The archaeology of Roman Durham

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THE ARCHAEOLOGY OF ROMAN DURHAM

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INTRODUCTION.

Among the kindred fortifications of the Roman period situated in north-east England, those of County Durham have, in the present century, been forced into the position of poor relations. Lack of opportunity, and the absorbing problems of the Hadrianic Limes, have denied Durham a share in the application of modern scientific archaeology, and the work, so promisingly begun at Binchester and South Shields in the '70s, has sadly languished.

A century ago the defence of local antiquities was regarded, to some extent, as a point of honour, and too often zeal outran discretion. To-day, access of knowledge has enlarged our horizon; still, an archaeological thesis which advertises that its framework is political, must protect itself against the charge of parochialism.

However much the peoples dwelling between the Tyne and the Tees in prehistoric times may have been isolated from their neighbours to north and south, it would be idle to claim that Roman Durham represents more than an arbitrary slice of the hinterland of the main northern frontier. Yet, only so far as the objective part of our work is concerned have we observed the confines of the county. The basic idea has been to employ a localised group of materials as a touchstone to the vicissitudes of the frontier

as a whole and, in particular, to the military region lying behind the outpost forts. Naturally, in pioneer work of this kind, many of our conclusions can be but tentative, and a great deal of active research is required before provisional hypotheses can be established upon a sound foundation of fact. We have attempted throughout, however, to strike a balance between excessive caution and undue temerity.

Three main sections are to be observed in the book. The first section is concerned with the physiographical background, primarily important in determining early settlement within the region. The prehistoric survey, which follows, has been elaborated, in some degree, because there was no complete and authoritative study to turn to, but the proportion between this and the principal chapter, Durham in the Roman period, has not been unduly disturbed.

As far as the latter is concerned, the first object was to secure a bibliography of Roman antiquities in the county. Secondly, existing archaeological materials, such as the Hooppell and McIntyre collections from Binchester, the Blair collection from South Shields, and the Piercebridge collection from the recent excavations at that site, have been worked through and assimilated. Rubbings of all the inscrptions still to be found within accessible distance of Durham have been incorporated. Thirdly, search has been made for unpublished materials in private hands and, although

a certain amount of evidence must have escaped attention, the pottery from Fulwell and Ryehope, for instance, shows some success in this direction. Finally, it has been possible to undertake excavation on several sites, and, thereby, to ensure that we should achieve something more than a gazetteer of remains.

A work of this nature is largely dependent upon co-operation, and frequent notice of indebtedness will be found in the text. Permission to study existing collections was readily granted by Messrs. E.Bailey (Librarian, the South Shields Public Library and Museum), C.F.Battiscombe (Chapter Librarian, the Dean and Chapter Library, Durham), J.D.Cowen (Hon. Curator, the Black Gate Museum, Newcastle-upon-Tyne), J.Charlton Deas (Librarian, the Sunderland Public Library), and S.E.Harrison (Curator, the Bowes Museum, Barnard Castle). Messrs. James McIntyre and G.H.Richardson, and Canon F.H. Jackson, placed their knowledge of specific sites at my disposal, while on the technical side, I enjoyed the skilled services of Messrs. Cordingley and McIntyre, Cathedral Architects, and of Messrs. M.Hayton, W.Percy Hedley, J.A. Stanfield, and R.P.Wright.

Finally, nothing but courtesy and consideration was met with at the hands of those landowners and tenants to whom we made application for permission to excavate.

I

THE PHYSICAL BACKGROUND

to

EARLY SETTLEMENT

The North-East basin is one of the most clearly defined of the geographical regions of Great Britain. While the sea washes its eastern border from Teesmouth to the Aln, the landward boundaries are delimited by the rising ground of the Cheviots to the north-west, the Pennines to the west, and the North Yorkshire Moors and Cleveland Hills to the south-east. Moreover, the continuity of this encircling highland belt is interrupted only by the Tyne Gap, a vital link with the Atlantic seaboard, and by an equally important natural route to the south, the Northallerton Gate.

County Durham forms only the southern part of this major geographical region, but it is a distinctive unit. Bounded on the east by the sea, on the north by the valleys of the Derwent, Stanley Burn, and lower Tyne, and on the south by the River Tees from Crook Burn to the coast, it presents, roughly, a triangular plateau, sloping gently

eastwards from the apex, near Cross Fell, to the broad base of the coast line.

The drainage of the county, following the contours, is predominantly eastward and, in the case of the three major rivers the Tyne, Wear, and Tees, radiates from the Pennine watershed near Alston. The Permian plateau, however, possesses its own independent drainage in the shape of a number of small streams rising in the western elevation of the plateau, and, in many cases, carving deep gorges, or "denes," through the soft limestone of the coastal cliffs. It is significant that from Teesmouth to the Tyne estuary there is a complete absence of any coastal plain, a phenomenon possibly due to land subsidence for which we have independent evidence from another quarter.(1) The associated problem of sea-encroachment presents more difficulty, and, in view of its important historical implications, is reserved for consideration in a later chapter.

A general view of the county shows four main geological regions, each region distinct alike in topography as it is in stratigraphical constituent. But the topography to-day presents many differences from that of the prehistoric

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(1) e.g. Submerged forests off the coast at Whitburn. Longstaffe, Durham before the Conquest, Newc. Vol. Arch. Institute, I, 1858, p.46.

period when the majority of "our arable fields were ... dense forest, most of our meadows marshlands".[1] Although primitive vegetation maps of County Durham are to be distrusted since we have less than half-per-cent of the necessary data,[2] the recent advances in the analysis of the pollen content of peat, together with the evidence from geology and early literary sources, do admit a subdivision of the county into physiographic regions and an estimation of the comparative attractiveness of each region to early settlement. (3)

THE PHYSIOGRAPHIC REGIONS

To the west lie the Pennine moorlands, a Lower Carboniferous region, mainly over 1,000 feet, including the upper valley of the Derwent as far as Shotley Bridge, Weardale as far as Witton-le-Wear, and Teesdale as far as Piercebridge. Here glacial erosion has frequently resulted in rock exposure and the highest ground is covered by a deposit of peat. Peat analysis suggests that this region was once well-wooded, but open moorland would seem to have prevailed in the pre-glacial period. While offering facilities for

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(1) Fox: Personality of Britain, 2nd edition, p.9

(2) I owe this information to Dr. A. Raistrick.

(3) This work has been done in some detail by Mr. H. Thorpe in an unpublished thesis entitled The Geography of Rural Settlement in the Durham Region, now in the Durham University Library.

communication the elevation and scanty soil of the Pennine moorlands would render them comparatively unattractive to early settlement.

Between the carboniferous limestone of the Pennines, and the magnesian limestone of the coastal plateau lies the region of Coal Measures, embracing the lower portion of the Derwent Valley, the whole of the Team Valley, and the valley of the Wear from Witton-le-Wear to Claxheugh. This area has exercised a dominant influence on settlement in the county from prehistoric times until the present day. Essentially it is a low-lying tract of land, drained by three major rivers, whose valley are flanked by the Pennine spurs. The conjunction of geological and physical factors would produce a region inhospitable to early settlement, being predominantly marshy, and covered with dense vegetation particularly in the river valleys. The Derwent forests were, indeed, still celebrated in rhyme in the last century,(1) while a vivid picture of the barren soil and rank vegetation of the country west of Lanchester in the late eighteenth century comes from the pen of Thomas White, the arboriculturalist.(2)

Thrusting eastwards, however, through the coal measures, the elevated ridges of the Pennine spurs would, at least, provide a link between the western uplands and the East

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(1) quoted by R. C. Bosanquet. PSAN., 4, iii, p. 100.

(2) PSAN., 3, vii, p. 219.

Durham plateau, and thereby natural routes of overland penetration from the coast. The Ferryhill-Wackfield ridge is the most important of these, but we must note also the Sacriston, Cornsay, and Esh ridges focussing on Durham city. Finally there is one independent physiographic region in this area, Gateshead Fell, a wedge of upland and consequently of more open country, surrounded in prehistoric times, it would appear, by the marshes and dense forests of the boulder clays. To settlers penetrating by the Wear or Tyne it would offer a natural habitation site, just as the advantages of elevation, and open country, appealed to engineers of the military roads in the Roman period.

The third main physiographic region is that of the East Durham plateau situated between the coal measures and the sea, and bounded on the south side by a line curving from a little west of Darlington to the Hartlepools. Here the geological formation is that of the Magnesian limestone, and from its western escarpment some 500 feet high, the plateau slopes gradually to a height of 100 feet at the coast. The surface drainage, to which reference has already been made (p. 2), is good, the soil light, and the rock formation would tend to produce an area of open, or thinly wooded country, upon which one might expect to find a concentration of early settlement.

In contrast, the fourth main physiographic region.

south of the Permian plateau, and around Teesmouth, would seem to form a virtually impassable barrier to inland penetration by the Tees in prehistoric times. Extensive deposits of boulder clay, a legacy of the glacial period, overlie the whole area, and until the land was improved by drainage in the eighteenth and nineteenth centuries the river delta was marshland and apparently unoccupied. Remembering, however, the recent work by the Fen Research Committee, any inferences on early settlement from topographical data must be checked by a study of the archaeological evidence.

The above definition of the physiographical regions in County Durham, shows an exact correspondence with the different geological formations. In relating the two, however, allowance must be made for the fact that solid geology is not infrequently masked by glacial drifts and deposits which themselves have an important bearing on vegetation and therefore on human settlement. The Glacial movements in the north of England have recently been reviewed by Dr. Raistrick and Dr. K. B. Blackburn,(1) and it is not proposed to repeat their conclusions here. The significant fact to be born in mind is that whereas the main legacy of the ice-stream is a mantle of boulder clay, especially thick over the eastern part of the county (e.g. Teesmouth), there is also a wide distribution of sands, gravels, and morainic deposits formed by the retreating glacial

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(1) Trans. N. Nats. Union, I, Part I, 1931.

lakes, all offering to early man, different possibilities as settlement sites, according to his stage of culture. In the main these deposits are concentrated in the lower and central valleys of the rivers Tyne, Wear, and Tees, and their tributaries, producing islands of drier and more open country in the wet and forested claylands. Large spreads are located round Durham city, while the lower Tees and its tributaries are bordered not only by considerable stretches of sand and gravel, but also by a series of terminal moraines, rising about 50 feet above the boulder clay plains, and encouraging important settlement sites such as Sadberge and Yarm. The pre-eminent importance of these glacial deposits, in determining routes of penetration, and localising settlement in the area not only in the prehistoric period but also under the Roman occupation will be apparent when we turn to consider the distribution maps.

Conclusion.

A general physiographical survey of County Durham in prehistoric times, taking no account of the archaeological evidence, would present the following picture. To north and south the region was bordered by the eastward flowing rivers of the Tyne and Tees, whose valleys were heavily wooded and waterlogged in the central portions. Connecting these two valleys was a great block of low and damp woodland

occupying the Team, middle Wear, and middle Tees valleys, while respectively east and west of this central block lay the hospitable limestone plateau with its light soil and thin woodlands, and the open but unattractive country of the Pennine moorlands. Communication between these two latter regions was practicable on the one hand by the waterways of the Tyne and Wear, and on the other by certain overland routes via the Pennine spurs, and the gravel ridges of the river terraces. In contrast to the relative ease of east-west communications, the difficulties in the way of north-south routes are striking. The east coast plateau was cut off from Yorkshire by the marshy ground of the Tees estuary; further inland the steep banks of the Tyne, the dense forests in the Wear valley, and the violent flooding of the Tees, would discourage penetration through the centre of the county. Only the Pennine moorlands provided a natural link with adjacent regions to north and south, and there is at present no evidence to suggest that this route was greatly used by prehistoric man. In the following chapter the evidence for prehistoric settlement in the county will be set forth, and we shall endeavour to show the extent to which this distribution is dependent on the physiographical background outlined above.

II

PRE-ROMAN DURHAM

"The distribution of population in Britain in prehistoric times" writes Dr. Cyril Fox," is controlled by physiographical conditions."(1) The same influence is, indeed, to be observed at all stages of our civilization, tending to decrease only as man becomes less dependent upon his environment. We must be careful, however, to draw a distinction between a spontaneous movement and settlement of peoples such as the Beaker Invasion, and an organised military occupation, like that of the north of England in the Roman period, when the distribution of population is, in a sense, an artificial creation. With the admission that such a distinction exists it becomes pertinent to enquire why a study of the Roman occupation of County Durham should involve an introductory chapter on the prehistory of the region. A twofold answer can be given. In the first place a historical, as opposed to a purely archaeological review of the Roman occupation of any

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(1) op. cit., p. 78

province or unit of a province, demands that we shall be able to assess the type and strength of the culture upon which it was imposed. To neglect this is to refuse an objective to the conqueror. Secondly, while the soldier is not concerned with topographical features from the same point of view as the settler and husbandman, the requirements of strategy force him, at least, to take them into consideration. Thus while the distribution of pre-Roman settlement cannot prove the path of the conqueror, it is, in default of direct archaeological testimony, the most useful basis we have for postulating both road systems and occupation sites in the Roman period.

Applying "Fox's law"(1) we see that County Durham lies well within the so-called "Highland Zone." The term is not literally exact for half the county is below the 400 foot contour, and only the western third rises above 800 feet, but it is convenient to retain it for, as will be seen, the lateness with which cultures reached the North-East region in prehistoric times, and the consequent telescoping of those cultures once they arrived, are characteristic phenomena throughout the "Highland Zone." We shall find, moreover, in considering County Durham, that these cultural waves are predominantly sea-borne, that the key to the distribution of settlement is, as Leeds(2)

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(1) op. cit., pp 25-26.

(2) Leeds, Archaeology of the Anglo-Saxon Settlements, p. 18.

has observed for the Anglo-Saxon invasions, the river-systems, and lastly that the population of the region in prehistoric times was never very great, nor, in comparison with the south of England, very prosperous.

A. THE MESOLITHIC INVADERS

The advent of man into Northumberland and Durham was delayed by the northward retreat of the ice-belt at the close of the Glacial period and only a single doubtful example of a palaeolithic implement has been found between the Tyne and the Tees.(1) The recent advance in the determination of climatic changes in the post-glacial era by analysis of the pollen-content of peat has shown that "following the sub-arctic period of the immediately post-glacial time, there was a considerable interval of warm and dry conditions, the Boreal period," and it was in this interval, between the retreat of the ice-streams, and the gradual silting up of the glacial lakes that man first penetrated the north-east region. Artefacts of Azilian culture have been found in the Victoria Cave near Settle in Yorkshire,(2) on several sites in Scotland,(3) and on the Durham coast at Whitburn,(4) but the significant fact which emerges from

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(1) At Warren House Gill on the Durham coast. cf. Trechmann, Geol. Mag., lxv, 1928, p. 25; Kendrick and Hawkes, Archaeology in England and Wales 1914-1931, p. 31.

(2) Elgee, Early Man in North-East Yorkshire, p. 26.

(3) Burkitt, Prehistory, p. 151.

(4) B. M. Guide ... to the Stone Age, 2nd edition, p. 73.

these scattered finds, is not so much the existence of Mas d' Azil implements so far north, but their comparative scarcity. It seems clear, indeed, that apart from a few early wanderers, there was no settlement in Durham until groups of people arrived bringing with them the culture of continental Tardenoisian type, characterised by microliths or "pygmy" flints.

Plate I has been prepared to show the distribution of microlithic flint sites in the county.(1) The bulk of the material has already been mapped by Dr. Raistrick,(2) to whose work I am extensively indebted in this chapter, but I have been able to include two important unpublished sites from information given to me by Mr. James McIntyre, (supra, p. 14). In dealing with specific sites I have fortunately been able also to secure the help of Mr. H. Preston, and the late Mr. G. Bennett Gibbs.

The more easterly microlithic sites are spread uniformly along the coast-line from South Shields to Hartlepool, and the typology of the flints found along this coastal belt, having affinity with the early Tardenoisian artefacts from Belgium, suggests that the original settlement sites are to be found in this area. Essentially fishers and hunters of

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(1) For the bibliography of sources used cf. Appendix III Bibliography I

(2) Trans. N. Nats. Union, I, Part 3, 1934, p. 189.

small game, the mesolithic peoples chose well-drained sites near the mouths of streams and within easy reach of the rock pools of the foreshore, avoiding the forest lands where they had neither the equipment, nor, being non-agricultural folk, the inclination to make clearings. At a later period, however, it appears that all but the most favourable of the coastal sites were abandoned, and inland penetration began - a change which Dr. Raistrick has suggested was directly caused by the climatic oscillations at the end of the Boreal period and with the advent of the colder, windy climate of the Atlantic period.(1) The chief route westwards was the Wear valley, and, avoiding the marshy, lake-strewn, drift-covered lowlands we find microlithic sites grouped on the glacial sands and gravels on the banks of the river (Offerton and Finchale Nab groups), on the shoulders of the adjoining hills (Wreakenton group), and on the rock exposures to the south-west of the East Durham plateau between Sherburn and Cornforth, overlooking the remnants of the Wear lake to the west, and the Skerne lake to the south. Typologically the flints from these areas show a developed form influenced possibly by contact with Neolithic elements.(2)

The ultimate penetration of the county by the Tardenoisian culture is represented by a few sites on the moorlands bordering the upper Wear and Tees valleys, occurring

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(1) Trans. N. Nats. Union, I, Part 3, 1934, p. 192.

