor, lay a large slab of yellow sandstone, six and a half feet by three and a half feet. It had grooves roughly cut in it, and might have formed the base of a cistern. In the wall beside it was an opening for a drain,

1 *Archaeologia Aeliana*, 3rd series, vol. v. p. 6.

2 *Ibid.* p. 91.

the continuation of which it proved impossible to trace. The courtyard itself had been covered with fine gravel. In the absence of doorways it was not easy to determine the exact number of rooms that the house had contained, as some of the divisions may have been merely sleeper walls for the support of floors. It seems probable, however, that it had consisted of some nineteen apartments. That opening upon the entrance passage was perhaps inhabited by the porter.

On the south side facing the rampart were what appeared to be the kitchen and the servants' quarters. A black deposit lay on the floors of several of these rooms. In the floor of the second room from the south-east corner of the building was a small pit which yielded an iron pickaxe. On one side of the room next to it on the west was a built cellar or stoke-hole, shown in Plate XI., Fig. 2, thirteen and a half feet long by two feet one inch wide. Except on the south side the walls remained in fair condition to a height of about four feet. They were built of hammer-dressed sandstone courses. On the west side a depression in the wall suggested the position for steps. A flue or drain issued from the north end, but it had disappeared beyond the wall. It is possible that the house had rooms with hypocausts which were heated from here. Four bricks of a type commonly used for hypocaust pillars were found lying together in the corridor, but these were the only traces of any arrangement of the kind. Indeed, no hypocaust was discovered in any of the buildings within the fort itself. In the built cellar there was found a small globular pot of white ware, covered with a black engobe, like Castor ware.¹ In the room adjoining it were the remains of what had probably served as a hearth. It was placed in one corner, and was more or less circular in shape, twenty-one inches by thirty inches, and terminating in a flue-like arrangement; the whole measured five feet ten inches in length. The sides were formed by sandstone blocks. The suggestion that the offices of the house had been here is perhaps confirmed by the presence of the base of the cistern at this side of the courtyard as noted above. The entrance from the corridor would be arranged conveniently for drawing water. The rooms on the west gave little indication of their use. In one there was found a bronze key, in another a fragment of a vessel of yellow-brown castor ware; yet another showed traces of a floor of *opus signinum*—a pavement formed of broken brick and lime.

The apsed room projecting into the courtyard had been destroyed down to its cobble foundations, only a single stone of the scarcement course

1 Plate xlviii. fig. 40.

remaining. A wall foundation crossed it near the spring of the apse, either to carry the floor or to form the support of a raised platform. The ruin of this chamber with its wing on either side was too complete to furnish any indication of its use. Professor von Domaszewski suggests that it was a shrine—the shrine of the genius Praetorii.[1] The only indication we have of apsed rooms in Roman forts elsewhere in Scotland, other than those belonging to baths, occur in the corresponding buildings at Camelon and Castlecary. An apsed room forms part of a house in the same position at Chesters, and it is not improbable that from such a room in the fort at Chesterholm or Vindolana on the wall of Hadrian came three altars discovered in 1831, two of which at least bore dedications to the genius of the Praetorium. The building in which this discovery was made is described as standing a short way within the eastern gateway on the northern side of the main street. 'One of the rooms had a circular recess, and on the outside of it were found three noble altars with their faces downwards.' [2]

On the north side of the building the only indication of a floor was in the large room towards the west, where a layer of *opus signinum* had been put down over rough stone flagging. There was no sign of any arcading round the courtyard, and it seems probable that the wall of the house had been solid. The only detail of its construction obtained was at the north-east corner where the stones on the side next the passage had been neatly rounded. Fragments of window glass were found in the courtyard, which suggests that it had had glazed windows. Some indication as to this may be gained from the small wings of the apsed chamber. Between these and the inner wall a space of three feet has been left as if for light, which would not have been necessary had the corridor been partially open to the courtyard. A few fragments of red tiles were found in the courtyard. These had probably formed the roofing.

Buildings of the type we have been discussing occur more rarely in the Limes forts than in Britain. But even there examples are occasionally met with, occupying very much the same position as the house at Newstead. In Britain this building is usually identified as the residence of the commandant, and the plan of the house at Newstead points to no other purpose so clearly. Of all the buildings of the kind in this country, it is,

1 *Romisch-Germanisches Korrespondenz-blatt* Jahrgang ii. p. 40.

