ROMAN DEFENSIVE WORKS.

By G. T. CLARK.

Following the British works, in number as in age, are those of the Romans, also very numerous and very generally diffused. These, as was to be expected, are of a far more scientific character and more worthy of the name of camps than the entrenchments of the Britons. The two visits of Julius Cæsar B.C. 55 and 54 to a certain extent made known the Britons to the Roman world, and when Aulus Plautius arrived in Britain, A.D. 43, he found a coinage in general use, roads, it is believed, between the principal settlements, a considerable commerce with the neighbouring states of Gaul, and various indications of a considerable advance in civilization. The actual work of Rome in Britain was completed between the arrival of Plautius and the departure of the legions, A.D. 411, or in 368 years; but what the effect was of that occupation upon the character of the Britons is not clearly ascertained. The earlier part of the Roman period was a time of immense military activity, both in Britain and Caledonia, and its traces are left in various works, chiefly of a defensive character, scattered broadcast over the country from Dover and Richborough to Inverness, and from Colchester to Caer-Segont and Octopitarum on the Irish Sea, many of them evidently intended to protect a few score soldiers for a few days or weeks, others of a larger area to contain an army. Roman earthworks generally seem to have been thrown up in the times of their earlier and aggressive warfare, and this was particularly the case in the strong country north of the Forth and Clyde, where the resistance was stubborn and incessant. Once fairly in possession of a district, the Romans laid out roads, and constructed works in masonry

of a substantial character. Under their sway London, the existence of which was unknown to Cæsar, became an important port, corn was largely grown and exported, law and order prevailed, and there sprang up those numerous villas and country-houses of which so many traces remain, and which show that when they were occupied the adjacent country at least was at rest. Of the simpler and smaller camps, "castra æstiva," Britain contained a vast number, though, being mostly on low land within reach of cultivation, they are fast disappearing; but it is in Scotland, and especially on the verge of the Scottish Highlands, that the finest and most numerous examples are found. There is probably no part of the old Roman empire in which the traces of contest are so clearly marked, and fortunately they have been surveyed and reported upon by a very competent observer, General Roy, and such as remain are being laid down in the large scale surveys of Scotland now in progress. The larger camp at Ardoch in Perthshire, where Agricola is thought to have won his last great battle, is 930 yards long by 650 yards broad; that at Dalginros is 400 yards by 316 yards inner area. Battle Dykes near Forfar measures 350 yards by 616 yards and includes eighty acres. Some of these camps are calculated to have held from 25,000 to 70,000 men.

Independently of its peculiar plan and its well-known and well-marked details, a Roman camp may be usually recognised by its position. The Britons, before the Roman period, lived mainly by hunting, and with the usages of savage tribes, inhabited the tops of hills, whereas the Romans, waging war after a civilized fashion, were accompanied by baggage and other impediments, and camped in low grounds, readily accessible and within reach of water. The Briton was easily taken unawares, and trusted mainly to the difficulties of his position; the Roman relied upon his discipline against surprises, and upon his firmness and superior arms when attacked. The difference between a Roman and a British camp, no less in their form than in their position, cannot be better illustrated than by the contrast between the works at Dorchester on the Thames and those upon the opposite hill of Wittenham, positions specially interest-

ing, because in all probability the works below are those of Aulus Plautius during his earliest advance into the interior of Britain. The district, indeed, is rich in the remains of the past. The British entrenchment of Sinodon still commands the whole valley of the Thames, the river and the hill being almost the only features bearing any trace of their British name; below is Wallingford, probably a work of those same Britons when about to become "Weallas," or strangers, in their own land. At Bensington, hard by, the two chief elements in the English people, the Saxons and the Angles, battled for supremacy. The ford at Wallingford, commanded by the moated mound of the English Wigod, was crossed by the Conqueror in his way from Hastings to Berkhampsted through the, as yet, unconquered England, and at Crowmarsh are the works thrown up during the memorable siege of the castle by King Stephen. Few spots are so rich in points of interest in the history of our island.