(2) Trans. N. Nats. Union, I, Part 3, 1934, p. 192.

generally between 1,000 and 1,500 feet, that is to say below the lower limit of the peat which covers most of the higher ground of the Pennines.(1) It was once believed that this culture was related to that of the mid-Pennines which has Azilian links with the cultures of Derbyshire, but Dr. Raistrick has recently drawn a clear line of division between the Tardenoisian cultures north and south of the Tees: "There is no evidence" he writes, "of contact of these two distinct groups anywhere in our northern area."(2) We are, therefore, to regard the Durham Pennine sites as belonging to a ~~distinct~~ different cultural complex from that of the mesolithic invaders of West Yorkshire but genetically allied to the east coast groups, a conclusion which is ~~immeasurably~~ strengthened by the discovery of two microlithic flint sites at Binchester and Ingleton(3) effectively bridging the gap which hitherto existed in the central Wear region of the coal measures. The Binchester site carries the evidence of river penetration an important stage further westward, while the discovery of microliths at Ingleton suggests that the Ferryhill-Wackerfield ridge was already in use as a land bridge between the Permian plateau and the Pennine moorlands.

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(1) YAJ, xxxi, 1934, p. 144.

(2) Trans. N. Nats. Union, I, Part 4, 1936, p. 215.

(3) Information from Mr. J. McIntyre. The sites are as yet unpublished.

Conclusion

The Tardenoisian sites in County Durham are [illegible] sufficiently numerous to discourage the belief that the region was entirely a cultural backwater in this period. The first group of sites, in point of time, borders the coast-line, and subsequent penetration inland due to a reversal of climatic conditions, is determined by physiographical factors, taken in conjunction with the economic needs of the people concerned. This penetration is limited to the Wear valley and the Pennine spurs. The Tyne valley appears to have been hardly used, and the Tees not at all. Indeed the latter river provided a deterrent to the northward spread of the distinctive cultures of Yorkshire, and the most significant feature of the Tardenoisian microliths of Durham is the genetical alliance between early and late examples and the real distinction of the type from artefacts of the same period in neighbouring regions. Thus the northern and southern limits of the county were at once borders and barriers.

B. THE STONE, BRONZE, AND IRON AGES IN COUNTY DURHAM

"The county of Durham," wrote Greenwell, "though it lies between districts which abound in the various remains of pre-Roman times, and though it presents natural features apparently well adapting it for early occupation, is strangely deficient as well in the weapons and implements of stone and bronze using people, as in the dwelling-places

of the living, and the graves of the dead."(1) In view of the acceptance of the controlling influence exerted by physiographical conditions over the distribution of primitive settlement it would be hard to find a more direct challenge to prehistoric studies in County Durham than this single sentence. Unfortunately the challenge has not been taken up, and prehistory, apart from the Mesolithic period, has languished equally in the north-east as in the neighbouring counties on the western seaboard.(2) The bulk of the field work has been done by two men only, Canon William Greenwell(3) and Dr. C. T. Trechmann,(4) and since the outbreak of war in 1914 interest in prehistoric remains seems to have suffered a relapse perhaps to be accounted for by the increasing claims of Roman archaeology on Hadrian's Wall. To compare with Dr. Trechmann's thorough investigation of burial sites at Copt Hill, Brandon, Sacriston, Ryton, Hasting Hill, Batter Law, Warden Law, Easington, Murton Moor, Fatfield, and Stone Bridge in 1911 and 1912,(5) we can only show the partial exploration of a single camp,(6) and a number of small papers dealing with minor prehistoric

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(1) British Barrows, p. 440.

(2) CW., 2, xxxiii, p. 164.

(3) British Barrows, pp. 440-2 ; Archaeologia, LIV, pp. 87-114.

(4) AA., 3, xi, pp. 119-176.

(5) AA., 3, xi, pp. 119-176.

(6) The Castles Camp, Hamsterley. TDNS., vii, Part I, 1934, pp. 92-98. Now believed to be post-Roman. (Collingwood & Myres, Roman Britain etc., 1st edition, 1936. p. 320).

remains. Moreover, while a great body of additional material in the shape of isolated finds has been published in the Victoria County History,[1] and from time to time, in Archaeologia Aeliana and the Proceedings of the Society of Antiquaries of Newcastle-on-Tyne, there has been no real effort to co-ordinate this material for the county as a whole, or to understand its implications in the light of recent advance in prehistoric studies elsewhere. Nor would it be true to say that we have reached a standstill because of the lack of opportunity for active field-work for the writer will point to several sites where excavation is an urgent necessity if we are to attain any grasp of the nature and distribution of primitive settlement within our area.

The most convenient line of approach to the Neolithic and Bronze Ages is by way of a distribution-map and Plate II has been prepared to show the distribution of stone and bronze implements, together with the distinctive types of Bronze Age pottery, throughout the county. Omissions must be noted. In the first place there has been no attempt to record flint sites, other than the Tardenoisian sites shown on Plate I, for the evidence is incomplete and confusing.[2] We may note, however, in this connection, that the so-called Neolithic flints occur not only in association with developed Tardenoisian implements, but also with

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(1) VCH Durham, I, pp. 199-209.

(2) TNNU., I, Part 4, 1936, p. 212.

Bronze Age sites.[1] Secondly it has been necessary for a rather arbitrary choice of earthworks to be included in the distribution map, and in view of the general deficiency of archaeological evidence the balance has, perhaps, been swayed in the direction of selecting a minimum of sites. A review of the evidence, however, together with reasons for the inclusion and non-inclusion of specific sites is given on p. 28, note 1. Finally one must remember that distribution-maps of this kind may present an unbalanced picture in a region where agriculture is confined to certain districts, for it is to the plough that we owe the discovery of many of our Neolithic and Bronze Age implements.

There are two main considerations to bear in mind when considering the prehistory of the north of England. These have been described in some detail by Professor R. G. Collingwood[2] and I shall only note them briefly here.

1. The fact that the north of England as a whole is removed from the major zone of continental cultures, means that successive cultural waves arrived late in this area, and that the dates of individual cultures must be scaled down in relation to similar cultures in southern and eastern England.

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(1) YAJ., xxxi, 1934, p. 154.

(2) CW., 2, xxxiii, pp. 170-171.

> 2. Even more important is the fact that from a combination of circumstances, successive cultures tend to telescope into one another in a way that makes clear-cut definition impossible. Consequently "we have no such thing as a pure Bronze Age; we have, instead, a fusion of Bronze Age and Neolithic elements; and similarly, instead of a division of the Bronze Age into Early, Middle, and Late, we have a gradual infiltration of elements belonging to these periods into a culture that was little affected by it and changed only very gradually."(1)

Turning to the distribution-map we note first of all an entire absence of megaliths in the county. This accords well with scanty distribution of stone circles in Northumberland and Yorkshire,(2) and with the accepted theory that the megalithic culture was sea-borne and penetrated northern England from the western coast. The date of the arrival of this culture is still controversial but Professor R. G. Collingwood has pointed out the close correspondence in the north-western counties between the distribution of megaliths and stone axes, and suggested that they reflect the civilization of a single culture.(3)

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(1) Collingwood, CW., 2, xxxiii, p. 171.

(2) AA., 4, viii, Plate XXIV.

(3) CW., 2, xxxiii, pp. 178-9.

If this is true the absence of megaliths in County Durham must either mean that we have in this area a distinctive Neolithic culture, or that the cult of the great stone circles was abandoned as the Neolithic folk penetrated further eastwards. The crux of the problem lies in the way of approach of Neolithic man to Durham county, and this, at present, is obscure. Several factors, however, stress the lateness of this arrival. In the first place the only Neolithic burial so far recorded in our area was characterised by the combustion-chamber in place of the typical ossuary,(1) representing "the Neolithic practice of communal interment ... modified by the Bronze Age practice of cremation."(2) While similar discoveries are not uncommon in Yorkshire(3) the interment is usually in a long barrow,(4) whereas the Copt Hill burial, in a round barrow, indicates that the fusion between Neolithic and Bronze Age cultures was complete. Confirmatory evidence is provided by the distribution of stone axes and stone hammers, the latter a recognized type of Bronze Age implement. Considering first the distribution of Neolithic polished axes (Plate II) we find that ~~it is~~ these are confined to the low ground, generally occurring below 800 feet and concentrated in upper Weardale and on the Pennine spurs near

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(1) Copt Hill, AA., 3, xi, pp. 123-130.

(2) CW., 2, xxxiii, p. 172.

(3) Elgee, Early Man in N.E. Yorkshire, pp. 40-53.

(4) Parallels to the Copt Hill burial do, however, occur on the Wolds, cf., Mortimer, Forty Years' Researches etc., pp. 9-11, 23-42.

Lanchester, with a small group in the region of the lower Tyne, and only three scattered examples in the Tees valley. The coal-measures of the central Wear valley, and the great block of the boulder clay from the southern limit of the Permian plateau to the Tees appear to have been entirely avoided. More significant still is the barrenness of the coast line and the magnesian limestone plateau, the latter physiographically the most attractive region to early settlement. Thus, if the distribution map throws any light on the way of approach of Neolithic man into County Durham it suggests that the main impetus was from the west. Two-thirds of the total number of stone axes come from the western half of the county and nearly half that total from upper Weardale in marked contrast, as we shall see, to the general distribution of bronze implements. It would be untrue to say that there was no coastal penetration of Neolithic culture into County Durham in view of the occurrence of Neolithic pottery with Danish affinities at Seaton Carew,(1) but this single discovery only emphasises the general poverty of the evidence for sea-borne invasion.(2)

Traces of domestic occupation of Neolithic man are difficult to find. Fragments of pottery have come from

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(1) AA, 4, ix, pp. 84-88.

(2) The distribution of stone axes in County Durham is in marked contrast to their distribution in N.E. Yorkshire where we find concentration on the Limestone Hills and avoidance of the dales and moors (Elgee, op. cit., p. 39). This again suggests that the major impetus in Durham was from the west.

inland sites but none sufficiently worthy of description.[1] As in Wales we may imagine the Neolithic population was nomadic, living in wigwam villages, and moving to a new site when the soil of one was exhausted,[2] and these habitations would vanish as completely "as do the ephemeral villages of the Congo at the present day."[3]

A different picture is presented by the distribution map of Bronze Age implements and pottery, for the majority of these are grouped in the eastern half of the county. Early penetration by way of the rivers Wear and Tyne is attested by Beaker burials at Sacriston, Brandon, Ryton, and Blaydon, and by a flat bronze celt from Durham city and moulds from Hurbuck near Lanchester.

Later burials of the food vessel and cinerary urn type, while reaching inland as far as Ryton-on-Tyne and Stone Bridge, near Durham, are concentrated mainly on the fringe of the magnesian limestone plateau overlooking the mouth of the Wear near Sunderland. Moreover, a single cinerary urn from Trimdon Grange may point to a slight occupation of the central regions of the plateau in the Late Bronze Age.

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1) TNHU., I, Part 3, 1934, p. 193.

2) Wheeler, Prehistoric and Roman Wales, p. 66.

3) ibid., p. 67.

The scanty nature of finds attributable to this period, in upper Weardale, apart from the exceptional site at the Heathery Burn cave, does, indeed, bear out the general impression that "the earlier settlement of the area was by both rivers Wear and Tyne, but that in the middle and later Bronze Age, comparatively few people penetrated more than the coastal lands of the Wear, while the Tyne became the chief entry."(1)

The distribution of one important type of Bronze Age implement remains to be considered; ~~namely~~ that of the stone hammer. In Cumberland and Westmorland it is possible to distinguish between the incidence of axes and hammers,(2) but no such distinction is apparent in Durham. Both are grouped in the western half of the county, with a marked concentration in upper Weardale. The inference is that the incursions of Neolithic and Bronze Age cultures in Durham was separated by such a brief space of time as to be almost indistinguishable. Arriving, probably from the west, we can envisage the Neolithic folk very soon coming into contact with the Bronze Age culture from the east, under the influence of which they abandoned the use of the old undrilled axe, and acquired not artefacts of bronze for they were too poor, but the new stone hammer based on a bronze type.

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(1) Raistrick, DUPS., ix, 1933, p. 49.

(2) CW., 2, xxxiii, p. 181.

Finally the distribution map does emphasise the general improvement of physiographic conditions in Durham during the Bronze Age. While the Tees estuary and the adjacent boulder clay region appear to have formed an impassable barrier throughout the prehistoric period, the first traces of occupation around Darlington and Sedgefield, in the central Wear valley at Howden-le-Wear, and in the Team valley at Chester-le-Street, Birtley and Broomyholme, date to the Bronze Age. While there is no evidence to show that a north-south route existed through the centre of the county at this time, nor did the movement of prehistoric cultures demand such a route, yet the general improvement in physiographic conditions was already preparing the way for the Roman invasion.

Before this took place, however, Britain began to receive in the seventh century B.C. a number of new cultures collectively known as the Iron Age culture. Of these the Iron Age A and Iron Age C cultures(1) never reached the north of England, but Iron Age B is firmly entrenched in Yorkshire. It is, therefore, necessary to review the evidence from County Durham.

About the year 1880 an iron sword in a bronze scabbard was found by ~~some~~ masons engaged in repairing a bridge at Barmston, near Sadberge.(2) The type has recently been dated by Leeds to c. 50. A.D.(3) No

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(1) Hawkes, Antiquity, V, p. 17.

(2) PSAN, 2, vii, p. 295. (3) Celtic Ornament, p. 55.

Hallstatt swords have been found on the terrain of the county although three have been recovered from the Tyne.(1) Lastly Dr. Raistrickexcavated a cave at Bishop Middleham in 1932(2) and obtained from it pottery "almost identical with that obtained in quantity in the early Iron age camps and cave shelters in West Yorkshire, and dated by numerous other finds as about La Tène II."(3) This is the sum total of our present evidence for the penetration of Iron Age culture into Durham and it seems clear, therefore, as Professor Childe has said of Scotland, that the Bronze Age probably lasted until "the beginning of our era"(4) and even down to the Roman occupation. Professor R. G. Collingwood's researches into the prehistory of Cumberland and Westmorland point to the same conclusion,(5) and it is thus necessary to reconsider our ideas of the kingdom of the Brigantes. Before doing so, however, it will be convenient to summarise briefly the foregoing account of the prehistoric occupation of the county in the post-Mesolithic period.

1. The Neolithic culture arrived at a comparatively late date in our area, when the cult of the megalithic monuments and interment in long barrows had been abandoned. It was therefore later than

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(1) One in the British Museum; two in the Black Gate Museum, Newcastle-on-Tyne.

(2) AA., 4, x, 111-122. (3) ibid, p. 119.

(4) The Bronze Age, p. 236. (5) CW., 2, xxxiii, p. 189.

the first Neolithic settlements in Yorkshire and in the north-western counties.

2. The distribution of the Neolithic peoples is concentrated in the upper valley of the Wear and the Pennine spurs and penetration from the west is thereby suggested.

3. The advent of this Neolithic culture was contemporary with, or followed very closely by, the arrival of Bronze Age cultures on the east coast which penetrated inland by way of the rivers Wear and Tyne. Thus the eastern half of the county tended to possess a rather higher degree of civilization than that of the west, although lack of evidence of habitation sites suggests that both Neolithic and Bronze Age peoples were nomadic, and the fusion of cultures does not allow a distinct line of division to be drawn between the two.

4. Most important of all, the population of the whole county was never very large, nor comparatively, highly civilized. One has only to compare the distribution of beaker food vessels and cinerary urns in Durham with that in Northumberland, or on the Yorkshire Wolds[1] to realise the significance of this statement.

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(1) Fox, AC., LXXX, 1925, pp. 1-31; AA., 4, viii, Plate XXII.

5. Thus while Greenwell's second point[1] is borne out by more recent research, his first point, that the county was well adapted for early settlement, will not hold good. Physiographical conditions must ultimately have been responsible for the deficiency of population in Durham in prehistoric times.

6. The general Bronze Age - Neolithic culture of the county remained undisturbed until the coming of the Romans.

When the latter event took place Durham, it would appear, was occupied by peoples small in number, scattered and chiefly nomadic; of mixed Neolithic and Bronze Age parentage but unaffected by the coming of the Iron Age to Britain. The latter point gains emphasis from the scarcity of prehistoric earthworks in the county for the writer can name only two- Maiden Castle near Durham, and Stockley Beck near Brancepeth - where the visible remains suggest o

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(1) supra, p. 15.

pre-Roman encampments.[1] There is nothing to compare either with the Brigantian strongholds in West Yorkshire, or with the numerous Iron Age village sites in the Yorkshire dales, and the conclusion must be that if the Tribes roaming the country between the Tyne and the Tees were,

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(1) The Victoria County History of Durham (I, pp. 343-363) lists a number of "ancient earthworks' in the county, including "hill-forts" and "promontory fortress," (pp. 346-350). The evidence for most of these is so slight that it would be unwise to accept them. Several exceptions may, however, be noted:

(i) Brancepeth: Stockley Beck. (VCH., pp. 246-348; PSAN., 3, ii, pp. 161-2). Probably pre-Roman.

(ii) Durham City: Maiden Castle. (VCH., p. 248; Hutchinson. Durham, II, p. 4). Probably pre-Roman.

(iii) Hamsterley: The Castles. (Hutchinson. Durham, III, pp. 310-311; PSAN., 3, i, pp. 64-70; ibid., 3, v, pp. 194-5; VCH., pp. 348-9). Excavated by Mr. J. E. Hodgkin, F.S.A. (TONS., VII, 1934, pp. 92-8). Probably post-Roman, (Collingwood and Myres, Roman Britain, etc., 1st edition, 1936, p. 320).