2 Bruce, *The Roman Wall*, p. 212. In this connection the inscriptions may be noted upon two votive plates of bronze adhering together preserved at York—one to Oceanus and Tethys, the other to the gods of the General's Praetorium (θεῖς τοῦς τοῦ ηγεμονικοῦ πραιτωρίου) by Demetrios the scribe.

perhaps, the most simple and symmetrical; and, although details of its construction are wanting, its general arrangement seems plain. The plans of the corresponding houses at Housesteads, Gellygaer, and Lyne are not sufficiently complete to enable us to fill up any of the missing details. The buildings in a similar position at Chesters and at Aesica show remains of hypocausts. Otherwise they add little to our knowledge. At Weissenburg on the Raetian Limes the group of administrative buildings is much better preserved than is usual in the smaller forts in Germany.¹ There the Principia, the Storehouse, and a square house with a central courtyard occupy the same relative position as at Newstead, while a number of the rooms on the side of the house farthest from the rampart have been furnished with hypocausts.

Although the general plan of the Newstead house differs from that of the majority of the ordinary Roman houses in Britain, we find, both at Caerwent and at Silchester, one or two private dwellings which closely resemble it. The best examples at Caerwent are the houses No.111² and No. VII.³ In both of these, the rooms open as at Newstead from the outer side of a square corridor which runs round the four sides of an inner court or garden. In house No.111 the corridor roof has been supported on columns, the sides having probably been open. The ambulatory was paved with tesserae of brick. At Silchester the same arrangement reappears in house No. 1 Insula XIV.⁴ All of these are buildings of some pretension, exhibiting traces of the refinement characteristic of private dwellings. Nor is this courtyard type of house confined to Britain. We find it, for instance, at Timgad in North Africa in the precincts of the Forum, perhaps as an official residence. In this case the roof of the corridor is supported by light shafts like a Moorish patio. And we find it at Mont Beuvray in France, where the building must date from the time of Julius Caesar or Augustus. In this dwelling, with its central court bordered by columns, M. Déchelette recognises the model of the *villae urbanae* of the end of the Republican period.⁵

The Officers' Quarters

Of the building which must have occupied the space on the north, corresponding to that occupied by the courtyard house on the south, almost no trace could be found. The surface soil was very shallow, and nearly

1 *Der Obergermanisch-Raetische Limes*, Lief. 72, Kastell Weissenburg.

2 *Archaeologia*, vol. 57, p. 301, pl. xl.

3 *Archaeologia*, vol. 58, p. 222, pl. viii.

4 *Archaeologia*, vol. 55, p. 216, pl. x.

5 *Les fouilles de Mont Beuvray*, 1897 to 1901, Paris, 1904, p. 45, fig. 4.

every remnant of stone-work had disappeared. That a building had once stood upon the site was, however, clear. A portion of a well-built wall of the usual character, eight feet in length, faced the Via Quintana, and in line with it further to the south were some post holes, perhaps the relics, of a still older structure. Towards the middle of the space a short length of a flue was also discovered, running north and south. But, carefully though the ground was trenched, it proved impossible to lay down any definite plan. Still, it is safe to assume that here also, as at Lyne and Birrens, there was situated another more or less square block of building, forming the quarters of some of the officers other than the commandant.

The Barracks in the Praetentura

We may turn now to the long lines of huts which occupied the Praetentura, or, in other words, the space between the Via Principalis and the east rampart. These were the barracks of the soldiery. The buildings consist of twelve rows of small huts arranged in pairs, each pair having a street between them. Six of the rows lay on each side of the main road leading from the Principia to the east gate. Many of the foundations had been much disturbed, lying, as they did for the most part, quite near the surface. Only the rows on the north and south (Blocks I and XII) could be traced in their entirety. These were more deeply covered owing to the mass of soil and clay which had been thrown down in the destruction of the rampart. The same cause had preserved the huts at the east end of the other rows. Except in the case of Block No. II, where even the foundations had almost entirely disappeared, the lines of the front and back walls of the huts that had composed the rows were plainly made out. Further, the number of cross-walls recovered was sufficient to warrant the conclusion that the internal arrangement of the twelve rows had been identical, and that each had contained eleven huts. The rows (with the exception of Block No. I, which measured 205 feet) were about 190 feet in length. Each hut occupied a space of thirty-five feet by about fifteen feet, there being some variation in size. The huts in the row were separated from one another by intervals of two feet, and the streets between the lines had a width of twenty-three feet.