A Roman camp may readily be recognised. It is almost always rectangular, usually oblong, with the angles rounded off. It is never circular, nor so laid out as to follow the irregularities of the ground unless these render regularity impracticable. The defence is a bank and an outer ditch, usually single. The bank is generally simple and light, the ditch of no great depth. The defence was completed by short palisades of split timber, "Paxilli fissi." The particulars of these palisades are given by Latin military writers, and in the last century part of an actual stockade, with several whole posts, was discovered preserved in peat along the line of a Roman agger near "Etocetum" or Wall in Staffordshire. The posts were oak trunks, twelve feet long, of which one third was intended to be in the ground, and each had a notch or chase three feet long from the top, and four inches wide, forming, when two were placed together, something between a loop and an embrasure, for sight and defence. At intervals the line was supported by a sort of a buttress turret, also of timber. Other stockades have more recently been laid open with the city of Carlisle. Roman camps have always more than one entrance and the larger ones have four, one in the centre of each end, and one in each side, but rarely in its centre. This

is said to be especially the case in later works, and is seen at York and Winchester. The prætorium or quarter of the commanding officer was in one of the four divisions formed by the intersecting roads, and had its special bank and palisade. This regularity of outline enabled the soldiers on marching into a camp to take up their post without confusion, as now in marching into a barrack. The prætorian gate was at one end, the decuman opposite to it, the side gates being the "principalis dextra" and "sinistra." The soldiers were hutted in structures of earth and timber thatched or tiled. It appears that towards the decline of the empire, when auxiliaries were much employed and little to be depended upon, it was the custom to post them in the central part of the camp, placing the regular troops between them and the outer defences. General Roy found in some of the Scottish camps a confirmation of this arrangement.

The earthworks that remain to us of the more temporary camps, works thrown up on a march, or for a summer's campaign, are very slight. Where the station was of permanent importance it was usually walled. The Romans, in Britain at least, do not appear to have had recourse to those gigantic earthworks which were employed by their British predecessors and English successors. No people indeed knew better how to use the spade in their wars, or were more given to employ their soldiers as pioneers, but for great and permanent works, masonry was a more secure and probably not a more expensive defence than an earthwork of equal strength.

Roman camps are seldom on high, that is, on locally high ground. The "impedimenta" of the soldiery had to be considered. They are usually upon a road, and often as at Leicester, Brougham, and Brough, upon the low banks of a river which forms their fourth side, and frequently they guard a ford, and generally are so placed as to give full advantage of ground. In England these camps are mostly of moderate size. In Scotland the nature of the service forced the regular employment of large bodies of men in the open field, and the camps are of areas corresponding.

Many of the great and irregular entrenchments that bear the name of Cæsar, and are called Roman, may have been occupied by the Romans, but are clearly British, such are Cæsar's camp at Chobham, and that of Vespasian near Stonehenge, and such was the camp at Wimbledon, now ruthlessly destroyed. Hamden Hill, a very fine British camp in Somerset, contains Roman works, and what is described as an amphitheatre. There is a small but well-marked example of the intrusion of a Roman camp into a British work near St. Nicholas by Cardiff, and something like it at Loughor in the same county. When a camp was succeeded by a walled station, the general plan was retained, even to the rounding off of the angles, as at York and Lincoln.

Roman masonry is celebrated, and with reason, for its durability. Even where generally destroyed or built over, as in London, in parts of York, and at Leicester, its remains may be detected, sometimes worked up into the walls of a house, or seen in a cellar, or forming the base of a later wall. This is remarkably the case at Gloucester, where the industry of Mr. Bellows has laid bare a considerable fragment of a Roman wall, and at Horncastle, though the walls generally are gone, fragments have been detected whence the plan of the whole station has been deduced. The walls of stations were commonly from six to twelve feet thick and from twenty-five to thirty feet high.

In many Roman works on the Continent the wall was double, the space between being filled with earth. In Britain such walls as remain are of solid masonry. They are usually studded with bastion towers, placed at short arrow flights apart, sometimes square, more usually half round with flattened or stilted sides, and there is always a bastion capping each angle. These flankers have rarely any internal projection; they rose only to the height of the curtain, being, therefore, rather bastions than towers, and were solid or filled with earth and rubbish. Where made use of by the Normans, as at Porchester, they have been raised and their interior cleaned out and occupied, but the rough masonry shews it was not intended to be seen. Rutupiæ, or Richborough; Anderida, or Pevensey; Adlemanum, or Lymne; Calleva, or Silchester; Portus

Magnus, or Porchester; Cariannonum, or Burn; Burgh by Yarmouth in Suffolk; "Lindum," or Lincoln; "Venta Silurum," or Caerwent; "Castra Legionum," or Caerleon; are good examples of Roman fortifications, as are the multangular tower and adjacent wall at York, and the fragments of "Bannovallum," or Horncastle; of "Glevum," or Gloucester; and of "Verulamium," by St. Albans. Even where the Romans took possession of posts supposed to be British towns their works were laid out by Roman rule, as at London, Chester, Exeter, Winchester, Colchester, and Lincoln, all usually regarded as important British sites.