(iv) Shackerton Hill, Near Redworth. (MacLauchlan. Memoir, p. 3; PSAN., 3, iii, p. 70; ibid., p. 318; VCH., pp. 349-350). No evidence of date.

One might add also:

(v) Old Durham, near Durham City. (Hutchinson. Durham, II, p. 4). Traces of earthworks still exist but there is, again, no evidence of date.

politically speaking, within the Brigantian confederacy, they were a comparatively backward and unimportant unit dominated by the Iron Age aristocracy localised in the West Riding.[1]

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(1) The question is further discussed in Chapter XII. Here, I have not attempted to do more than indicate general probabilities for the structure and extent of the Brigantian kingdom are at present being worked out in detail by Mr. R. Pedley. It must be noted, however, that Elgee's theory that the Brigantes were not Iron Age but Late Bronze Age invaders, bringing with them the bronze "leaf-shaped" sword (op. cit., pp. 206-7), is not now accepted.

C. PREHISTORIC DURHAM

DISTRIBUTION MAP II (PLATE II).

For full references see BIBLIOGRAPHY II, APPENDIX III.

A. BEAKERS.

1. Sacriston.	(Abercromby, p. 177).
2. Brandon.	(Trechmann, pp. 130-131).
3. Ryton.	(ibid, pp. 132 ff).
4. Blaydon.	(Hancock Museum, Newcastle).

B. FOOD VESSELS.

1. Hasting Hill (3).	(Trechmann, pp. 135-157).
2. Fatfield.	(ibid, p.169).
3. Copt Hill.	(ibid, p. 128).
4. Steeple Hill, near Tunstall (2).	(Greenwell, p. 441).

C. CINERARY URNS.

1. Stone Bridge, Durham (2).	(Trechmann, p. 170).
2. Hasting Hill.	(ibid, pp. 135-157).
3. Copt Hill.	(ibid, p. 129).
4. Humbledon Hill (3).	(ibid, p. 121).
5. Ryton.	(AA., vi, pp. 197-8).
6. Trimdon Grange.	(Greenwell, p. 442).
7. Boldon (2).	(PSAN., 2, viii, p. 206).

Note I am indebted to Messrs. J. McIntyre and J. D. Cowen, F.S.A., for information on several discoveries listed here.

D. STONE AXES.

1. Jarrow (2). (VCH).
2. Sherburn. (Evans, p. 113).
3. Raby. (VCH).
4. Cowshill. (Evans, p. 96).
5. Hamsteels. (VCH, given as Quebec; PSAN., 3, vi, p. 188).
6. Witton Gilbert. (PSAN., 3, vii, p. 152).
7. Denton. (PSAN., 3, iv, p. 173).
8. Caldron Snout. (PSAN., 3, iv, p. 199).
9. Frosterley. (PSAN., 3, vii, pp. 194-6).
10. Stanhope, White Edge. (PSAN., 3, vii, pp. 194-6).
11. Knitsley. (AA., 4, i, p. 35).
12. Esh Winning. (PSAN., 4, vii, p. 14).
13. Lanchester, Greenwell Ford. (Personal inspection).
14. South Shields. (PSAN., 2,iii, p. 3).
15. Penshaw. (Vasculum, xv, 1929, i).
16. Whickham. (PSAN., 3, viii, p. 16).
17. High Kitty Crag, Westgate. (Seen by Mr. J. Lee, Unrecorded).
18. Weardale, Harthope Beck. (Seen by Mr. J. McIntyre. Unrecorded).
19. Stanhope. (PSAN., 3, vii, p. 178, no. 1).
20. Stanhope. (ibid., no. 2).
21. Stanhope. (ibid., no. 3).
22. St. John's Chapel. (Seen by Mr. J. McIntyre. Unrecorded).

E. STONE HAMMERS.

1. Gainford. (VCH).
2. Milne House, near Frosterley. (VCH).
3. Redworth. (VCH).
4. Stanley, near Brancepeth. (VCH).
5. Sunderland, Wear above bridge. (VCH).
6. Sunderland, Millfield. (Evans. p. 173).
7. Whickham. (Black Gate Museum, Newcastle).
8. Ingleton. (ibid).
9. Satley. (PSAN., 4, ii, p. 100).
10. Stanhope, Collier Law. (PSAN., 3, vii, p. 196).
11. Egglestone. (Sturge Collection, British Museum).
12. Stanhope, Parson Byers. (ibid).

13. Teesmouth. (Elgee, p. 161, and fig. 2, Plate XI).

14. Wolsingham, Red-Gate Head. (PSAN., 3, vi, p. 92).

F. FLAT BRONZE CELTS.

1. Durham City. (VCH).
2. Hurbuck, near Lanchester. Two stone moulds. (VCH).

G. SHORT FLANGED AXES.

1. Ashwood, Near Flass. (VCH).
2. Fawnlees, near Wolsingham. (VCH).
3. Chester-le-Street. (VCH).
4. Durham City. (British Museum).
5. Birtley. (DUPS., IX, 1933, pp. 47-54).
6. Middleton-in-Teesdale. (Bowes Museum, Barnard Castle).
7. Piercebridge. (VCH).

H. PALSTAVES

1. Near Darlington. (Ashmolean Museum).
2. Howden-le-Wear. (VCH).

I. RAPIERS.

1. River Tyne, at Newcastle (2). (VCH).
2. River Wear, at Claxheugh. (VCH).
3. Chapel Fell, near Westgate. (PSAN., 4, v, pp. 333-4).

J. DAGGERS.

1. River Tyne, King's Meadows. (VCH).

K. SPEAR HEADS.

1. Frosterley.	(PSAN., 3, v, p. 19).
2. River Tyne, at Newcastle.	(Black Gate Museum, Newcastle).
3. Blaydon.	(ibid).
4. River Tyne, King's Meadows.	(VCH).
5. Medomsley, High Bradley Farm.	(PSAN., 2, v, p. 184).

L. SOCKETED CELTS.

1. Brandon.	(VCH).
2. Harton.	(VCH).
3. Morden Carr.	(VCH).
4. Hylton.	(VCH).
5. River Tees, opposite Wycliffe Hall.	(PSAN., 4, ii, p. 328).
6. Hebburn-on-Tyne.	(Newc. Evening Chronicle, October, 1922).

M. SWORDS.

1. River Tyne (3) Hallstatt type.	(Black Gate Museum, Newcastle (2); British Museum).
2. River Tees, opposite Middlesborough.	(Elgee, Plate XXV).
3. Ebchester, Law Farm.	(PSAN., 2, v, p. 99; AA., 4, x, pp. 189-190).
4. River Wear at Hylton.	(Sunderland Museum).
5. Heathery Burn Cave (3).	(VCH).

N. SHIELD

1. Broomyholme.	(Black Gate Museum, Newcastle).

O. LATE BRONZE HOARDS

1. Stanhope, Heathery Burn Cave.	(Archaeologia, LIV, pp. 87-114).
2. Stanhope, Hag-gate.	(AA., I, i, pp. 13-16).
3. Medomsley, High Bradley Farm.	(PSAN., 2, v, pp. 213-216).

III

ROMAN ROADS

In the last chapter we have seen that prehistoric life in County Durham, with its affinities in Cumberland and Westmorland rather than south of the Tees, was dominated by the east-to-west orientation of the natural communication routes. From the first incursions of the Mesolithic folk to the Late Bronze Age invasions the rivers Wear and Tyne and their tributaries were the chief highways of penetration.

This situation, first seriously disturbed by the approach of the Roman forces from the south, was completely reversed when the northern frontier was established on the Tyne-Solway line in the second century. Instead of the compact cultural unit of the prehistoric period Durham now became an arbitrary slice of the hinterland of the military zone, her garrisons serving the dual purpose of maintaining communications between the outpost forts and the legionary base at York, and reinforcing the east flank of the Wall. Free from the danger of coastal invasion until the close of the third century, strategical requirements primarily emphasised north-to-south routes through

the county for the greater part of the Roman occupation of the province; only in the final phases of this occupation was Durham again called upon to fulfil the role destined for her by her geographical situation.

The effectiveness of the Hadrianic frontier system, with its widely scattered units of defence, depended on two factors, the balanced disposition of forces, and, what is perhaps more important, the ability to co-ordinate these forces in time of crisis. Before considering fort sites, therefore, it will be convenient to review the evidence for the Roman roads in county Durham, without attempting, at this stage, a detailed historical appreciation of individual routes. The road-map (Plate III) is to be used in conjunction with this chapter.

At the outset it cannot be claimed that the road-system shown on Plate III is by any means complete, for apart from missing segments of proved roads we have only an imperfect framework quite inadequate for maintaining effective co-operation between the various units within the area. Fox has suggested that the difficulty of proving Roman highways may be due to the fact that these not infrequently followed pre-Roman tracks, unmodified or only slightly improved,(1) but while this may be true as far as the communications between small and isolated settlements are

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(1) Archaeology of The Cambridge Region, p. 167.

concerned, it is hardly likely that such a patchwork would satisfy the military authorities. The truer explanation is rather to be found in subsequent obliteration and destruction of roads, for which the enclosures of the nineteenth century are primarily responsible, and in our own archaeological shortcomings. Until recently Roman roads in the north-east area have received scant attention from the excavator owing to the accessibility and more speedy remuneration offered by settlement sites.

While in general it is best to follow Codrington's rule: "To refrain from conjecture as much as possible and to follow the roads only so far as there is evidence available for tracing them",(1) this evidence is not limited to road sections, for the distribution of occupation sites, the discovery of milestones and cemeteries, significant place-names, and the conjunction of parish boundaries may all reasonably suggest Roman roads where formal proof is lacking. Provided such materials are carefully weighed we are not justified in denying their application.

In 1924 Petch wrote: "throughout the area of county Durham we can only be sure of one Roman road - Deor Street, as Symeon of Durham called it, running from Piercebridge

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(1) Roman Roads, Preface, p.v.

to Ebchester, with probable, though unknown offshoots. The other suggested lines, though they have often been accepted as certain, must be far more thoroughly explored before we can be at all sure that they are the sites of Roman roads".(1) In view of the extravagant guesses of eighteenth and nineteenth century antiquaries the warning was not ~~untimely~~ *inapposite*, although one feels that the same writer was rather arbitrary in his rejection of all literary sources, and it is particularly difficult to account for the omission of the road from Chester-le-Street to the Tyne. Fortunately, however, attention has recently been paid to the Roman road-system in Durham county by Mr. R. P. Wright, whose excavations first on the road from Bowes to Binchester, and secondly on the branch road which leaves Dere Street at Willington, have achieved most encouraging results and added materially to our understanding of the Roman occupation of the area. Mr. Wright's report on the former road is already in print,(2) but I wish to acknowledge here permission to use his notes on the latter excavation, prior to the publication of the full report in the forthcoming volume of Archaeologia Aeliana.(3)

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(1) A.A., 4, i, p. 4.
(2) A.A., 4, xiv, pp. 194-204.
(3) A.A., 4, xv.

Lastly, while it might be possible to classify the Roman roads in the county under three headings:-

(i) Routes of conquest.

(ii) Roads forming an integral part of the Hadrianic frontier system, or modifications of that system.

(iii) Trade routes.

no attempt will be made to do this until the evidence from forts and other settlement sites in the county has been reviewed. The present chapter must be regarded as little more than a catalogue.

R. I. DERE STREET.[1]

County Durham lies athwart Dere Street, the best known and, according to Petch, the only certain Roman road between the Tees and the Tyne. Four of the six forts in the county lie along its route[2] while further research will no doubt add to the two roads known to branch from it at Willington and Fieldon Bridge.[3]

The road crossed the Tees and entered the county a short

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(1) The mediaeval name, used by the twelfth century chronicler Symeon of Durham (Historia Dunelmensis Ecclesiae, p.210) is retained in preference to Watling Street (cf. N.C.H., x, p. 461).

(2) Two of these forts, Binchester and Ebchester, are named in the Antonine Itinerary, iter I, which certainly follows Dere Street from High Rochester to York.

(3) R. IV; R. V.

distance east of the village of Piercebridge, which occupies the site of the fort guarding the bridge-head. Gale[1] lost the main track of the road north of Catterick and followed only the Stainmore route to Carlisle while postulating a branch road crossing the Tees at Winston and proceeding *via* Binchester and Chester-le-Street to Gateshead. This omission was pointed out to him by Warburton, in correspondence dated 1717,[2] and extracts from these letters are worth quoting because they give us not only the general course of the road but also the condition of the remains in the eighteenth century. The "main street", writes Warburton", proceeds northwards almost in a straight line and uninterrupted ridge from Piercebridge close by a small village called Denton ... by Bolham, Houghton, St. Helens, Aukland, and soon after crosses the Wear to Binchester ... From this place its course is generally over moorish ground to Lanchester ... and at six miles further to Ebchester". North of Ebchester he describes the agger as being "for the most part two yards in height, fully eight yards broad, and all paved with stone, that it is at present as even as new laid." Other writers testify

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(1) *An Essay towards the Recovery of the Courses of the Four Great Roman Ways.* Printed in Leland's *itinerary*, 2nd. editn., 1744, Vol. VI, pp. 108-140.

(2) *Surtees Society Transactions*, LXXX, 1885, pp. 74-5, 77-81.

to the excellent state of preservation of the road in the eighteenth and early nineteenth centuries,(1) and indeed, its course appears to have been so visible that no one judged it necessary to record it in any detail until Henry MacLauchlan was commissioned by the Duke of Northumberland, "Algernon the Good," in the middle of the nineteenth century, to survey Dere Street between the Swale and the Scottish border. This work was carried out in the years 1851-2, and the results were published in a series of maps based on the Ordnance Survey two inch scale, accompanied by a descriptive memoir.(2) Allowing for the fact that no excavation was undertaken so that the course of the road could not be exactly determined at every point, these two publications present one of the finest accounts of a Roman road ever written, and it is not surprising that MacLauchlan's results were adopted without question by the Ordnance Survey Department.(3) Ploughing and the urbanisation of the countryside have

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(1) Horsley. Britannia Romana, p. 486 "very visible" between Binchester and Piercebridge.
Hutchinson. Durham, III, p. 318 "distinctly to be traced" half a mile west of Willington. ibid., II, p. 433 "remarkably perfect where the new enclosures of common land had not taken place" south of Ebchester.
Hodgson. Poems, pp. 102-3 "as visible as on the day it was made" between Lanchester and Ebchester.

(2) H. MacLauchlan. Memoir written during a Survey of the Watling Street from the Tees to the Scotch border, London, 1852.

(3) cf. O.S. 1 in., 6 in., and 25 in. maps.

rendered the remains far less visible to-day than they were eighty years ago, and at only a few points in Durham is the line of Dere Street plain, and at the same time free from modern metalling. As, however, an adequate view of the road has been published within recent years(1) we shall only note here those sectors where excavation has modified the line taken by MacLauchlan, or where an alternative course is suggested by topographical or other considerations.

(1) The site of the Roman bridge across the Tees and the true line of Dere Street through the Toft's Field on the east side of the fort at Piercebridge have been proved about a quarter of a mile west of MacLauchlan's conjectural line.(2)

(2) From the excavations at Lanchester in 1937 it appears improbable that Dere Street ran on the east side of the fort. For a discussion of the problem see pp. 183-4.

(3) The road excavated by Hooppell on the plateau at Binchester pointing to the south-east gateway of the fort, lay a little to the west of the course suggested by MacLauchlan.(3) North-west of the fort, between Binchester and the Wear, the actual position of the road was found in 1911 to be only a few yards south of MacLauchlan's

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(1) Mothersole. Agricola's Road into Scotland, London, 1927.

(2) TDNS., VII, pp. 240-247.

(3) Hooppell. Lecture, p. 21.

conjectural route.[1]

(4) The course of the road from Fieldon Bridge to Binchester, a distance of roughly three miles, has never been exactly determined. MacLauchlan's line[2] based on local topography together with an appreciation of the requirements of Roman engineering, is not altogether satisfactory and an alternative route suggested by Hooppell,[3] deserves consideration. The problem is fully discussed on pp. 90-2.

Construction.

One or two earlier writers have provided notes on the construction of Dere Street at various points. We have already quoted Warburton's view of the road just north of Ebchester where it was "fully eight yards broad" and paved with stone.[4] Hodgson reports that: "In some places it is paved; in others formed of a high ridge of earth covered with gravel: in general it has a ditch on each side."[5] Hutchinson provides the only serious discrepancy amongst the earlier observers with the following account of the road as it approached Ebchester from the south: "It is formed in three distinct

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(1) PSAN., 3, v, p. 65.

(2) op. cit., pp. 4-6.

(3) Vinovia, pp. 2-3.

(4) supra., p. 39.

(5) Poems, pp. 102-3.

parts, with four ditches; a centre road, probably made for carriages and cavalry, forty-two feet in width, with a narrow road on each side for foot passengers, twelve feet wide: ... we had not observed this form in any of the roads in Northumberland, or on the line of the Wall."(1) Nor, one may add, has any parallel yet been found in this country, and Miss Mothersole's statement that the standard Roman road of Italy and Gaul is constructed on this pattern,(2) is not born out by the archaeological evidence. Gautier, significantly another eighteenth century writer, claimed to have observed a triple highway near Langres, but Grenier, while admitting that footpaths existed in the towns, seriously doubts whether they were continued into the open country where there appears to be no adequate reason for them.(3) Hutchinson's observations may, therefore, be dismissed until more positive evidence comes to light.