In addition to its greater length, Block No. I presented certain peculiarities that should be noted. The foundation of the south wall was continuous, although the cross-walls of the huts were separated by the usual intervals. Again, the huts themselves were somewhat smaller in

dimensions, generally occupying a space of about twenty-four feet from front to back, and varying somewhat in width. The hut next the rampart at the east end of the row was, however, as much as thirty-five feet in length, and projected towards the north beyond the line of its companions. This suggests that a verandah may have run along the front, as was the case at Gellygaer and elsewhere, but no trace was discovered of posts for its support. The exceptional length of the row, which has been already noted (205 feet), was doubtless intended to compensate for its reduced width.

The soil on which these huts lay showed many traces of occupation. Pottery was of frequent occurrence, especially on the site of Block No. 11, where a fine bowl of Lezoux ware, bearing the stamp of Cinnamus,¹ and another decorated bowl,² as well as some coarser dishes, were discovered. At the west end of Block No. IV a number of iron objects—portions of wheel tyres and rings from axles—were found. Many small bronze objects, enamelled trinkets, and coins also came from this area. The most interesting find was, however, a bronze oenochoe,³ which was taken out of a rubbish pit under Block XII. The pit was clearly of earlier date than the building, for the dividing walls of the two huts at the east end were built over it, and its existence was only ascertained by observing a slight subsidence of the foundations above it. The pit was not the sole evidence of an earlier occupation of the Praetentura. To the south the ends of the rows lay over the ditches of the Agricolan fort, and between Blocks I and III there were discovered the foundations of a large building, which, since it crossed the Agricolan ditch, could not have belonged to the first occupation, but must yet have been earlier than the lines of huts above it. Trenches had already been driven across the Praetentura from north to south, in hopes of finding earlier buildings, but without result, when in February, 1908, in cutting across the line of the Agricolan ditch, the workmen came upon the heavy foundations of the building of which we have been speaking. They lay at a considerable depth a trench had been cut down some two feet into the subsoil, and in this had been laid heavy sandstone blocks, from three feet six inches to three feet nine inches thick. As illustrating the level of the building, it may be noted that the top of the foundation at the east end lay from seven feet ten inches to five feet three inches below the modern surface, while in the case of the later buildings, the distance from the surface to the bottom of the foundations was only three

1 Plate xlv.

2 Plate xl. fig. 14.

3 Plate lv.

and a half feet. The early building was of a long rectangular shape occupying a space of about 224 feet by 57 feet, the interior measurements being 217 feet by 50 feet. Whether any further remains of older buildings lie beneath the surface of the Praetentura is uncertain. Excavation was carried some distance to the north on the line of the east wall of this block, in hopes that a series of early barracks might come to light. But nothing had been found when the exigencies of cultivation interfered to put a stop to the search.

The rows of huts at Newstead take the place of the long buildings which we see in the plans of Birrens, Camelon, Gellygaer, and Housesteads. The Newstead blocks are of greater length than any of those mentioned, but this is largely due to the huts being separate constructions with an interval between each. At Camelon and Gellygaer only the outlines were recovered; the excavation obtained no evidence as to the internal sub-divisions. At Birrens a few partitions are noted, but the plan is plainly incomplete. At Housesteads, the numerous partitions which were traced belonged to different periods, and it was thus a matter of difficulty to determine the exact manner in which the blocks had been subdivided at any one time. The use of these buildings and their internal plan is made plain from a study of the barracks in the three legionary fortresses of Novaesium, Lambaesis, and Lauriacum. In the case of a field force, tents of leather were employed to house the soldiers, and probably in the earliest occupation of Newstead only tents were used, if we may judge from the number of tent pegs which the ditch of that period yielded. In the more permanent forts, however, tents must have gradually given place to buildings of wood and stone, although in the Newstead huts and in the subdivision of the long blocks the tent tradition obviously survives.

Hyginus, laying down his rules for the encampment of a large field army, deals with the space occupied by its different units. It was customary to quarter the soldiers according to centuries. Two centuries, which in his time were each composed of eighty men, were grouped together in pairs, each pair forming a maniple. The maniple occupied a space 120 feet long by 60 feet broad, which was termed a *striga*. A *striga* comprised twenty tents, arranged in two parallel lines of ten, the lines being separated by a road twelve feet wide. Between each tent and its neighbour was a space two feet in width, the *incrementum tensurae*. The single rows were termed *hemistrigia*. In the width of the *hemistrigium* the eight soldiers grouped together

in each tent were allowed a space of ten feet, five feet were allowed for arms and equipment, and nine feet for packhorses or other beasts of burden.