Roman works may also be recognised by the details of the masonry. The face work is often composed of cut stone in small cubical blocks, dressed by the hammer, pick, or chisel, sometimes to a pattern, and laid with open joints. Masons' marks are not uncommon. Where rubble is used it is laid in regular courses, with occasional bonding or chain courses of five or six layers of well-burnt red tile or thin flat brick, sometimes relieved by single or double bands of stone placed on edge or in herring-bone fashion. The mortar is well mixed, often with pounded brick, and always freely used. The arches are full centered and with deep rings. Sometimes in mixed Roman and Norman work the latter is executed with Roman materials, and the result is puzzling, as in the gatehouses at Porchester, and in parts of the walls of Colchester. At other places old materials are employed in wholly Norman work as in Guildford and Colchester keeps, and in the base of that of Chepstow. The keep of Penllyne and the curtain at Tamworth shew herring-bone work, but the materials used are not Roman, though the workmanship is imitated. In the outer wall of Rochester castle is a very curious mixture of Roman and Norman work, and part of Brixworth church, and of that of St. Botolph Colchester, contain work long supposed to be Roman, so close is the resemblance. At Colchester, where stone is scarce, Mr. Freeman is of opinion that the Norman and later builders continued to bake bricks after the Roman pattern. It of course frequently happened that Roman stations or towns retained their inhabitants under the English rule, and not unfrequently churches are found within Roman

camps and stations, as at Whalley, Manchester, Lancaster, Ilkley, Castleford and Porchester, and many of our cathedral cities.

Besides the great roads, the Watling Street and the Foss, the Ickneld and the Akeman Street, are many others, evidently laid out by the Romans. They are to be recognised by their direct undeviating course, occasional fillings up, solid foundations, and here and there surface pitching. Where the way has fallen into disuse, its broad and direct line and hard bottom may often be traced even over enclosed lands. This is seen very remarkably at High Cross at the intersection of the Watling Street with the Foss, and for that reason reputed the centre of Roman England. Here the two roads, though in part enclosed and in part disused, may still be recognised, and, looking northwards, the long line of the Foss may be seen stretching away over the hill and dale for Leicester, whence it is continued to Lincoln. It has been thought that the rectangular enclosures common in parts of Somerset, and laid out between cross or field roads, are of Roman origin.

Besides these camps and roads and fortified stations, are other Roman military works of not less importance. Of these are the lines of Agricola, thrown up A.D. 82, connecting the Friths of Forth and Clyde; those of Hadrian, A.D. 120, laid out also, originally by Agricola, between the Tyne and the Solway; and the lines formed a few years later, A.D. 139, by Lollius Urbicus, called after the emperor Antonius Pius, and supposed to have extended from Caeriden on the Forth to Alcluyd or Whithern on the Clyde, and represented by Graham's Dyke. There remain also the lines generally attributed to Severus, A.D. 211, though perhaps of later date, which consisted of a wall and towers, intending to reinforce the lines of Hadrian, sometimes attributed to Hadrian himself, and known along the Border as "The Roman Wall." This great work included about eighteen "castra" or forts along its course, averaging four miles apart, but unequally placed, and most numerous towards the two ends. Besides these were "castella" or towers sixty-six feet square, in greater number and nearer together, and about 300 "turres" or turrets twelve feet square, the whole

connected together by a wall and ditch, of which the former was eight feet thick and twelve feet high, exclusive of the parapet. The lines of Agricola have been investigated by General Roy, and a pleasant and accurate account of them is given in the recent Scottish History of Mr. Burton. Dr. Bruce's great work on the lines of Hadrian may be said to have exhausted that very interesting subject.

Notwithstanding the storms that have swept over the various inhabitants of the British Isles, it is not surprising that there should remain so many traces of Roman military works. They were certainly very numerous, and their masonry was of a most durable character. The Count of the Saxon shore, whose government embraced the coast line of Norfolk and Suffolk, Essex, Kent, and Sussex, had nine fortresses to defend, and the "Comes militum Britanniarum" had thirty-seven. Lappenberg, who mentions these facts, estimates the Roman force at one time in Britain as composed of about 19,000 foot and 1700 horse, and at the period of their retirement from the country they counted in it at least twenty-eight fortified towns, besides posts and stations in considerable numbers.