Two sections of Dere Street have been cut within the present century, near Binchester and Piercebridge:

(1) In 1911 a road was discovered about 500 yards north-west of the fort at Binchester, within a few yards of MacLauchlan's assumed line for Dere Street.(4) It

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(1) Durham, II, p. 433.

(2) op. cit., p. viii.

(3) Grenier. L'Archéologie du Sol: Les Routes, p. 343.

(4) PSAN., 3, v, pp. 64-5, and pl. f. p. 64.

proved to be twenty feet in width, formed of water-worn cobbles of varying sizes brought from the nearby bed of the Wear, and laid in three layers with a total thickness of twelve inches. It would be difficult not to accept this as Dere Street in view of its proximity to and alinement with the agger of the road on the left bank of the river, but absence of metalling, camber, and kerb-stones, and the shallow depth of the remains suggest extensive disturbance possibly due to the flood action of the river.

(2) In 1933 a section of Dere Street was cut in the Toft's Field on the east side of the fort at Piercebridge.(1) Unfortunately this was not complete but the following data emerge. The earliest road, one foot five-and-a-half inches below the turf line was composed of fine rammed gravel. Below this was a layer of cobble stones, one foot three-and-a-half inches thick, graduated in size so that the smaller cobbles were nearest the surface. Next came a bed, about a foot thick of "material like concrete,"(2) presumably gravel with an admixture of builders' material, while below this was a layer of blue clay, again about a foot thick, inset with cobbles and native rock. It was not found possible to ascertain the width of this road, but it cannot have been less than 15 feet, and the absence

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(1) TDNS., VII, Part II, pp. 244-246; Plate V.D.

(2) ibid., p. 244.

of marked camber in the section suggests that it must have been much wider.(1) Above this earlier road was another layer of large cobbles as a foundation for a fifteen foot road with covered stone gutters forming the kerbstones still *in situ*. The reduction in width and the presence of gutters are features of the late road at Corbridge,(2) and thus the epigraphic evidence of milestones for periodic reconstruction of the entire road-system is supported by archaeological testimony.

Conclusion.

The course of Dere Street through the county seems to have been determined by strategical requirements, such as favourable river crossings and fort sites naturally defensible. By keeping to the moderately high ground of the Pennine spurs it was possible not only to avoid the broad reaches of the rivers but also to secure the elevation necessary for strategical advantage. Without considering the archaeological evidence, therefore, it seems likely that Dere Street represents the original route of penetration through the county, and this conclusion is strengthened by the fact that, as Haverfield pointed out,(3) there

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(1) The construction of the road here is strikingly similar to that of the first period Dere Street at Corbridge, which measured 33 feet 9 inches between the kerbs. cf. AA., 3, iv, p. 209.

(2) AA., 3, iv, p. 211.

(3) NCH., x, p. 460.

seems to be no real relationship between the road and the Hadrianic frontier system. The purpose of the one is as plainly offensive as that of the latter is defensive.

For the ultimate objective of the road we must look further than the northern boundary of Durham county, possibly, as Mr. Birley has suggested, westwards, in the original phase of conquest, to Carlisle, and certainly in the Agricolan period, to Newstead and beyond. But problems such as these are outside the scope of the present chapter.

R. II. POUNTEY'S BRIDGE TO PONS AELIVS.

The Ordnance Survey Map of Roman Britain[1] shows a second road from York to the Tyne roughly parallel to, but east of Dere Street. For half this distance at least the course of the road is imperfectly known, but the same map marks three sectors of the line as "certain," namely from Thornton-le-Street in Yorkshire to within a short distance of the Tees, from the Tees to Great Stainton, and from Chester-le-Street to the river Tyne. While there is no reason to doubt the authenticity of the road south of the Tees;[2] so great a part of the suggested line through County Durham is uncertain that close examination of the evidence is essential.[3]

It will be convenient to consider the road in two sections:

(1) From the river Tees to Chester-le-Street.

(2) From Chester-le-Street to the river Tyne.

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(1) 2nd edition, 1928.

(2) Elgee. Archaeology of Yorkshire, p. 134.

(3) Mr. O. G. S. Crawford has kindly supplied the following note to account for the inclusion of the road on the O.S. map. "As regards the Roman road which crosses the Tees at Pountey's, I am the authority for the road in question. At the time when I was compiling this map I investigated the course of the road and although absolute certainty of its exact course could not be obtained everywhere, I satisfied myself on the spot that the general course of the road was quite certain on the scale on which the map was published. Since then confirmatory evidence has, I believe, been found further south (i.e. in Yorkshire); but no certain remains of the causeway itself are visible at the point you mention" (i.e. from Chester-le-Street to the Tees).

(1) This sector was unhappily fathered, for it first appears in Cade's Conjectures concerning some undescribed Roman roads and other Antiquities in the County of Durham.[1] The suggested route crossed the Tees at Sockburn and proceeded by way of Sadberge, Great Stainton, Mordon, Bradbury, and Mainsforth to Old Durham, and thence via Chester-le-Street to Gateshead. South of Chester-le-Street Cade's main concern appears to have been to link up his "camps" at Mainsforth and Old Durham with the ford over the Tees at Sockburn, and Hutchinson rightly refused to accept a Roman road on these grounds. Surtees, however, notes that "Great Stainton is ... often distinguished as Stainton in the Street; and it is not improbable that this appellation may be derived from its standing on the line of an ancient Roman cross road, or via vicinalis ... "[2] By other nineteenth century writers[3] the line of the road was accepted as far as Sedgefield, although the site of the Tees crossing was moved a little further down the river to Pountey's bridge at Middleton-St.-George. North of Sedgefield all the suggested lines for continuing

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(1) Archaeologia, VII, 1785, pp. 74-81.

(2) Durham, III, pp. 20 and 61.

(3) Longstaffe, Durham before the Conquest, pp. 64-65.
Eastwood, JAA., xliii, 1887, pp. 155-161.
Hooppell, Vinovia, Map facing p. 2.
Boyle, County of Durham, p. 67.
Wooler, PSAN., 3, ii, pp. 406-7

the road to Chester-le-Street or elsewhere are purely imaginary.(1)

Apart from conjecture the evidence of the road includes Longstaffe's statement that its pavement was said to be very perfect south of Sadberge;(2) the discovery of fragments of supposed Roman brick at Pountey's Bridge;(3) and the brief record that an excursion party of the Society of Antiquaries of Newcastle inspected the road in 1909, north of the Tees crossing at a point where it was visible as a "slightly raised mound through a grass field, leading northwards to the railway."(4) No forts or settlement sites of the Roman period have been discovered along the line of the road,(5) and the only finds of Roman date so far reported are two lamps from Middleton-St.-George,(6) and single coins from Cornforth(7) and Durham.(8)

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(1) There is no evidence to support Cade's bridge "seemingly of Roman construction" over the Wear near Kepier.

(2) loc. cit.

(3) JAA., XLIII, 1887, p. 182.

(4) PSAN., 3, iv, p. 244.

(5) The "Roman station" at Sadberge is, at present, ~~mythical~~ hypothetical. cf. Rev. W. Lancaster Taylor. History of Sadberge, Leeds, 1919, p. 13. f.

(6) PSAN., 4, i, p. 199.

(7) Hooppell. Vinovia, Map facing p. 2.

(8) Longstaffe. op. cit., p. 67.

To summarise the evidence we have on the positive side the existence of the road on the south of the Tees, the coincidence of the parish boundaries of Dinsdale and Middleton-St.-George with the suggested course of the road, the straightness of the modern highway from the Tees to Great Stainton, and two highly significant place names, Street House, and Stainton-le-Street.(1) On the negative side there is the lack of visible remains, the difficulty of continuing the road north of Great Stainton, and the entire absence of adjacent sites military or civil, dateable to the Roman period. Topographically there is no reason to doubt the feasibility of the route for prehistoric finds at Darlington, Barmpton, Bishop Middleham, and Morden (Plate II) show that the ridge of gravelly limestone between the marshes of the Skerne to the west, and the boulder clay swamps of Teesmouth to the east was being used in pre-Roman times. The balance of probabilities is in favour of the existence of the road,(2) but until

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(1) Staynton in Strata occurs as early as A.D. 1312 (Mawer. The Place Names of Northumberland and Durham, s.v.); Ekwall suggest the 'Tun on the paved road' (English Place Names, s.v.).

(2) The most significant evidence is provided by place names, and the proof of the road in Yorkshire. On the other hand it is not difficult to explain away the negative evidence in the absence of excavation, while one notes that the road south of the Tees is similarly characterised by a scarcity of adjacent Roman settlements. Some protection would be expected at the crossing of the Tees, and a post would be "Tower Hill" on the north bank of the river. cf. VCH., Durham, I, p, 355. Again excavation is urgently required.

speculation has been checked by the spade the wisest verdict will be "not proven."

(2) "I think there are some certain and visible remains of a military way on Gateshead fell," writes Horsley, "pointing directly to the part where I suppose the station has been at Newcastle, and coming, as I apprehend, from Chester-le-Street. Dr. Hunter assured me that he had also observed visible remains of such a way. And it is the common opinion, that there has been a military way from Chester to Newcastle. This way tends towards the place where the bridge now is."(1) Elsewhere he reports an observation that it lay "to the west of the present highway through the fell"(2) (i.e. the old turnpike road east of the modern North road). Stukeley likewise reports that its course was very visible, running in a straight line from Gateshead fell to the bridge at Newcastle, and from the fell southwards.(3) In the middle of the nineteenth century the pavement of the road was ploughed up in the fields of High Eighton farm at the point where the Wrekendike branches off to South Shields,(4) and Mr. G. A. Pyburn the present tenant of the same farm

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(1) op. cit., p. 104.

(2) ibid., p. 452.

(3) Itin. Curiosum (Iter Boreale), 1776, pp. 69-70.

(4) Bruce. Wall (2), p. 299; Longstaffe, op. cit., p. 62.

vouches for its line running through the gardens of Chambers Crescent, southwards to join the Durham-Wrekenton road (the old turnpike), and northwards in the direction of the quarries on the summit of Gateshead fell. It is not certain whether the present road from Birtley to Chester-le-Street represents its line[1] for there is a parallel road a short distance to the east passing through Picktree (where 'Roman stones' are said to have been seen)[2] and Portobello, which has the advantage of the higher ground, while and the site of the bridge over the Cong located in 1930 (Plate XXIV) would seem to give some support to this route. In Chester-le-Street itself the Roman pavement is said to have been uncovered in 1902 "at the depth of a yard."[3]

This sector of the road, linking the fort at Chester-le-Street with Pons Aelius is, therefore, well authenticated, but it is by no means necessary to postulate a continuation southwards to Pountey's Bridge in view of the proof, recently obtained, of the link between Chester-le-Street and Dere Street.[4]

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(1) As Codrington, op. cit., p. 164.

(2) Longstaffe. op. cit., p. 62.

(3) Codrington. op. cit., p. 164.

(4) R. IV.

R. III. THE WREKENDIKE.[1]

From Wrekenton to South Shields, a distance of some seven-and-a-half miles, the modern road runs practically in a direct line and represents, for the most part, the course of a Roman road, the Wrekendike. While one might suggest that the known causeway of the Wrekendike was responsible for the traditional belief that one of the 'Four Great Roman Ways,' the Riknild Street, terminated at Tynemouth,[2] the first topographical account of the road is given by Horsley.[3] Hunter agreed with Horsley's observations,[4] and Hutchinson added further notes on the visibility of the causeway at its western end,[5] but for the most complete publication of the evidence one must refer to an admirable paper by the Rev. John Hodgson in the second volume of Archaeologia Aeliana, first series.[6]

From Jarrow Slake to High Eighton, where it joins the Roman road from Newcastle to Chester-le-Street, opinion of the course of the Wrekendike agrees, but east of Jarrow Slake the approach to the Lawe, "obscure and uncertain" even in the early eighteenth century, has never been

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(1) In a twelfth century charter embodying a grant of land by bishop Pudsey we have reference to the "marches of Wrackenndberge." The name Wrakendike occurs on a commission issued by bishop de Stichill in 1262 A.D.

(2) cf. Leland. Collectanea, ii, p. 370.

(3) op. cit., p. 451. (4) Letter to Gale, 1735. Surtees Soc. Trans., LXXVI, 1883, p. 140.

(5) Durham, II, note p. 487. (6) pp. 123-136.

satisfactorily determined.[1] In view of the fact that the terminus must have been at South Shields fort the problem is merely an academic one, and the obliteration of the Gut since mediaeval times makes formal proof of the exact course at least unlikely.

(2) The westward extension of the Wrekendike to Lanchester.

On Horsley's authority the Wrekendike did not end at the junction with the north-to-south road near High Eighton but continued westwards "towards Lamesby (Lamesly) and Kibblesworth, which it leaves a little to the south ... on towards Bemish, and no doubt has gone forward to Lanchester."[2] The first part of this extension he declares to have been visible before the land was enclosed in the early eighteenth century, but between Beamish and Lanchester no evidence of the road could be produced. Hunter[3] was in agreement with the line as far as Kibblesworth but from that point carried it forward rather north of Horsley's route through Hedley and Causey, crossing the low ground of the Beamish burn at its narrowest point, and terminating at an earthwork at Stanley,[4] without any apparent connection with Lanchester. The same course was accepted by Hodgson who added that the pavement of the road had been dug up on the south side of

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(1) Compare Horsley. loc. cit., and Longstaffe, op. cit., p. 59.

(2) op. cit., p. 451. (3) loc. cit.

(4) ? A signal tower. cf. pp. 305-6.

Blackburn Fell, between Kibblesworth and Hedley, and that a little south-west of the former village " a very great quantities of querns were found".(1) Moreover, for the continuation to Lanchester he writes "I supposed I could see traces of it at Maidenlaw, and a little to the east of that place; and my opinion is that it ran from Causey, thence through the north side of the manor of Stanley by the Shield-Row"!(2) The only other direct evidence is Longstaffe's note that the surface of the road was discovered in building the engine house for the Team Colliery, a short distance west of High Eighton.(3)

An examination of the ground between Lamesly and Causey at the present time shows no traces of the agger of the road and local tradition is unresponsive. On the other hand it is impossible to reject Horsley's definite assurance of the extension of Wrekendike to Kibblesworth, while in view of the enclosures and the marshy nature of the ground in many places, the disappearance of the pavement is not an unnatural phenomenon. Further attention could profitably be paid to this problem, but at present it is only deemed advisable to suggest on the map the continuation of Wrekendike beyond the Newcastle-Chester-le-Street highway (Plate III).

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(1) A.A., 1, ii, p. 135.

(2) ibid, p. 134.

(3) loc. cit., p. 60.

R. IV. BINCHESTER TO CHESTER-le-STREET.

One of the most important branch roads in the county leaves Dere Street at Willington, a little over three miles north of Binchester. Attention was first drawn to the existence of the road by Hunter in a letter to Gale dated May 17, 1735, from which we may quote the relevant extract: "The communication it (i.e. South Shields) has had with Binchester is very visible in several places, as is the angle where the paved way goes off from the military way leading to Langchester (sic), about 8 (?3) miles to the north of Binchester, and passes to the north-east through Branspeth park, thence a little to the south of Brandon, and is lost in the cultivated grounds, but appearing on Durham moor in the same direction again, passing by Haghouse, and below upon Harbrasse moor, is very visible tending past Lumley Castle in a direct line towards South Shields, passing about a mile to the south of Chester-in-the-Street, without any signs of communication therewith."(1) Hutchinson(2) observed the same road at Willington and reported the discovery of a milestone near

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(1) loc. cit.

(2) Durham, II, p. 486.

the junction with Dere Street. The most detailed evidence, however, comes from MacLauchlan, who traced it, as he says, "passing close in front of Hollin Hall, in rear of West Park Farm-house, over the brook, where it is very visible, and thence obscurely under the cottage near Stockley Farm-house, to the high part of Stockley Pasture ... As we near the burn, a mound in the line of the way has been planted, which is either a perfect remain of what the road originally was along its whole line, or else a tumulus. As usual, there are but few vestiges of the road in the precipitous banks, but on the east side of the stream are some stones, which perhaps formed a part of the line. A short distance from the brook it enters the present road to Durham, in the village of Brancepeth; and being first on the south side it crosses the turnpike road diagonally apparently, and leaves it where the present road makes a slight inclination to the southward. It has lately been dug up in one of the Littlewhite fields, along which it is still visible some distance north of Scripton House. It is presumed this road leades to Chester-le-Street; the line points west of Durham, and so far seems to be a straight line from Willington to Brancepeth".(1)

In August, 1937 Mr. Wright examined the course of this road and proved its line at Willington(2) near the

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(1) Memoir, p. 8. Line accepted by Codrington. op. cit., p. 164; Boyle. op.cit., p. 167; Bruce. Wall (2), p. 299.

(2) Fig. 1.

junction with Dere Street, at Park House, in the fields of the Red Barns' farm near Brancepeth, and at Meadowfield, an overall distance of four miles. The two latter sections were the most complete and the following brief notes on the construction of the road have been given to me by Mr. Wright.(1) In the Red Barns' field at Brancepeth (O.S. 599) where the agger is clearly visible, the section revealed the road 21 feet 8 inches wide within one to two feet of the turf line.(2) Its construction was unusual for the large sandstone bottoming was not carried throughout the entire width of the road but occurred only at the sides and in the centre, leaving two gaps on either side of the spina filled with comparatively light footings.(3) The upper metalling was still in situ, and showed a marked camber.