While it is certain that in the great legionary fortresses, and also in Newstead, the principle of the system described by Hyginus underlay the whole arrangement, it is quite clear that considerable latitude was permitted in its application, both as regards the space covered by the *strigae* and as regards the number of huts which they contained. At Novaesium we find thirty-one of these double lines each longitudinally divided by its street or court. Twenty-one of the *hemistrigia* contain eleven rooms. In this respect they resemble the blocks at Newstead. There is, however, an important difference. At one end of each line is a larger house projecting beyond the line of huts, in some degree resembling the projection at the end of Block No. I at Newstead. This is generally recognised as the dwelling of the centurion. The two projections belonging to each pair faced one another, while on either side of the road beyond there ran a line of posts or pillars, which must have supported a verandah. Attention has already been drawn to the fact that both of these features are to be seen reproduced in the first century fort of Gellygaer. At Lambaesis, which originally dates from the reign of Trajan, the barrack blocks have thirteen huts in each line, and the line terminates in a larger dwelling like the houses believed to have been occupied by the centurions at Novaesium. M. Cagnat thinks it possible that ten of the thirteen huts at Lambaesis were occupied by the eighty men of the century, each hut being allotted to a *contubernium* of eight men, while the three that remain might have been used as offices,¹ or as the quarters of the officers of lower grade, such as the *optio* or the *tesserarius*. It is to the shrines of these barrack blocks that he attributes three inscriptions found at Lambaesis, dedications to the *genius centuriae* by the *optiones* or by veterans.

The eleven huts of the Newstead row might have been distributed ten to the men and one to the inferior officers, but we have no trace of the centurion's dwelling. It seems probable that, in the interval that elapsed between the erection of the buildings at Lambaesis, Novaesium, and Gellygaer, and the final occupation of Newstead in the second half of the second century, some modification had been made in the plan of such barrack buildings. Discipline was to a certain extent relaxed, and probably greater space allowed to troops. Certainly in the barrack lines at Lauriacum² on the Danube, a legionary fort dating from the time of Marcus Aurelius, the

1 Cagnat, *Les deux Camps*, p. 54.

2 *Der Römische Limes in Österreich*, Heft viii, Taf. ii.

barrack blocks are divided into twelve huts of more or less uniform size and character, and the centurion's dwelling is absent.

Unfortunately, the remains of the Newstead huts gave no clue to their internal arrangements. It is, however, probable that they were to some extent divided by partitions. This was the case in the legionary forts, and apparently also in the barrack blocks at Housesteads. At Novaesium each hut is divided into two unequal portions. In the inner and larger room lay the men, and in the outer one were stored the arms and baggage, while it has been suggested that, following the Hyginian plan, the beasts of burden were haltered below the verandah. At Lambaesis and at Lauriacum the internal arrangements of the barrack huts are revealed still more clearly. In both of these fortresses we have the large inner room for the men, while the outer room is divided into an entrance passage and a small room, partitioned off for the arms and stores. There can be little doubt that a somewhat similar arrangement must have obtained in a permanent fort such as Newstead. Whether the animals were tethered in front of the huts is more doubtful. We have no trace of the covered verandah, which would be almost essential for this purpose in the rigours of a Caledonian winter; and it may well be that, in the comparative security of a walled fort, the animals were no longer tied by the tent-doors, but were housed more suitably elsewhere.

In the Retentura of the fort there are two classes of structure to be dealt with—long narrow buildings which are obviously barracks, and others whose identification presents greater difficulties.

The Retentura

Block XVII, measuring 198 feet by 37 feet, lay in the rear of the courtyard house. The walls were two feet in thickness, and in places they were still standing to a height of two feet, showing four courses of hammer-dressed masonry. A single buttress was noted supporting the wall on the east side. The building was probably entered at the south-east end from the Via Quintana. A corridor, nine feet wide, ran along the west side, giving access to the various rooms. At the north end it was crossed by a number of dwarf walls set apart at irregular intervals, with air passages between, intended no doubt to keep the building dry, or perhaps to heat it. There were, however, none of the usual signs of a hypocaust. This building has perhaps a parallel in Block XI at Housesteads which occupied much the same position. At Housesteads one of the rooms contained an apsidal structure, possibly the remains of a bath, which helped, along with other features, to differentiate the block from the ordinary

groups of barrack huts. In length, Block XVII at Newstead did not differ much from the Blocks I–XII in the Praetentura, but its internal arrangements seem to have been different. Besides, were we to include it as a barrack with the blocks lying beside it on the west, the plan would present the unusual feature of seven blocks placed side by side, whereas in the Praetentura they are placed, as in other forts, in pairs. It is not improbable that the building may have been the quarters of the superior officers' commanding the troops who lay in the barracks beside it on the west.