At Meadowfield (O.S. 693), the road had been rather more disturbed and only three inches of metalling survived without any trace of camber. The solid footings, were homogeneous throughout, showing that the central rib observed in the Brancepeth section was a local feature, Again the width between the kerbs was exactly 21 feet 8 inches.

From Willington to Meadowfield the course of the road lies virtually in a straight line and a production of this line for a mile and a quarter brings us to ~~the~~ Stone Bridge, near Durham, the natural site for the crossing of

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(1) See full report in forthcoming volume (xv) of Archaeologia Aeliana, ser., 4.

(2) Fig. 2.

(3) For parallels to this central rib, cf. PSAN., 4, viii pp. 51-52

the Browney. From this point the road must be re-alined to avoid the Wear and, on Hunter's authority, we may take it forward past Hag House, and Harbour House moor, keeping on the west bank of the Wear to Chester-le-Street. It is not difficult to account for Hunter's statement that the road made no visible contact with the latter fort for the connection would only be by a branch road from the main highway. The ultimate goal of the road, however, is in doubt. Hunter clearly believed that it pursued a course independently of Wrekendike to South Shields but no other evidence of such a route has come to hand. Alternatively to link it up with the Newcastle-Chester-le-Street road one must assume, in view of the site of the bridge over the Cong burn that its course lay not south-east, but west of the fort. Further speculation is worthless in the absence of excavation.

It might be noted here, however, that while the urgency for the Pountey's Bridge to Chester-le-Street road is lessened by the proof of communication between the latter fort and Dere Street, the sector between Durham and Chester-le-Street could serve both routes equally well. Thus the margin of uncertainty in the case of the former road is reduced to the distance between Great Stainton and the neighbourhood of Durham city.

R. V. BOWES TO BINCHESTER.

The authenticity of the traditional Roman road from Bowes in Yorkshire, to Dere Street, three miles south of

Binchester, has recently been determined. The evidence for the road together with an account of the excavations carried out in July and September 1936, is already in print[1] and need not be repeated here. Actually the road is a by-pass between the Stainmore route and Dere Street, cutting off Scotch Corner, and thereby not only time-saving for traffic from the north to the west and vice-versa, but strategically important in reducing the distance between the north-east frontier forts from Binchester northwards, and the military posts on Stainmore. A "first-class example of Roman engineering," deviating only from a direct line at the crossing of the Hummer beck, the road was slightly wider than the branch road from Willington (24 feet 3 inches as against 21 feet 8 inches) but otherwise its section[2] presented similar features to the section of the latter road at Meadowfield to which reference has already been made.[3]

R. VI. LANCHESTER TO CHESTER-le-STREET.

In spite of Boyle's assertion that there was "undoubtedly a direct road from Lanchester to Chester-le-Street"[4] there is at present virtually no evidence in support of this statement. Hodgson tells of a paved road observed

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(1) Wright. The Roman Road from Bowes to Binchester, AA., 4, xiv, pp. 194-204.

(2) Figs. 3 & 4. (3) Supra p. 58. (4) op. cit., p. 67.

in the brook opposite the church east of the fort at Lanchester but ~~took~~ takes it no further than the Burnhope quarries.(1) MacLauchlan marks this line as probable on his map, and suggests the present road past Maiden Law represents the "probable course of the Wreken Dyke to Chester-le-Street," but the text of the Memoir gives no support. Longstaffe(2) and Bruce(3) can only point to a Roman figure, (actually mediaeval), at Holmside Hall, and a late Bronze Age shield found near Broomyholm. Topographically the best course for such a road would be to keep to the Pennine spur, via Sacriston and Walridge, on the south side of the Cong Burn, but evidence is awanting.

R. VII. CHESTER-le-STREET TO THE MOUTH OF THE WEAR.

No Roman road has ever been discovered between Chester-le-Street and Sunderland but from Ford on the south bank of the Wear below South Hylton, has come a milestone bearing the name of the emperor Gordian.(4) The consensus of opinion seems to have been that this milestone implies a north-to-south route crossing the river Wear hereabouts. Haverfield, indeed, says so emphatically,(5) but the advocates of the Roman bridge or paved ford at Hylton do not seem to have proved their case in the face of strong local opposition.(6)

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(1) Poems, p. 93. (2) op. cit., p. 62. (3) Wall, (2), p. 299.

(4) CIL., 1184 (114). (5) PSAN., 2, iv, p. 230

(6) The dispute was a cause célèbre. cf. PSAN., 2, i, pp. 19-20; ibid., p. 24; ibid., pp. 134-8; ibid., iv, pp. 230-1

The alternative is to suppose that the presence of a milestone at Ford indicates not a north-to-south road but rather east-to-west communication between Chester-le-Street, or perhaps even Lanchester, and Wearmouth. In this connection one notes that a milestone with an identical inscription(1) has been found at Lanchester, and although this obviously cannot be interpreted as positive proof of the existence of lateral road between the fort and Wearmouth in the third century other considerations pointing to this conclusion will be noted elsewhere.

R. VIII. LANCHESTER TO THE WEST.

Horsley's road (2) from Lanchester to a supposed Roman site at Old Town in Allendale,(3) was based upon a misinterpretation of the Tenth Iter of the Antonine Itinerary. He himself could find little evidence in support of the road and there is no reason to believe that it ever existed. Penetration of Weardale and Teesdale in Roman times seems to have been by native trackways rather than by built roads.

R. IX. CATKILL LONNING.

At Petty's Nook, a mile north of Sadberge, an old drove road locally known as Catkill Lonning, now overgrown, and waterlogged in winter, leaves the main highway in a north-

(1) CIL., 1183 (43).

(2) op. cit., p. 453. (3) PSAN., 2, vii, p. 278.

westerly direction • runs for two miles in a straight line until it is joined by a minor road from Newton Ketton. Here there is a short break of half-a-mile and then the line is taken up by the modern road on the north side of Whin Field House, crossing the Great North Road at the Travellers' Rest Inn, and continuing forward to Eldon and St. Andrew Auckland. According to Longstaffe(1) and Wooler(2) this is the course of a Roman road linking the Pountey's Bridge - Stainton road with Dere Street and the fort at Binchester. The evidence is inconsiderable; two coins, one from Eldon, and another reported from Catkill Lonning;(3) the directness of the line; and the fact that the Lonning is a parish boundary.(4) Until the road north from Pountey's Bridge is proved it is wiser to disregard this route.

R. X. COAST ROADS

No coast road of Roman date has ever been proved in County Durham despite many suggestions.(5) Moreover, historical considerations do not require such a discovery, for apart from the fort on South Shields Lawe there seems

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(1) op. cit., p. 65.

(2) PSAN., 3, ii, pp. 406-7; ibid., 4, i, p. 199.

(3) Longstaffe. loc. cit; Wooler. PSAN., 3, i, p. 90 "a coin of Augustus"(!)

(4) For the danger of assuming that roads forming parish boundaries are necessarily Roman cf. Fox. op. cit., p. 167.

(5) Longstaffe. op. cit., pp. 70-71; Robinson. ~~TAS.~~ Proc. Sund. Ant. Soc., V, 1904, pp. 5-9; Hodgson. South Shields, p. 29.

to have been no military occupation of the coast-line until the establishment of the signal station system in the late fourth century, and even then the primary need was for inland rather than coastal communication. Furthermore, the topography of the Permian plateau, intersected by deep gorges of magnesium limestone and thickly wooded ravines, would prove an insuperable obstacle to highway construction. The needs of the few scattered settlements of the fisher-folk dwelling on the coastal bluffs could well have been served by the prehistoric trackways on the relatively open country of the immediate hinterland, just as many of these were doubtless incorporated into the 'Salters Track' of the Middle Ages.

B R I D G E S

1. PIERCEBRIDGE

The wooden piles of the Roman bridge over the Tees at Piercebridge were apparently visible until the great flood of 1771.(1) For the rediscovery of the bridge in 1933, and notes on construction, cf. TDNS., VII, Part II, pp. 240-242.

2. BINCHESTER

No trace of the bridge over the Wear at Binchester has been observed in recent times although the site of the crossing is fixed by the known line of the road on either bank. Mr. McIntyre tells me that difficulty has been experienced in driving piles into the river at this point.

3. EBCHESTER

Hutchinson(2) records the remains of two ~~piles~~ *piers* in the Derwent "supposed by some to be part of a Roman bridge," but, in his estimation, of more modern appearance. MacLauchlan could find no trace of the bridge,(3) and Featherstonhaugh's account of foundations of "oblong pyramid-pointed piers" is highly suspect

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(1) Horsley. op. cit., p. 486; Hutchinson. Durham, III, p. 214.

(2) op. cit., II, p. 430. (3) Memoir, p. 17

in the absence of either contemporary substantiation ~~of~~ current local tradition.

S I G N A L T O W E R S

An important feature of Roman frontier organisation is a developed system of signalling. Reliefs on the column of Trajan show how the burgi of the Danubian Limes were equipped for fire-signalling, and isolated signal towers have been discovered in the region of Hadrian's Wall at Walltown Crags(1) and Pike Hill(2) (both later incorporated into the Wall), at Mains Rigg,(3) Gillalees Beacon(4) and elsewhere. Moreover, it is clear that not only the forts along the Limes but also those between the Limes and the legionary bases were similarly linked by signal towers situated at vantage points and, whenever possible, within easy reach of the main roads.(5) Such a tower seems to have been constructed on the high ground about a mile and a half south of Ebchester to establish communication between

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(1) AA., 3, ix, p. 68.

(2) ibid., 2, v, pp. 124-9.

(3) CW., 2, xxix, pp. 314-15.

(4) ibid., xxxiii, pp. 241-245.

(5) cf. Maiden Castle on the Stainmore route. RCHM Westmorland, p. xxxviii.

the latter fort and Lanchester,[1] and to complete the local series on Dere Street we must postulate towers near Square House and on Brandon Hill[2] between Lanchester and Binchester, and at Brusselton or, less likely, at Shackerton between Binchester and Piercebridge.[3] Elsewhere, a suggestion that the reported earthwork at Stanley was a signal tower, will be developed.[4] Attention might profitably be paid to this branch of Roman military works in the county.

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(1) Hunter's authority: "At a Roman mile and a half to the south (of Ebchester), some years ago was discovered the foundation of a square watch tower about 6 or 8 yards on the west side of the military way; the stones were cemented with lime" (Hutchinson. Durham II, note p. 434). MacLauchlan could find no trace of the tower - the curious mound beneath Fern Cottage would seem to be too far north to command the view to Lanchester.

(2) Traces of a walled building having the appearance of a "tumulus, or post of observation" were observed hereabouts by MacLauchlan 220 yards from Dere Street (Memoir, p. 9). I can only conclude that the site has been obscured by coal workings.

(3) MacLauchlan. Memoir, p. 3.

(4) pp. 305-6.

IV

THE ROMAN FORT AT PIERCEBRIDGE

"There was a Roman city at Piercebridge".
(Stukeley, Itinerarium Curiosum, 1776, Iter Boreale, p. 72).

From the fort at Catterick, Dere Street runs practically in a direct line northwards for a distance of ten and a quarter miles along the low foothills of the Pennine spurs to cross the Tees at Piercebridge. Topographical considerations would seem to have determined the route chosen, for to the west lie the sudden heights and steep scarps of the Pennine massive, while eastwards the valley of the Tees widens into a flat alluvial plain whose marshes proved a serious obstacle to north and south communication in the prehistoric period.

The site of the river crossing, exactly determined in 1933,(1) is thus placed immediately below the point where the Tees emerges from the narrow Pennine gorge, and yet above the limit of the meander. Moreover, the natural rock formation hereabouts is covered by a drift deposit of glacial gravel, providing not only a hard, compact bed for a permanent bridge-passage,(2) but also a strip of well drained, relatively open country, on either bank

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(1) T D N S., VII, pp. 240-2.

(2) Compare the site of the Thames crossing (Wheeler, London in Roman Times, p. 12).

pre-eminently attractive to early settlement.

The Roman fort, rectangular in shape and with its major axis from north to south, is situated on the left bank of the river some two hundred yards west of Dere Street, and within the angle formed by the Tees, and its tributary the Dyance Beck (Plate IV). The only real natural protection is afforded by the river, which to-day washes the ground within a hundred feet of the south rampart, and the importance of the Dyance Beck would seem to have been not defensive, but rather as a convenient water supply for the aqueduct feeding the fort bath-house and the latrine at the north-east angle. Tactically, the site, which is only twenty or thirty feet above the bed of the Tees, has little to commend it, for there is more elevated ground to hand on all sides, but like other bridge-head forts (one is reminded of Risingham) Piercebridge seems to have been chosen primarily for the nearness to the river-crossing which it guarded.

To-day the little village of some forty houses lies almost entirely within the ramparts of the Roman fort and, like Aldborough near Boroughbridge, seems to have borrowed much from the Roman ground plan. Thus the cottages round the four sides of the Green are practically parallel with the adjacent ramparts, while the modern north-to-south road through the village may well represent, to some extent, the line of the <u>via principalis</u> of the fort.(1) Indications of

(1) Cf. p. 75.

all four ramparts are visible on the ground, the north-west angle still being magnificently developed, while traces of the ditch system are to be detected on the west side. The over-all area of the fort is probably between 10 and 10½ acres,(1) a size far in excess of that of the majority of auxiliary stations in the north of England.(2) So far the only explanation advanced is that a strong local concentration of forces was necessary to control the "British camp" at Stanwick on the south side of the Tees;(3) this, however, is by no means a satisfactory solution of the problem.

The reports of the excavations conducted at Piercebridge from 1933-5 are already in print,(4) but before reviewing these results it will be convenient to summarise the literary evidence for the site.

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(1) Wooler's estimate of 10¾ acres (Piercebridge, p. 47) is probably a little exaggerated since the mound of the western rampart has been found to represent the debris of the wall, rather than the wall itself (T D N S., VII, p. 272).

(2) The size of Piercebridge, however, is not as unique as was once believed. Newton Kyme, though unexcavated, is said to have an area of c. 10½ acres; Binchester is 9 ½ acres over-all, and Malton 9 acres over-all.

(3) MacLauchlan. Memoir, p. 2.

(4) T D N S., VII, pp. 235-277.

THE BIBLIOGRAPHY OF THE SITE

The ~~first~~ earliest reference to the fort at Piercebridge is given by Bishop Gibson in his second edition of Camden's Britannia,[1] although the first edition[2] contained a drawing of an altar dedicated to Mars Condatis said to have been found nearby at Coniscliffe.[3] The text of Gibson's account is as follows: "Joyning to the Bridge is a large square Inclosure, about the usual bigness of the Roman Fortifications in these parts. A Gentleman of good understanding in this neighbourhood, speaks of an idol, that he saw himself, which fell into his Father's hands; who through excess of Zeal, caused it to be crush'd to pieces. It is certain, that several Urns have been found and many Coins, and in the neighbourhood, many years ago, the Plowers struck upon a large stone-coffin with a skeleton in it, in a field adjoining to the yard of the aforesaid Chapel."

Dr. Hunter, added the following observation in the early eighteenth century, important for the light which it throws on the excavations at the north-east angle in 1933-4: "The brook (i.e. The Dyance Beck), supplied the ditch of the fortress with water, and also the garrison by

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(1) 1722, cols. 940-1.

(2) 1695, col. 782.

(3) CIL., 420 (2). Note: the number in brackets refers to the numbering of the inscriptions in Appendix I

an aqueduct, firmly arched at the top so as to bear the public road, till 1730, when some coal draughts penetrated through it, discovering the cavity about a yard wide and a yard-and-a-quarter deep."(1) Apparently Hunter's collection contained not a few miscellaneous finds from Piercebridge, for Stukeley, on his northern tour with Roger Gale in 1725, was shown "a pretty onyx",(2) and Horsley makes a passing reference to several coins at that time in the doctor's possession.(3) "From Piercebridge", writes Stukeley "we entered immediately upon the Roman road which comes to the river a little lower down than the present bridge: it is a broad, very straight, and hard road at this day; the great ridge of stone originally laid, being not worn out through so many ages though broken and in great need of reparation. Several mile-stones by the way."(4)

Horsley provides corroborative evidence for the excellent state of preservation of Dere Street hereabouts in his day, and reports the local tradition of the Roman bridge "some of the wood of which was yet remaining"(5) For the rest he writes:"An aqueduct (if I am not mistaken)

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(1) Quoted by Bailey: Piercebridge a Roman Station, pp. 1-2.

(2) Iter Boreale, p. 72.

(3) Britannia Romana, p. 486.

(4) Loc. cit.

(5) Loc. cit.

has gone just through the present town, and the foundations of houses every where appear, especially when the earth is any way opened, or even well watered with rain; and after a shower the coins also are discovered and gathered up in abundance. A large stone coffin was also found here, and other antiquities. The last time I viewed the place, I was inclined to think, that a sort of garden, with some trees in it, which I once imagined might be enclosed in part with some of the ramparts of the station, has rather been the praetorium only ... I take Piercebridge to be Magae in the Notitia."(1)

Other notices of the site in the eighteenth century record only miscellaneous discoveries such as a gold ring,(2) a bronze figure of Mercury and two other small statuettes,(3) and inscribed but illegible stones from both Piercebridge(4) and Carlbury.(5) One of the many coins picked up within and around the fort is said to have been of Otho,(6) while others were "of the Lower Empire".(7)

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(1) Loc. cit.