A Workshop

Block XVIII occupied a space of fifty-one feet by sixty feet. It lay immediately to the north of the preceding, and was strongly built on a foundation of cobbles. A hedge with some large trees crossed it diagonally, and this rendered thorough examination difficult. But it may be noted that no traces of cross walls were discovered, and nothing of the interior arrangements, beyond a large flagstone on the west side, which from the burnt appearance of the clay beside it might have been a hearth. It is not easy to point to a similar building in any fort hitherto excavated elsewhere. The position is that of the *Quaestorium*, or office occupied by the paymaster, on the Hyginian plan. The title has been applied to buildings found in the Limes forts in Germany, but the correctness of such an attribution appears to be very doubtful.¹ The position and size of Block XVIII seem rather to indicate that it may have been a workshop.

Between Blocks XVII and XVIII lay a small building which was not in alignment with either, and which was founded at a lower level. It occupied a space of forty feet by twenty-five feet. The walls were two and a half feet thick, and seemed to have been built almost entirely of whitish yellow sandstone, and to be founded upon one foot's depth of broken chips of the same stone lying on a bed of sand. At one point the wall was fifteen inches high and showed two hammer-dressed courses. The whole floor was covered with river cobbles laid in finely puddled clay. The relative level of this building as compared with that of Block XVII is shown by the fact that the highest point of its wall lay from four feet nine inches to five feet below the modern surface, while that of Block XVII, of which the same height remained, was little more than eighteen inches down. A

1 Von Domaszewski expresses the opinion that there is not the smallest proof of the provision of a *quaestorium* for a permanent camp. *Neue Heidelberger Jahrbücher*, Band ix. p. 145, note 44.

drain which passes through the 'reducing wall,'¹ near this point had been carried through the building. The method of foundation, and the depth at which it lies, associate this small structure with the early walls lying below the Principia and Block XIV in the Praetentura. All probably belong to the same period. Its size suggests a single hut in a barrack line. But it was unfortunately discovered towards the close of our work in this area, and at a time when it was impossible to ascertain whether any similar huts lay beneath the adjoining buildings.

The Stables

To the north of Block XVIII lay a building covering a space of 280 feet by 40 feet, and therefore exceeding in length anything else in the fort. Like most of the other buildings it was founded on cobbles, and it had walls of sandstone two and a half feet thick. The outline of the whole was uncovered, and zigzag trenches were carried from end to end of the building. These latter failed to bring to light any signs of partitions or cross walls. Near the north end, however, on the east side of the building, was the foundation of a wall forty feet long, which had probably belonged to some earlier building. Pottery was almost entirely absent, and of the few metal relics discovered a small bronze key was the most noteworthy. Immediately to the west of Block XIX there was traced a trench running parallel to it, and extending the whole length of the wall. It appeared to have been employed for a foundation, though all traces of stonework had disappeared. Possibly it had belonged to a second block of equal size. At Gellygaer, which in the opinion of some scholars has been planned for the occupation of a *cohors quingenaria equitata*, we have a long building (Block IX) occupying a space of about 147 feet by 40 feet, and divided longitudinally by a single partition wall. This was probably used as a stable for the horses of the cohort.² The building at Newstead, covering nearly double the area of that at Gellygaer, is practically the same width, and may well have been employed for the same purpose.

Barracks in the Retentura

To the south of the road, in the space which lay between Blocks XVII and XVIII and the rampart, was a series of barrack blocks. The remains were very scanty, often not more than a single stone of the footing of the walls being left. The walls appear to have been about two feet in thickness. The

1 See p. 33 *supra*.

2 Professor Fabricius, in discussing the plan of Gellygaer, allocates this building to the cavalry: *Römisch-germanisches Korrespondenzblatt*, 1908, p. 34. See also the opinion expressed by Professor Ritterling, *Kastell Wiesbaden*, p. 40, footnote.

buildings were arranged in six blocks, forming three *strigae*. Only one of these (Block XXV) could be traced for its entire length to the edge of the road leading to the west gate. It measured 270 feet. It seems likely that Blocks XX to XXV were of the same length, and that they also extended northward to the road. Block XX was probably shorter. Its width, thirty feet as compared with fifteen feet in Block XXV, would more than compensate.¹ Although the excavation gave unsatisfactory results owing to the scanty nature of the remains, it seems plain that in these *strigae* we have the same system that had been followed in laying out the barracks of the Praetentura. The walls of the blocks, however, are continuous. Besides, the blocks themselves were, with the exception of No. XX, much narrower, and accordingly the huts were so arranged that they lay with their greatest length towards the street. Hardly any of the cross walls were found, but Blocks XXIII and XXV each furnished one complete hut which serves to give an indication of the rest. These huts measured respectively twenty-one feet by seventeen feet and twenty-one feet by eleven feet. As has already been noted the size of the huts in the Praetentura (Blocks I to XII) varied slightly. If this variation is allowed for, it will be found that the measurements of the two huts of the Retentura, and therefore presumably their fellows, go far to indicate that Blocks XXIII and XXV were similarly sub-divided into ten or eleven huts.

Barrack Yard

In the space which lay to the north of these *strigae* there was no trace of any corresponding buildings. The ground was carefully trenched down to the subsoil, but, with the exception of a large circular oven, nothing was discovered to suggest that the space had ever been occupied. This oven was of the usual horse-shoe type. It lay almost on the line of the rampart of the early fort to which it possibly belonged, and close to the street leading to the west gate. The wall stood about one and a half feet high, and was composed of cobbles and stone from the Eildon Hills embedded in clay. The wall showed a batter on the exterior. The opening of the oven lay towards the east. The clay was of an orange red colour, showing that it had been exposed to fire. Remains of two other smaller ovens lay beneath Block XXV, and were apparently of earlier date. The ground of this area appeared to have been covered with coarse gravel. It is curious to note that even in the earlier fort, to which

1 We have already noted in the Praetentura the greater length of Block I to compensate for its smaller width.

the barrack buildings just described cannot possibly have belonged, the signs of occupation were much greater in the southern than in the northern half of the area. The Agricolan ditch north of the west gate yielded almost no relics. The same ditch on the south contained many fragments of pottery, pieces of leather, and metal objects which had been thrown into it. If, as seems probable, the cavalry of the garrison was stationed in the Retentura, we may see in the *strigae* here the quarters of the men, and in the long building (Block XIX) the stables for their horses, while the open space on the north would form a convenient barrack yard.

The Garrison

While the information obtained from the exact subdivision of the Newstead barrack blocks enables us to arrive at some approximate estimate of the size of the garrison, we are unable to speak definitely as to the troops which composed it. The absence of inscriptions is much to be regretted, for those found in the course of the recent excavations add little to what was already known from the discoveries of altars in the eighteenth and nineteenth centuries. Altogether, we have from the site three altars bearing dedications by G. ARRIUS DOMITIANUS,¹ centurion of the Twentieth Legion Valeria Victrix, three stones bearing the legion's cognizance, a boar, and one fragment of a tablet, which appears to refer to the same legion. We have also a dedication of an altar by AELIUS MARCUS,² decurion of the Augustan Ala of Vocontii, and another by L. MAXIMIUS GAETVLICVS,³ who simply styles himself a centurion of a Legion, but who is no doubt identical with LVCIVS MAXIMIUS GAETVLICVS, a centurion of the Twentieth Legion, whose altar dedicated to Jupiter Dolichenus has been found at Aesica.⁴ These dedications are all by individuals, and from none of them do we learn the precise capacity in which the dedicators were present at Newstead. Was G. ARRIUS DOMITIANUS, who is responsible for no less than three, or L. Maximius Gaetulicvs, in command of legionary troops? Or were either of them seconded to command a garrison of auxiliaries? Were these soldiers contemporaries? Or do their dedications date from different epochs of the fort's history? These are questions which so far we are unable to answer with confidence. The altar of G. ARRIUS DOMITIANUS, which was found in the pit in the Principia,