(2) Surtees. Durham, IV, p. 32; A J., VII, p. 191.

(3) Archaeologia, IX, 1789, pp. 289-90; A J., XVIII, p. 90.

(4) Archaeologia, loc. cit., p. 287.

(5) Hutchinson. Durham, III, p. 216. Probably a tombstone.

(6) Archaeologia, loc. cit., p. 287.

(7) Hutchinson. loc. cit.

In 1844 a tombstone was found on the line of Dere Street on the south side of the river, of interest because it was set up by a woman, and therefore provides proof of a civil population living within the vicinity of the fort.(1) Compared with the wealth of incidental discoveries, however, the only structure known within the fort before the excavations of 1934, was a hypocausted building found in 1849, near the south-east corner,(2) supposed to have been part of the bath-house.

MacLauchlan estimated the size of the fort as $8\frac{3}{4}$ acres within the walls, and noted the existence of a branch road from Dere Street to the east rampart, traces of which were said to be visible in dry weather.(3) The Ordnance Survey six inch map marks the line of this road, and its existence is confirmed, on a slightly different alinement, by the personal observations of Mr. G. H. Richardson.(4) If the course of this road is correct it enters the fort midway through the eastern or longer rampart, and although this does not accord with the lay out of the normal rectangular fort of the Hadrianic period(5) it would agree perfectly well with the natural supposition that the

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(1) C I L., 421 (3).

(2) Wooler. Piercebridge, p. 93.

(3) Memoir, p. 2.

(4) Plate IV.

(5) e.g. Housesteads.

station fronted on to Dere Street. Moreover, the present contour of the north rampart suggests that the gate was not centrally placed in this side, but rather to the east and possibly beneath the modern highway. Further excavation is needed, however, before the orientation of the fort can be determined with precision.

In 1855 the construction of a cutting for the Darlington-Barnard Castle railway at Carlbury, about a mile north of Piercebridge, disclosed an extensive cemetery crossed by the presumed continuation of Dere Street from Toft's field.(1) Further discoveries were made during the following year, and interim reports in the Archaeological Journal(2) were followed by a full publication of the interments in Wooler's monograph.(3) Although the grave furniture found at this time has not survived, it does not appear from the accounts that the burials were of one period. Both inhumation(4) and cremation(5) were represented, while denarii of Trajan and Geta, a third brass of Antoninus Pius, and urns seemingly of Castor type "formed of a very fine red clay, coloured black both externally and internally,"(6) were recovered. That this was not exclusively the cemetery of the fort, is shown by the number

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(1) Plate IV. (2) XIII, 1856, pp. 96 and 101; ibid., XIV, 1857, p. 78.

(3) Piercebridge, pp. 171-180.

(4) ibid., p. 172. (5) ibid., p. 175.

(6) ibid., p. 173.

of stone coffins found on the left bank of the river near the south-east angle of the rampart,[1] while in 1903 another stone cist was brought to light "about a hundred yards due west of the west gate of the Roman station."[2]

In the course of restoration of the church at Gainford, a village on the Tees three miles west of Piercebridge, in 1864, two inscribed stones,[3] a sculptured fragment,and an uninscribed altar were discovered,[4] and St. Andrew's Church, Winston, is likewise said to have brooched stones built up into its walls.[5] As in the case of Binchester, the Roman fort at Piercebridge proved a useful quarry for Saxon and mediaeval masons.

Notices of incidental finds of coins[6] and pottery,[7] and a brief review of the foregoing materials in a paper delivered to the Society of Antiquaries of Newcastle-on-Tyne in 1904,[8] complete the bibliography of the site until we come to the publication of Wooler's bulky monograph in 1917.[9]

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(1) MacLauchlan. Memoir, note p.2; TDNS., VII, pp. 242-4.

(2) Piercebridge, pp. 179-80; cf. also CIL., 421 (3) found on the south bank of the Tees.

(3) CIL., 422 (4) & 1344 a. (5).

(4) JAA., xxii, pp. 182-90.

(5) PSAN., 3, ii, p. 355.

(6) ibid., i, p. 108.

(7) ibid., p. 100.

(8) ibid., pp. 123-131.

(9) The Roman Fort at Piercebridge, County Durham, London, 1917. An expansion of his paper in YAJ., xxiii, 1915, pp. 401-441.

This work is of little merit, showing no scholarship or originality of thought, and full of irrelevant discursions. The account of the site is preceded by an introduction some fifty pages in length, the body of the paper contains hardly any new evidence, and the historical conclusions drawn from the materials may be disregarded. We cannot even be certain that the identification of the coins, listed in the concluding chapter[1] is in every case correct.

Far more stimulating is Petch's brief note on the site,[2] which contains the original suggestion that the exceptional size of the fort might possibly be accounted for by the fact that the visible ramparts represent not the fort alone, but the fort and an annexe, the dividing wall having been demolished. This theory, however, together with the statement that "earlier coins are sufficient in number to suggest that excavation might bring to light definite evidence of a Flavian date for the foundation of the fort," can only be considered in relation to the excavations of 1933-5.

THE EXCAVATIONS OF 1933-5

(1) The Bridge.

The site of the bridge was exactly determined in 1933 when Mr. C. F. Dixon found a number of oak piles,[3] and several stones with lewis holes, in the bed of the river, exactly in line with the section of Dere Street cut in the

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(1) pp. 185-187. (2) AA., 4, i, pp. 4-6.

(3) cf. Horsley. op. cit., p. 486.

Toft's field.[1] The distribution of the piles suggested four piers between the north and south abutments,[2] though it is doubtful whether we are to infer that Leland's bridge "sometime of five arches"[3] referred to the Roman structure. The same method of construction - stone piers laid on a raft of iron-shod oak piles - was observed in the case of Hadrian's bridge over the Tyne at Newcastle.[4]

(2) The North-East Angle.[5]

Excavation at the north-east angle of the fort was begun in 1934 following the opening out of a culvert discovered in 1915. The work was hampered by the restricted area available for digging, and by a restive tenant, so that the results are not as satisfactory as one could have wished, but against the lack of historical evidence secured, the structural remains were sufficiently well preserved to make the excavation profitable.

Where the fort wall had not been completely robbed away it was found to measure nine feet nine inches in width, resting on composite footings of cobbles sandwiched between

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(1) TDNS., VII, pp. 240-2. (2) Plate V.B.

(3) Itinerary, Vol. I, p. 74.

(4) NCH., xiii, p. 509.

(5) The remains here have been put into repair by H.M. Office of Works and are now open to the public.

layers of blue clay seventeen feet wide. The outer face, at one point on the curve of the angle, still preserved a neatly chamfered plinth on a heavy sandstone base course.(1) Immediately behind the wall, in place of the customary rampart backing, stood a latrine building built parallel to the curve of the fort wall and measuring eight feet wide and sixty-eight feet between the doors at either end. A well-constructed culvert, presumably fed by the aqueduct from the Dyance Beck, provided for the flushing of the latrine and, a point not noticed by the excavators, the course taken by this culvert suggests that away from the angle it was deliberately re-alined to avoid the rampart backing of the wall.(2) South of the latrine a second building was located, but as the site was crossed at this point by a modern boundary wall excavation was limited to a small area inside the north-east corner. "The interior," we learn, "showed signs of having been plastered, and two feet four inches below the top of the wall a ledge three inches wide held remnants of freestone flooring slabs. It yielded two coins, a Victorinus ... and a Tetricus ... , a fair amount of pottery and several fragments of box tile ... "(3)

In spite of the fact that the whole of the available area at the north-east angle was cleared during the course of the excavations and, subsequently, when it was decided to leave the remains permanently open, Mr. G. H. Richardson,

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(1) TDNS., VII, Pl. f. p. 258. (2) Plate V.A.

(3) TDNS., VII, p. 254.

who took an active part in the supervision of the work, informs me that no sealed deposits were observed at any point.

For the dating evidence, therefore, we are dependent upon the mass of pottery and a few intrinsic objects, preserved in the Piercebridge Museum, all unstratified, but whose provenance is recorded in a careful inventory prepared by Mr. Richardson. The bulk of the coarse ware, as has already been noted,(1) dates to the fourth century and, one might add, to the Constantian period. Thus, from the floor of the latrine were recovered several hammer-head mortaria rims, fumed cooking-pots with outbent rims and obtuse-angled lattice decoration,(2) and a number of Castor types paralleled in the Constantian deposit at Lanchester.(3) From the same level came also a bronze spoon of fourth century type.(4) The filling of the culvert contained cooking-pots of similar section to those already described, platters decorated with burnished intersecting arcs,(5) and fragments of a delicate green lustre vessel repeated at Lanchester(6) - all well-attested Constantian types. Furthermore, coins of Tetricus and

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(1) ibid., p. 269. (2) cf. Lanchester, Plate XLV, nos. 2-4.

(3) ibid., nos. 1 & 7. (4) TDNS., VII, p. 252.

(5) cf. Lanchester, Plate XLV., nos. 25-6.

(6) ibid., no. 9

Victorinus from building II may well point to the same period.(1)

The late fourth century is represented by at least one Crambeck sherd (type 10), and by a quantity of calcite-gritted cooking-pots of Huntcliff type chiefly from the filling between the high culvert wall and the farm buildings.

If this was all, the inference would be plain, for the existing structures all seem to belong to one period and while a pit, dug behind the culvert wall, produced "no evidence of any earlier level."(2) Yet, in addition to the coarse ware of predominantly fourth-century date, there was almost an equal quantity of Terra Sigillata widely distributed over the whole area. The excavators could only explain this anomaly by the supposition that a Hadrianic rampart had once occupied the site of the latrine building,(3) but evidence of this is to seek. It seems certain, however, that the earlier pottery is not merely imported debris, for in several cases it was possible to reconstruct vessels almost to completeness from adjacent fragments. Nothing further can now be done at this point on the defences and the solution of the problem must await further excavation.

(3) The west rampart section, 1935.

In view of the need for determining the date of the fort and proving or disproving the homogeneity of the

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(1) cf. Rudston (4), p. 324. (2) TDNS., VII, p. 258.

(3) TDNS., VII, p. 259.

rampart, a section of the defences was cut under the direction of Mr. G. S. Keeney in 1935. The site of this excavation is not given in the report but I have marked it on the general plan from personal measurement.(1) Although it is claimed that the results of the excavations disproved Petch's suggestion of a combined fort and annexe,(2) ~~but~~ this ~~was~~ is not actually the case, for the section taken lies to the north of the site of the so-called bath-house. While, therefore, surface indications certainly suggest a homogeneous rampart, absolute proof of this can not be obtained until the south wall of the fort has been examined.

Summarising the results of 1935, we find that at least two ditches existed on the west side, each twenty-four feet in width and five to six feet deep, separated from the wall by a twelve-foot berm, and from each other by a counterscarp of similar measurement.(3) Only the inner face of the wall survived but the character of the masonry and the width of the footings indicated "a wall of similar proportions to that in the north-east corner."(4) Moreover, evidence for the date of the defences as a whole was provided by the discovery of two sherds, dated c. 300 A.D., lying amongst masons' chippings, and sealed by the rampart backing of the wall,(5) while a few other fourth century fragments

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(1) Plate IV. (2) TDNS., VII, p. 267.

(3) Plate V.E. (4) TDNS., VII, p. 272.

(5) Plate V.C.

were recovered from the black soil at the bottom of the ditches.

CONCLUSION.

No attempt will be made in this chapter to estimate the significance of the fort at Piercebridge in relation to the Roman occupation of the county as a whole, but it will be convenient to summarise briefly here the extent of our present knowledge.

In the first place, the discovery of a latrine-building inside the north-east angle of the ramparts is, in itself, sufficient proof that we have to deal with a military, rather than with a civil site, and against the absence of epigraphic record of any specific garrison at Piercebridge we may set the evidence for the identification of the site with one of two military posts listed in the Notitia Dignitatum (see below).

The visible agger of the ramparts represents a fort some ten acres in extent with correspondingly massive defences, constructed in the early fourth century. A short branch road provided a connecting link with Dere Street 200 yards to the east, and may have continued to the quarries at Carlbury, but there is no archaeological evidence for suggested routes east and west either to Darlington or Barnard Castle.(1)

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(1) Piercebridge, pp.70-74.

No structural remains have yet been detected to suggest military occupation before the Constantian period, and, in view of the results of recent excavation, MacLauchlan's explanation of the exceptional size of Piercebridge falls to the ground.[1] On the other hand, ceramic and numismatic materials point unmistakeably to the existence of a settlement of some kind or other at the brige-head at least from the time of Hadrian,[2] and the fact that excavation to date has been concentrated on the ramparts, together with the known propensity of Chlorus for reorganisation on a grand scale, make it possible that an earlier fort may well be concealed within the visible defences. In what capacity the two

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(1) p. 70.

(2) Petch suggested that the original settlement might prove to be of the Flavian period, and Healey, reviewing the recent coin evidence has said: " There is nothing unusual in the series which represents almost continuous occupation from Flavian times (or shortly afterwards) down to the opening of the fourth century" (TDNS., VII, p.259). A striking feature of the pottery collection in the museum, however, is the complete absence of first century types. Amongst a quantity of plain and decorated forms of the Hadrian-Antonine period there is not a single fragment of South Gaulish manufacture while, ignoring Wooler's doubtful coin list, the earliest coin produced by the excavations of 1933-5, a denarius of Titus (Appendix II, A. no.4), might well have appeared on a site not occupied until the middle of the second century (cf. the denarius of Vitellius from Balmuildy, Balmuildy, p.111).

centurions from Upper Germany were established at Piercebridge in the third century[1] we cannot say, but the absence of a regiment on either tombstone would be unusual if they were then in garrison at the site.

On the east side of the fort, bordering the line of Dere Street, coins and other incidental discoveries suggest an extensive vicus which seems even to have embraced the south bank of the Tees.[2] Some light is thrown on the economic life of the population living without the fort by the discovery of a fine bronze figure of a ploughman driving the aratrum, or light plough drawn by two oxen.[3] Mr. R.G.Collingwood has recently discussed this group in the course of a comparison between the elaborate villa-economy of the south with that of the rural districts.

Excavation of a site of this magnitude can only proceed piece-meal, and many years of work are required before the history of the place can be more than guess-work. Rampart sections, the most valuable approach

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(1) CIL., 421-2 (3-4).

(2) Plate IV.

(3) Now in the British Museum; cf. Piercebridge, Pl. f. p.148.

(4) Collingwood and Myers. Roman Britain and the English Settlements, p.212.

to archaeological understanding, are no more than a starting-point, and even to concentrate satisfactorily on the defences alone requires the co-ordination of sections at several points on the perimeter. Thus it is felt that at least one more rampart section at Piercebridge is desirable, preferably at the south-west angle easily accessible to excavation. When this has been accomplished the interior of the site claims urgent attention.

THE ROMAN NAME OF PIERCEBRIDGE

A section of the Notitia Dignitatum[1] reads as follows:

24. Praefectus numeri vigilum, Concangios.
25. Praefectus numeri exploratorum, Lavatres.
26. Praefectus numeri directorum, Verteris.
27. Praefectus numeri defensorum, Braboniaco.
28. Praefectus numeri Solensium, Maglone.
29. Praefectus numeri Pacensium, Magis.
30. Praefectus numeri Longovicianorum, Longovicio.
31. Praefectus numeri supervenientium Petueriensium, Derventione.

Then follows the Item per lineam valli.

Although there are omissions, the striking feature of this list is that all the sites which can be identified, thus Concangios (= Concangium, now Chester-le-Street),[2] Lavatres (= Lavatrae, now Bowes), Verteris (now Brough under Stainmore), Braboniaco (= Brovonacae or Braboniacum, now Kirkby Thore), Longovicio (= Longovicium, now Lanchester),

(1) ed. Seeck, Berlin, 1876, Occ. XL.

(2) see pp.163-4.

and Derventione (?now Malton), are situated in the north-east region south of the Wall or along the Stainmore route. Of the remaining sites between the Tyne and the Tees we have the Roman names for Binchester (Vinovia), Ebchester (Vindomora) and possibly South Shields (? Arbeia)[1]; only Piercebridge and Greta Bridge escape identification. Since the above sector of the Notitia list, specifically dealing with the forts within or on the fringe of County Durham, includes but two sites Maglona and Magis not yet determined, it seems reasonable to equate one of these with Piercebridge and the other with Greta Bridge, remembering that at the present state of knowledge we cannot discriminate between them.

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(1) Notitia Dignitatum, loc. cit., 22; cf p. 279.

POTTERS' STAMPS FROM PIERCEBRIDGE (1)

A. On Terra Sigillata.

1.	CELSIANI F	F.31. CELSIANVS of Lezoux. Period: Hadrian-Antonine.
2.	FORTIONIS	F.31. FORTIO of Rheinzabern. Period: Antonine.
3.	IVSTI M	F.37. IVSTVS of Lezoux. Period: Hadrian-Antonine.
4.	MAIORI[S]	F.33. MAIOR of Lezoux. Period: Trajan-Antonine.
5.	RIIGVLI M	F.18/31. REGVLVS of Lezoux. Period: Trajan-Hadrian.
6.	SABINI·M	F.33. SABINVS of Lezoux. Period: Trajan-Hadrian.
7.	SAXAMI M	F.18/31. SAXAMVS of ?Lezoux. Period: Antonine.
8.	VICTOR F	F.31. VICTOR of Rheinzabern. Period: Hadrian-Late Antonine.

B. On Amphorae.

1. L IVNI
MELISSI

cf. Wroxeter, 1912, p.65; CIL., xii, 5683, 154; ibid., xv, 2775; and, for variants of the stamp, Malton, pp.80-81.

C. On Mortaria.

1. ⋋∧M

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(1) All in the Piercebridge Museum.

V.

THE ROMAN FORT AT BINCHESTER

"Binchester, now a poor Villag, stondith on the South side of the Were, and is but half a Mile beneth Castelle Akeland. It stondith on the Brow of an Hille, and there I saw, as I roode on the South side, a little Fosse, and indicia of old buildings. In the ploughid Feeldes hard by thys Village hath and be founde Romaine Coynes, and other many Tokens of Antiquite".

(John Leland c. 1540. Itinerary, Oxford, 1744, I, fol. 79, p. 73).

At Bishop Auckland, the river Wear begins a broad eastward meander in a flood plain and, at the apex of the loop, receives the waters of its largest tributary, the Gaunless. Throughout the course of this meander the left bank is a flat expanse of alluvial deposits, constantly taking on new accretions as the right bank is correspondingly undergoing marked erosion from year to year.(1) The geological formation of the surrounding country is primarily that of the Coal Measures region, with the important exception that about a mile from Bishop Auckland, between the streams of the Gaunless and the Bell burn, stands a glacial gravel plateau, in a synclinal line of the coal strata, rising steeply on the south and west sides to a height of about 100 feet above the bed of the Wear, and falling away gradually to north and east. On this

(1) Mr. McIntyre informs me that 24 feet of the east bank has been washed away within the last 8 years.

plateau stands the Roman fort of Vinovia.

Glacial deposits, as we have seen,[1] whether gravels, sands, or moraines, affect vegetation to the extent of producing relatively dry and open country, and it is not surprising to find Tardenoisian implements close at hand.[2] More important considerations, however, from the point of view of the Roman occupation of the plateau are the inter-related problems of strategical advantage and immediate communication routes.

The natural strength of the site is apparent. "It appears," writes MacLauchlan, "almost an island in the valley of the Wear."[3] On the south and west sides protection is afforded by the wide sweep of the river, fordable only in the dryest season, and by the steep and difficult ascent to the plateau. The little Coundon burn prolongs the natural defences on the south side, while to the north the more gradual approach to the fort is guarded by the marshy ground in the valley of the Bell burn. Only South Shields' Lawe, of the other fort sites in the county, is as easily adaptable for defensive purposes.

From the top of Burselton Hill MacLauchlan believed that Dere Street was sighted to Bishop Auckland, and deviated only from a direct line to take advantage of a

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(1) pp. 6-7. (2) Plate II. (3) Memoir, p. 5.

favourable crossing of the Gaunless.[1] Unfortunately, from a little beyond the site of this crossing to the edge of the plateau at Binchester, a distance of two and a half miles, the course of the road has never been proved, and the exact approach to the fort remains uncertain.

MacLauchlan's suggested line runs from the market-place in Bishop Auckland obliquely down the Wear Chare, across the present curving arm of the Wear at two points, and meets the known line of the road through the fort on the edge of the plateau.[2] The angle of 120° produced at this point is, however, an artificial one, and, while on present evidence there is no difficulty in assuming that the course of the river in Roman times lay to the west of the present bed, excavation on MacLauchlan's line in Bishop Auckland has produced negative results.[3] An alternative route, noted by MacLauchlan[4] but dismissed as improbable, is shown on Hooppell's map, and described by him as passing "through the episcopal park and the village of South Church, the original St. Andrew's Auckland, to what is now known as Fyland's Bridge."[5] Recent discoveries[6] have confirmed the existence of a Roman cemetery on this line, but more definite evidence is awanting, while Horsley's observation[7] fits both routes equally well. It is possible that the re-laying

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(1) ibid., p. 4. (2) Plate VI. (3) Information from Mr. James McIntyre.

(4) Memoir, p. 6. (5) Vinovia, pp. 2-3, & map f. p. 2.

(6) see p.173; Plate VI. (7) "At Binchester, our military way makes a large turn, and disappears a little near the town of Bishop Auckland." (Brit. Romana, p. 399).

of sewage-pipes at present in progress between the fort and the river on the south side will reveal the course of the road, but until more definite evidence is to hand the question must remain sub judice.(1)

Both MacLauchlan and Hooppell believed that Dere Street ran through the fort itself. Certainly the well-made road discovered by Hooppell(2) can hardly have avoided entering the south-east gateway, while the agger of Dere Street on the Hunwick bank of the Wear, the section of the road uncovered in 1911,(3) and the site of the porta principalis sinistra, are all in reasonable alinement.(4) Although the same relationship between Dere Street and the fort seems to exist at Catterick, the position would be intolerable unless by-pass roads were also provided to avoid the defences. Such loop-roads, indeed, appear to have existed at Corbridge,(5) and commonly in the case of the forts on the Antonine Wall in Scotland.(6) On the O.S. six-inch map (1924. Durham XXXIV, S.W), a short sector of the road from

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(1) The Chief Engineer, Mr. R. Stanage, informs me that a cutting is to be made through the "singular water-worn projection, having all the appearance of an artificial structure" a little to the east of MacLauchlan's line, which, it has been suggested, is a third alternative for the approach of Dere Street to the fort (Memoir, p. 6).

(2) Plate IX. (3) PSAN., 3, v, pp. 64-5. (4) Plate VI.

(5) NCH., X, p. 459.

(6) Macdonald. Roman Wall in Scotland, figs. 19, 42, etc.

Binchester to Newfield is marked "Roman."[1] The authority is undoubtedly MacLauchlan whose note is as follows: "It seems probably that there was a way towards the coast from Binchester, and some may fancy they can trace a dyke running from the north-west gate, along the road towards Newfield; first on the east side, and then on the west, near Belburn Brook, ascending near the road, and running on the west side of it as far as the Newfield Brook, where the road turns to the east towards Bier's Green. Beyond this no trace may be seen, but about 350 yards before we reach the cross roads on the hill, there is a heap of stones in the road, having much the appearance of an ancient tumulus, so that a road possibly ran this way by Bier's Green to the sea side."[2] No other evidence in support of such a road has come to hand, for the tombstone of Montanus,[3] observed in 1819 by the side of the bridge over the Bell burn was not in situ; it will be wiser at present, to disregard the suggestion of a road to the coast.

Two other roads communicating with the fort at Binchester are, however, well attested. The first of these is the road from Bowes,[4] which crossed the Tees at Barnard Castle and proceeded almost in a direct line

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(1) Plate VI. (2) Memoir p. 7. (3) CIL., 429 (13).
(4) R.V.

by way of Stainton, Raby, and Wackerfield to join Dere Street three miles south of Binchester, thus "avoiding wet ground and a superfluous crossing of the river Gaunless."(1) The second branch road left Dere Street three miles north of the fort, thereby obviating the necessity for a second passage of the Wear, and apparently, communicated directly with the station at Chester-le-Street.(2)

From many points of view, therefore, Binchester is the key-site to the Roman occupation of the county. Situated on Dere Street, the possibility of obtaining substantial evidence relating to the first advance of the Roman armies across the Tees is apparent, for it is inconceivable that the adaptability of the plateau as a bridge-head position would escape the attention of the pioneer forces. A natural focus of road, Binchester is the link with forts as far afield as South Shields and Brough-under-Stainmore, and the vicissitudes of the frontier in the second, third, and fourth centuries are certain to be reflected within its walls. Finally, the association of the site with the Brigantes on Ptolemy's authority, the only direct evidence we have for the extension of the dominion of that tribe into ~~County~~ County Durham, is an intriguing problem in view of the present lack of evidence for Iron Age settlement on the plateau.

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(1) AA., 4, *xiv*, p. 203. (2) R. IV.

THE BIBLIOGRAPHY OF THE SITE.(1)

The Roman name of Binchester is provided by two classical texts. As already noted,(2) the geographer Ptolemy(3) writing about 160 A.D., lists Vinnovium as one of the cities of the Brigantes, while the Antonine Itinerary, the third century road book of the Roman Empire, places Vinovia nineteen miles from Vindomora (Ebchester), and twenty-two miles from Cataractonium (Catterick).

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(1) The excavations of 1937 proved that, at the present time, about a quarter of the total area of the fort lies within the grounds of Binchester Hall, and beneath the house and outbuildings of Binchester Farm. Local historians have traced the ownership of the site as far back as the twelfth century to the family of Binchester which took its name from this property. The manor evidently possessed a small population of serfs, or sub-tenants, surviving into the sixteenth century as the "poor village" noted by Leland. While the village no longer exists, Binchester is still rated as one of three townships composing the parish of Byers Green. The present Hall, built in 1835 to replace an early seventeenth century structure, is not upon the same site but a little to the north, incorporating the foundations of the old Hall within its grounds (cf. Plate VII). For the history of Binchester from mediaeval times onwards cf. Conyers Surtees. History of the Parish of Byers Green, including the the Townships of Newfield and Binchester, Newcastle, 1922, pp. 15-38.

(2) p. 94 . (3) Geographia, Bk. II, c. III.

As Camden pointed out,(1) the two references are obviously to the same site, and the identification with Binchester is certain(2) although Ptolemy's latitude and longtitude have here fallen into error, possibly through ~~the~~ mishandling by transcribers. Camden records two inscriptions from Binchester,(3) while bishop Gibson, adds a few discoveries made in the early eighteenth century, including a carnelian, and what would appear to have been a circular stone tomb: "all carefully searched for by the present owner, Mr. Charles Wren."(4) Apparently Dr. Christopher Hunter of Durham was also making a collection of objects from the site at this time for when Stukeley visited him, on the occasion of his northern tour with Roger Gale in 1725, he was shown a number of fragments of Samian ware, including, as he tells us, a vessel with the potter's stamp AMANDVS. In view of Hooppell's discovery of kiln-rests, Stukeley's further observation (probably repeating Hunter) that "the clay is there met withall and there was a great pottery,"(5) would seem to be not without foundation.

Horsley's visit to Binchester produced two further inscribed stones,(6) and the following brief notice: "The station has been large, and nearly equal to that at Lanchester. The river makes a remarkable turn, and so happens to run almost east and west, and to lie nearly

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(1) Britannia, 1607, p. 603. (2) cf. CIL., 427 (11).
(3) CIL., 424, 425 (8&9). (4) Britannia, 1722, col.940.
(5) Iter Boreale (Itinerarium Curiosum, 1776) p. 72. (6) CIL, 426,428 (10 + 12).

south from the station ... The outbuildings, as usual, have been between the station and the river, or to the south-west of the station."(1) Although there is no explicit statement to this effect, the inference of the first sentence is that the ramparts were sufficiently visible in Horsley's time to allow an estimation of the size of the fort. On the other hand, Horsley's computation of the size of Binchester in relation to that of the fort at Lanchester is quite erroneous, and so we must doubt whether surface indications were much more pronounced in the early eighteenth century than they were sixty years later when Hutchinson visited the site.

Cade's extravaganza entitled Conjectures on the name of the Roman Station Vinovium or Binchester,(2) contains the information that the coins found on the site extended to the time of Valentinian and Theodosius, and adds further discoveries, viz: a sculptured stone, an uninscribed altar, and a bronze statuette; the rest of his material is merely amusing.(3)

The best eighteenth century view of the site is given by the historian of Durham county, William Hutchinson. While only incidentally interested in Roman antiquities, and in no sense an epigraphist, Hutchinson was a zealous and, within his limitations, a faithful recorder, and his

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(1) op. cit., p. 399.

(2) Archaeologia, VII, 1783, pp. 160-3.

(3) The area of the fort is given as 29 acres. ibid., p. 161.

writings have preserved much useful material which otherwise might have been lost in the hiatus in Roman studies between Horsley and Hodgson. The text of his account of Binchester is as follows: "The station at Binchester lies on elevated ground, near eighty perpendicular feet above the river Wear, which washes its western foot, and by the washing of the bank ... the south-west corner of the vallum is gone; the north-west terminates at Mr. Wren's summer-house. The ground within the station is an inclining plain facing the east, and on account of old inclosures and long cultivation it is very difficult to ascertain the dimensions and exact figure. In the break of the bank at the south-west corner the foundations of the vallum are laid open, consisting of very large blocks of stone laid transversely; several pieces of stone aqueducts are on the sides of the hill, where they have shrunk down with the soil"(1) Notes follow on Mr. Wren's collection of gems and pottery, and the account concludes with a lengthy discourse on the sculptured figure considered by Cade to be that of a faun. An important footnote is, however, appended from Gyll's MSS., recounting

(1) Durham, III, 1794, pp. 346-8.

the discovery of Roman burials in the Bishop's park.(1)

The most significant statement in the above description, ~~unnoticed~~ not mentioned by previous writers, is that a landslip has taken place, in consequence of river-action, on what is really the south-east side of the fort.(2) How far this affected the fort is not clear, for Hutchinson apparently mistook the stone pavement of Dere Street for the masonry of the fort wall,(3) and thereby anticipated the results of the excavations of 1937 on completely false premises.

About 1815, attention was again focussed on the site by the chance discovery of a hypocaust, "peculiarly

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(1) "in building a bridge over the Gaunless, in the park at Bishop Auckland in 1757, was found a Roman urn of greyish-clay, filled with ashes, earth, and the remains of human bones. ... The place where this urn was found was about a quarter of a mile from Binchester, where several other pieces of pottery have been discovered" ibid., p. 348.

(2) Hutchinson's compass-points are not exact, S.W. should read S., N.W. should read N., and similarly for the other angles.

(3) MacLauchlan. Memoir, p. 5.

worthy of examination,"[1] within the station, while four years later the tombstone of a decurion was discovered at the crossing of the Bell burn, between Binchester and Byers Green.[2] The latter stone cannot now be located, and the chances are that it perished in the general disaster which befell the Wren collection of antiquities when the Hall was sold by Charles Lyon to bishop Van Mildert in 1833. All but one of the sculptured and inscribed stones which had formerly stood in the court-yard were used as building material in a neighbouring coal-pit.[3] Only the altar to Fortune was preserved through the intervention of Canon Raine.[4]

The last general account of the existing remains before Hooppell's excavation is given by MacLauchlan, and his description is interesting because it is accompanied by the first serious attempt to define the limits of the fort. "The whole of the N.E. front" he writes, "is traceable, and about half of the N.W. and S.E. fronts; on this assumption the fortress will have been a right-angled

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(1) Bruce. Wall (1), p. 344; Roach Smith. Collectanea Antiqua, iv, 1857, pp. 131 ff., & Pl. xxxi; Mackenzie & Ross. Durham, II, p. 304; MacLauchlan. op. cit., pp. 6-7.

(2) AA., 1, i, p. 142; CIL., 429 (13).

(3) Lapidarium Septentrionale, p. 371.

(4) cf. CIL., 423 (7).

parallelogram, with the N.E. and S.W. fronts about 214 yards in length, and the N.W. and S.E. fronts about 160 yards. This would give an area of about seven acres." The possibility of a landslip having removed the south-west rampart is not considered, but the southern half of the fort is arbitarily planned to fit the shape of the plateau.(1) Further observations refer to gateways in the centre of each rampart, and a broad ditch "perhaps the same as at Lanchester, above sixty feet."(2)

THE EXCAVATIONS OF 1878-80.

In the year 1877, on the occasion of a visit of the Tyneside Naturalist's Field Club to Binchester, Mr. John Proud of Bishop Auckland offered to finance the exploration of the site. ~~Having secured~~ With the patronage of the bishop, Dr. Lightfoot, and the consent of the owners and tenant of the land, excavation was begun in the following year under the direction of the Rev. Dr. R. E. Hooppell, rector of Byers Green. The final results of the work were published in book form in 1891 under the title Vinovia, A Buried Roman City in the County of Durham, illustrated by plans prepared by J. W. Taylor, and sketches by

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(1) MacLauchlan. Enlarged plan, accompanying map.

(2) Memoir, pp. 6-7.

W. Heatlie[1]. By arrangement with the University of Durham it was agreed that all portable objects should be deposited in the University Museum, where they are to be found at the present time.

A recent writer reviewing these excavations has declared: "the slight excavation then carried out did not shed much light upon the history and form of the fort".[2] Unfortunately this is only too true, but scientific archaeology as we know it to-day is largely a product of the twentieth century, and Vinovia, whatever its defects, ranks highly amongst similar publications of the period.

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(1) For contemporary summaries cf:

(i) AA., 2, ix, pp. 191-202.
(ii) JAA., xliii, 1887, pp. 11-123.
(iii) Antiquary, III, 1881, p. 82.
(iv) Antiquary, V, 1882, p. 77.
(v) Lecture: Vinovium. Delivered by Hooppell in the Town Hall, Bishop Auckland, Feb. 24, 1879, and reprinted from the Auckland Chronicle, Feb. 28, 1879.
(vi) DUJ., III, 1879, no. 8, pp. 4ff.
(vii) DUJ., IV, 1879, no. 14, p. 29.

(2) Petch. AA., 4, i, p.6.

In the following pages a critical analysis will be made of Hooppell's report, in three sections (i) structural evidence, (ii) pottery, and (iii) coins, to form a basis for the excavations carried out by the writer in 1937.