- 1 (1) DEO SILVANO PRO SALVTE · SVA ET SVORVM G·ARRIVS DOMITIANVS > LEG XX·V·V·V·S·L·L·M.
 (2) I · O · M · G · ARRIVS DOMITIANVS > LEG XX · V · V · V · S · L · L · M.
 (3) DIANA REGINAE : G · ARRIVS DOMITIANVS > LEG XX · V · V · V · S · L · L · M.
- 2 CAMPESTR(IBVS) SACRVM AEL(IVS) MARCVS DEC(VRIO) ALAE AVG(VSTAE) VOCONTIORVM
 V·S·L·L·M.
- 3 DEO APOLLINI L · MAXIMIUS GAETVLICVS · > LEG. 4 *Archaeologia Aeliana*, vol. xix. p. 271.

had been placed there after the reign of Hadrian. The other two altars which bear his dedication both appear to have come from the ditch of the east annexe, which cannot belong to the earliest period of occupation. The *nomen* Aelius of the decurion Aelius Marcus suggests that he lived not earlier than the reign of Hadrian. The few fragments of pottery associated with the altar of L. MAXIMIVS GAETVLICVS indicate that it had been thrown into the pit in which it was found during the second century.

Probably, then, all of the altars belong to the second century. At the same time the evidence they convey is insufficient to determine the garrison of the fort at any one period. On a permanent frontier, such as we have in the German Limes, the legionary troops were stationed in the rear—in the great fortresses at Windisch, at Strassburg, at Mainz, at Bonn,—while the auxiliaries held the chain of smaller posts that marked the actual line of the frontier. Such obviously was the case in Britain too during the more or less settled period which appears to have followed the advance of Lollius Urbicus. The legions lay at York and at Chester; the auxiliaries—Tungri, Baetasii, Hamii, Nervii, and others—occupied the posts on the Wall of Hadrian and the Vallum of Pius, as well as on the lines of communication. There is no doubt, however, that the legionary troops took part in the expeditions into the north and in the building of the Vallum of Pius. The Ninth, the Second (Augusta), and the Twentieth Legions, possibly also the Second (Adjutrix), accompanied, or may have accompanied, Agricola in his expedition into Caledonia. The Second (Augusta), the Sixth, and the Twentieth Legions all took part in building the Antonine Vallum, and we find the traces of legionary troops as well as of auxiliaries in more than one of the Roman forts in Scotland. From Castlecary, we have inscriptions commemorating the Second and Sixth Legions and the First Cohort of Tungrians.¹ From Birrens we have inscriptions of the Sixth Legion, the Second Cohort of Tungrians, and the First Cohort of Germans styled Nervana.² The evidence from the inscriptions on the Wall of Hadrian seems to prove that from time to time advanced posts were garrisoned by legionary troops, as, for example, the dedication of an altar to the god Cocidius by soldiers of the Twentieth Legion, which was found in a mile castle to the west of Birdoswald, and is now at Lanercost.³ As a matter of fact, the presence of this legion in the north is attested by many inscriptions, not only

1 *Proceedings of the Society of Antiquaries of Scotland*, vol. xxxvii. pp. 75, 78.

2 *Ibid.* vol. xxx. p. 47 ff.

3 Bruce, *The Roman Wall*, p. 268.

from the line of the wall, but also from forts in front of it, as at Netherby, or in its rear, as at Lanchester.

At Newstead the three altars of G. ARRIUS DOMITIANUS give him no title higher than that of centurion, nor have we evidence of any other kind that he was set over a garrison of auxiliaries, though instances of such employment of a centurion are known elsewhere. But the mere fact that he appears to have dedicated three altars suggests that he was a personage occupying a position of prominence. That L. MAXIMIVS GAETVLICVS belonged to the Twentieth Legion seems evident from the altar found at Aesica. [1] Of the three representations of the boar, the symbol of the legion, two at least are on heavy stones that must have formed parts of buildings. The fragmentary inscription from the upper level of the pit in the Principia is too incomplete to base theories upon, but it also has evidently dealt with the Twentieth Legion. When we add to the testimony of these stones the indications of change and alteration, gleaned from the foundations of the fort, and confirming what we may learn from history of the short and somewhat insecure hold that the Romans gained in Scotland, it would clearly be unsafe to conclude that the garrison of Newstead was necessarily an auxiliary force. Rather, it appears probable that at one period of its existence the fort had held a contingent, possibly a vexillation, of the Twentieth Legion; but the evidence seems insufficient to enable us to define this period with certainty.

The general plan of the fort suggests that the barracks of the Praetentura were constructed for infantry, and that the Retentura was laid out for the occupation of cavalry, and we might suppose that in its latest period the soldiers of the Twentieth Legion occupied the lines of barrack blocks of the Praetentura, while the horsemen of the Vocontian *ala* were quartered in the Retentura. When, however, we endeavour to dispose of this force in the buildings discovered, the scheme is not without difficulties. The sixty centuries which composed a legion were grouped in ten cohorts each consisting of three maniples. At Lambaesis three *strigae*, forming the barracks of a cohort, are to be seen on either side of the Porta Praetoria. The same arrangement existed at Novaesium, and we have a similar disposition of the buildings at Newstead. In both of these larger forts we are dealing with the housing of legionary troops, and we know that the legionary century of the time of Hyginus was composed of

1 We have a parallel instance at Auchendavy on the Antonine vallum where we find four altars dedicated by the centurion M. COCCEIVS FIRMVS of the Second Legion AVGVSTA.

eighty men, and that in each of its ten tents eight men were quartered, making a total of 480 for the legionary cohort. Accordingly, if we assume that the inscriptions found at Newstead give us a clue to the nature of the garrison in its final period, we must place in the barracks of the Praetentura two cohorts of 480 men, in all 960, and in the barrack blocks of the Retentura the horsemen of the Vocontian *ala*.

Of the history of this *ala* we know little. At some time in the first century it appears to have been stationed in Lower Germany. But it was specially associated with Britain, for an inscription found at Hemmen in Germany bears a dedication by a decurion who styles himself '*decurio alae Vocontiorum exercitus Britannici*,'^[1] a descriptive title doubtless used to distinguish it from another *ala Vocontiorum* which was stationed in Egypt. If we assume that it was a force nominally of 500 men, an *ala quingenaria*, it would probably consist of 480 men divided into sixteen *turmae* or troops each containing 30 men, and each commanded by a decurion. As the officers of each troop—the decurion, the *duplicarius*, the *sesquiplicarius*—had each more than one horse, the horses of the *ala* might number as many as 544. Now, if we assume that the men of the *ala* occupied the barrack buildings of the Retentura, and that the long building to the north (Block XIX) was their stable, we are met with the difficulty that the accommodation for the horses would obviously be insufficient, unless indeed we were to assume, from the single foundation trench lying to the west, that a second block of the same size lay beside it—an assumption which the evidence is, perhaps, too slender to justify.

If, again, we suppose that the garrison was, during the last period of occupation, a purely auxiliary force, the numbers must be estimated on a somewhat different basis. The auxiliary cohorts were either *miliariae* or *quingenariae*, that is, they had nominally a strength of 1000 or 500 men. They were primarily infantry forces, but most of them were *equitatae* or furnished with a certain proportion of mounted men. A *cohors miliaria equitata* was composed of 240 horsemen, or ten *turmae* of twenty-four men, and of 760 infantry. The infantry were quartered in ten centuries. On the other hand, a *cohors quingenaria equitata* was composed of 120 horsemen and 360 infantry, or 480 men in all. The infantry were quartered in six centuries, each of sixty men. Now the twelve barrack blocks of the Praetentura at Newstead were not apparently constructed to hold a *cohors*

1 *C.I.L.* xiii. 8805.

miliaria. On the other hand, it is possible to adopt the view of Professor von Domaszewski,¹ and argue that they were intended to hold the infantry of two *cohortes quingenariae equitatae*—360 men on each side of the gate. That the number of occupants in each hut should be reduced to six instead of ten, as in the auxiliary encampments referred to by Hyginus, von Domaszewski attributes to the relaxation of discipline which had taken place in the interval, bringing with it larger ideas of comfort. In the Retentura, according to this hypothesis, there would be stationed the 240 horsemen of the cohorts. In Block XIX there would just be space to accommodate the horses of the two cohorts, tethered in two double lines.² In any event, it is apparent that in its final period the number of the garrison cannot have been more than 1500. Nor can it have been less than 1000, for any smaller force would have had difficulty in holding the circuit of its walls against a determined foe.

1 'Das Lager bei Newstead' *Römisch-Germanisches Korrespondenzblatt Jahrgang ii.* p. 40.

2 In arriving at the space necessary to accommodate this number of horses, we have to acknowledge the help of Professor Ewart and of Colonel H. J. McLaughlin of the Army Remount Department.