A. THE FORTIFICATIONS.

1. The Rampart.

The rampart of the fort was excavated only on the north-east side where its raised mound is still plainly visible. No attempt was made to discover the position of the south-west rampart, so that the size of the fort remained uncertain. Hooppell's opinion that it was square in shape and not less than eight acres in extent,[1] was purely conjectural. The first section, cut through the north angle, revealed the stone wall 8 feet 7 inches thick with a fine chamfered plinth resting on a base course[2]. No facing stones were found *in situ* above the plinth, but, in happy contrast, the back of the wall was discovered standing six courses high on a flagged foundation. Moreover, the wall was found to be stepped back by offsets, 7 inches and 6 inches wide respectively, at the second and fifth courses from the foundations[3]. The excavators apparently removed the

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(1) *Vinovia*, p. 5.

(2) *Vinovia*, p. 7, Plate 3, and drawing f. p. 8.

(3) A similar method of construction has been noted in the Gordianic reconstruction of the fort wall at Lanchester (p. 185), and at Caerwent (*Arch. Cambrensis*, xvi, 1916, p. 16).

bank behind the wall without being aware of its existence. Hooppell was at first inclined to believe that the solid bed of water-worn cobbles - "in some places ... quite 30 feet wide"(1) - on which the fort wall rested, represented a Brigantian fortification,(2) but he was later persuaded by Roach Smith that such footings were not abnormal to Roman constructional methods.(3)

(2) Towers and Gateways.

No sign of an angle turret was observed at the north corner, although the excavators uncovered the back of the fort wall eastwards from the apex of the curve for a distance of some 35 feet. Neither were any gates found although search was made for the entrance in the north-east rampart. Unfortunately, the excavators were here working not in the centre of this rampart, where we may now assume the porta praetoria was situated,(4) but a short distance to the east,(5) so that the lack of success is not surprising. While the site of the gateway in the south-east rampart was suggested by the discovery of its roadway both inside and outside the fort, the "absorbing interest of the work undertaken elsewhere, and the absence of any special indications of the probable survival of this gateway, conspired to prevent a

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(1) Vinovia, p. 9. (2) Lecture, p. 13. (3) Vinovia, p. 9.
(4) see Plate VII p. . (5) Vinovia, Pl. 2, J, and p. 9.

search for it being undertaken."(1)

Before we leave the ramparts we may note that at the northern angle a narrow passage had been cut through the core of the wall down to the foundation course, and the chamfered plinth at this point was worn by constant tread.(2) When this breach was made it is impossible to say, but it can hardly have been before the mid-fourth century, for the defences appear to have been reconditioned under Constantius Chlorus.(3) On the other hand, the fact that the postern was carried through at the foundation level of the wall, suggests no appreciable accumulation within the site, and therefore a date not far removed from the final abandonment of the military occupation of the fort. Until we have evidence for a Theodosian garrison, however, we are not justified in deducing from this discovery a sub-Roman settlement on the plateau.

3. The Ditches.

There is no suggestion in Hooppell's account of any work being carried out on the ditch-system of the fort, and nothing is said to amplify or modify previous references.

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(1) ibid., p. 9.

(2) ibid., frontispiece, Plate 3, and drawings f. pp. 8 & 21.

(3) see p. 160 .

B. EXCAVATION WITHIN THE FORT

1. The Praetorium.[1]

Reference has already been made to the discovery of a hypocaust within the fort, about the year 1815.[2] On the general site plan prepared by J. W. Taylor[3] it is placed 350 feet from the north-east rampart, and 165 feet from the south-east rampart, but these measurements are incorrect and should read 315 feet, and 200 feet respectively (O.S. 25 inch map, 1920, Durham XXXIV, 14). The excavators decided to undertake a more exact survey of this structure and we are indebted to Mr. J. W. Taylor for a series of excellent plans and sections. It was soon discovered that the hypocaust was only one of a series of chambers in a building which Hooppell rightly identified as the praetorium. As the garden-wall of the Hall ran across the site hereabouts, part only of this building was excavated, and it is, therefore, impossible to form any idea of its size and shape.[4] Moreover, the plan of

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(1) cf. Vinovia, pp. 14-18, Plates 2, 4, 5 & 6, and drawings f. pp. 14 (defective, AA., 2, ix, footnote p. 198) & 15.

(2) pp. 99-100. (3) Vinovia, Plate 2.

(4) Mr. H. Thompson of Binchester Hall tells me that the remains of this building have been traced through into the present Hall grounds.

the remains[1] shows a confused jumble of walls, in some instances of obviously different date, but which the excavators failed to isolate. Without re-examination of the site the task of so doing is now impossible. It is, however, worth while to analyse Hooppell's account for the evidence it contains of re-building within the fort.

Work of one period is represented by a row of three rooms,[2] parallel to the north-east rampart, and fronting on to a road which appears, on present evidence, to have been the via principalis of the fort. The most easterly of these rooms (a) contained the principal hypocaust, measuring 15 feet 6 inches by 22 feet 6 inches and originally supported by 88 pillars, of which 80 were in perfect condition when first discovered. These pillars, ~~as~~ each 4 feet 4 inches high, were formed of tiles, a number of which bore the stamp N CON (retro)[3] in two sizes. Elliptical flue-tiles round each wall, secured into a cement bedding by T-shaped iron holdfasts carried the air to the room above. The walls of the heating-chamber were a little over 3 feet thick, and access was

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(1) Vinovia, Plate 4.

(2) ibid., a, t, u.

(3) CIL., 1234 (14).

provided by three arched openings, each 2 feet 2 inches wide, symetrically placed in the north-west wall. The central arch had been ruthlessly widened at the beginning of the nineteenth century.

In the room above the hypocaust-chamber many of the flue-tiles were still standing two deep round the walls, faced with coloured wall-plaster. Two doorways, each 3 feet 7½ inches wide, were observed in the north-east and north-west sides, the latter communicating with room t. A section drawn by Taylor[1] shows mortised holes in the imposts of the north-east doorway to receive the tenons of a timber framework.

Room t was the same size as room a and possessed a hollow floor which we must assume was likewise hypocausted, although excavation in this area was hindered by the precarious state of the remains.[2] An underground bricked archway, however, at the south corner of this room, 3 feet wide and about 5 feet 6 inches high, apparently gave access not only to the heating chamber of room a, but also to those of rooms u and w.[3] Of the latter, u was only partially excavated but it would seem to conform to the measurements of a and t. Room w, projecting north-east from the latter, was of smaller proportions, measuring only 5 feet by 11 feet 6 inches.

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(1) Vinovia, Plate 5, section E. F.

(2) AA., 2, ix, p. 198.

(3) Vinovia, Plate 5, & p. 17.

From the evidence of flue-tiles in position round the walls, and a drain penetrating its west wall "made," Hooppell writes, "when the chamber was first built,"(1) it may well have been part of a suite of baths.

The remaining walls shown on Plate 4 are uniformly hatched as period II work, although as has been remarked at least two more periods seem to be involved which the scanty nature of the evidence does not allow us to disentangle. We may, however, summarise the evidence for reconstruction as follows:

(i) Room a. The hypocaust was apparently in use at a late period, a coin of *Magnentius* being discovered on the threshold of one of the underground doorways,(2) while in the room above an elliptical flue-tile had, at some time, been replaced by a square box-tile stamped M.P.P.(3) Moreover, the threshold of the north-east doorway was worn down, and the doorjambs showed signs of repair.(4) Lastly a flue-tile had been removed from one of the walls to admit the passage of a drain whose course was traced for a few feet in the direction of the garden wall.

(ii) Room u. Hooppell states that "the hypocaust appeared not to have been used in the later period of the Roman occupation of the building."(5)

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(1) ibid., p. 16. (2) AA., 2, ix, p. 198.

(3) Vinovia, Plate 5, & p. 15; EE., VII, 1135 (19).

(4) Vinovia, Plate 5, Section E.F.

(5) ibid., p. 16.

(iii) Courtyard. In front of the chambers a & t, and abutting on to the road, was a walled and paved courtyard with a small rectangular room in the north-west corner (r). The north-east wall of this courtyard appears to be of a later period than the construction of the hypocausts for it is not parallel to the street drain on the opposite side of the road, and it is possible that it encroaches on the roadway. Beneath the flagging of this courtyard were found a number of stone pillars from a disused hypocaust,(1) and many fragments of wall-plaster,(2) while the flagging itself incorporated re-used material including a broken statue of the goddess Fortune.(3) Unfortunately we cannot say whether the dedication to Aesculapius and Salus,(4) found hereabouts, was serving the same purpose, although Hooppell would seem to imply that this was the case.(5) Part of this reconstruction must be ascribed to the fourth century for the coins "Which were picked up in so great numbers along the course of the channel of the drain, were few, if any of them, earlier than the Constantine period".(6) Hooppell was inclined to believe that the commandant's house had now become a public baths, but it is wiser to agree with Petch that

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(1) AA., 2, ix, p. 198.

(2) Lecture, p. 27.

(3) Antiquary, III, 1881, p. 82.

(4) EE., VII, 979 (16).

(5) Vinovia, p. 18.

(6) Ibid.

the existing evidence does not "warrant so great a transformation".(1)

C. EXCAVATION WITHOUT THE FORT.

1. The North Angle.

A stone-built flagged drain, 2 feet 2 inches wide, ran out of the fort through the northern angle.(2) As it passed beneath the fort wall it was arched, and Taylor's plans suggest that the construction of both wall and drain is contemporary. For convenience, ~~sake~~ drainage from Roman military sites was usually conducted through the angles for here the latrines were commonly situated.(3) In front of the rampart a large stone had been fixed across the mouth of the drain apparently to check the flow of water by reducing the passage to half its height. Like the archway, this stone was coated with a deposit which proved on analysis to be no more than the residue of pure spring water.(4) The drain continued beyond the fort wall for a distance of twenty feet and debouched into a square stone-built chamber, "one of the greatest puzzles of the exploration".(5) Hooppell was not convinced that

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(1) AA., 4, i, p. 6.

(2) Vinovia, pp. 7-9, frontispiece, Plate 3, and drawings f. pp. 8 and 21.

(3) e. g. Housesteads, AA., 2, xxv, Pl. XVIII.
Benwell, AA., 4, iv, p. 140.
Ebchester, p. 240.

(4) AA., 2, ix, p. 193.

(5) Vinovia, p. 7. and Plate 3.

there was necessarily any connection between the two but the excavations of 1937 have made this point certain. The chamber measured 10 feet square internally; its walls were formed of rubble masonry, and the only entrance was that of the drain on the fort side. Moreover, we may quote Hooppell: "The floor was red with burning, as a hearth might be; and there were great hewn stones, apparently part of some important building, with deep grooves carefully chiselled in them, and other marks of construction about them, which had evidently been exposed to great heat. And besides all this there were lumps of bright red clay, which had not been burned, in this mysterious chamber."(1) Clearly the structure had been built of re-used material and was therefore subsequent to the first-period stone fort. Whether the burning had actually taken place in the chamber we cannot tell from Hooppell's account, but remembering that we are dealing with re-used building material it is not unlikely that the "marks of fire" were already on the stones when they were again brought into service.

The suggestions for the purpose of the structure were varied and entertaining, ranging from a potter's kiln to a Mithraic cave, but in view of the discovery of a similar structure outside the east angle in 1937, a full

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(1) Vinovia, p. 8.

discussion of the problem may be reserved for later consideration.(1)

2. The Circular Bath-Building.(2)

Some 70 yards outside the south-east rampart of the fort, on the north side of Dere Street, a circular building was discovered, and interpreted correctly by the excavators as having originally formed part of a suite of baths. The size of the building (diameter 19 feet 6 inches) and the width of the walls (1 foot 10 inches), closely correspond with the measurements of the circular structure at Templeborough.(3) From the evidence of flue-tiles lining the walls, we may conclude that the building was hypocausted, though whether the hypocaust was channelled or pillared we cannot say.(4)

Two doorways gave access to adjacent rooms, one of which was hypocausted, while a mortised stone in the middle of the floor suggests that the roof was supported by a central pillar.(5) On the right-hand side of the north-east entrance stood a hollow stone table.

Subsequently the building was modified and put to another use. The doorways were blocked up, a stone

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(1) See pp. 161 f.

(2) Vinovia, pp. 19-21, Plates 2 & 7, and drawing AA., 2, ix, f. p. 196 (defective, note p. 197).

(3) May. Templeborough, p. 49.

(4) Channelled hypocausts are primarily used ~~on~~ in suadatoria on the Antonine Wall (Roman Wall in Scotland, 1934, p. 71).

(5) As in similar buildings at Maryport (CW., 1, v, p. 246) & Kösching (Fink, ORL., no. 74, Lief., xxxviii, 1913, taf. iii).

and rubble bench was built against the eastern wall, and a new floor was laid over the accumulation debris of the old.[1] Moreover, the hypocaust of the adjacent chamber on the north-east side seemed to the excavators to have been destroyed by fire and never again put into commission.[2]

Finally, at a third period, a rough wall 1 foot 6 inches wide was erected across the chamber on the south side, and a new floor laid several feet above that of period II, and "many feet" above the original floor level.

Hooppell conjectured that in its original phase the building had been the caldarium, or hot room of the bath-house,[3] but Miss Fair, in a valuable paper analysing this and similar structures in cohort forts,[4] has shown that we are rather to identify it with the sudatorium described by Vitruvius and Pliny - a small and very hot circular chamber, hotter than the caldarium, and ~~heated by a separate furnace,~~ with its heat regulated by adjustable bronze shutters in the roof. From the evidence provided by forts in Britain and on the German Limes, Miss Fair concludes that "the circular sudatorium, as a feature of the cohort-fort's bath-house, seems to belong to the

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(1) The circular sudatorium at Hardknot appears to have been similarly dismantled (CW., 2, xxviii, p. 336).

(2) AA., 2, ix, p. 197.

(3) The discovery of a fine bronze strigil in this building left no doubt as to its general purpose.

(4) Circular Bath-Buildings in Connexion with Cohort Forts, JRS., XVII, 1927, pp. 220-224.

late first and early second century".[1] As an isolated building it is "an early feature", but "it has not, apparently, gone out of fashion by the beginning of the second century".[2] In this connection, it is significant that "a number of coins of the earlier emperors" were found in the Binchester sudatorium.[3]

No independent dating evidence was noted by the excavators for periods II and III, but a significant clue to the use of the building following one of these reconstructions was provided by the discovery of a number of terra-cotta objects "made exactly after the fashion of a modern bobbin ... about six inches in height, and about three inches across the ends."[4] Hooppell could offer no explanation of their purpose, but they are undoubtedly kiln-rests.[5] Here we may see positive evidence of Dr. Stukeley's "great pottery" at Binchester.

3. The Civil Settlement.[6]

When the investigation of the ramparts was deemed completed, work was transferred to the edge of the plateau

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(1) ibid., p. 220.

(2) ibid., p. 221. Hardknot is cited as an example of the upper limit.

(3) Antiquary, V, 1822, p. 77.

(4) Vinovia, p. 21.

(5) AA., 4, i, pp. 115-116.

(6) Vinovia, pp. 9-12, 21-22, Plate 2, and drawings f. pp. 11 and 22.

on the south side of the fort, and here the first discovery was that of the roadway (already noted by Maclauchlan,[1] but placed by him a little west of the true line)[2] terminating abruptly at a landslip on the edge of the plateau. The western side of this road was followed towards the fort for about 80 yards, and its continuation fell almost directly into line with the roadway observed within the ramparts.[3] It was paved with solid blocks and bordered by a stone gutter (mistaken by Hutchinson for an aqueduct),[4] and "seemed to have been repaired at different periods, and at different levels".[5] The width does not appear to have been ascertained.[6] Fronting on to the road was a row of rectangular buildings of varying sizes; each building being free-standing while separated from those on either side only by a narrow alley-way. Hooppell's observant eye noted at least three constructional periods.

The original stone buildings had their foundations at the first-period road-level, and the gutter at the side of the street took the eaves-drip.[7] Moreover the "oldest edifices", nearest the edge of the plateau, had a distinctive type of large, well-dressed masonry,

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(1) Memoir, p. 5.

(2) Lecture, p. 21.

(3) Plate IX.

(4) cf. p. 98.

(5) Vinovia, p. 10.

(7) Vinovia, drawing f. p. 22.

(6) In his report to the British Archaeological Association meeting Hooppell mentions a width of 30 feet, but there is no evidence to show that this was more than a conjecture (Antiquary, III, 1881, p. 82).

and roofs supported by round monolithic columns.(1) Evidence of period II was provided by building U, whose four walls were uncovered. It proved to be no less than 91 feet in length, and 21 feet 8 inches wide, built of small well-dressed ashlar, reminding Hooppell of the "stones of which the great Roman Wall ... is composed".(2) The foundation course of this building had been laid partly over the stone gutter of period I, a section of which had been lifted 2 feet to meet the requirements of the higher floor-level.(3) Finally a third period was represented by a further raising of the floor-level and the regular placing of door-steps two feet above the raised gutters of period II.

The purpose of these buildings was not clear to the excavators, and later writers do not seem to have appreciated their real significance.(4) There is no reason to doubt, however, that Hooppell uncovered part of the civil settlement of the fort, remarkable for the symmetry of planning and the excellent construction displayed. While no direct evidence was forthcoming to date the successive rebuildings, Hooppell ventured to ascribe the original work to Hadrian, and the reconstructions to Severus and

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(1) One of these columns in the Durham University Museum measures 4 feet in length and 1 foot in diameter.

(2) Vinovia, p. 10.

(3) ibid., drawing f. p. 11.

(4) Petch. AA., 4, i, p. 6. "The buildings resemble barrack blocks".

Constantine - a singular anticipation of the first three Wall periods.(1)

Perhaps the most important feature of work in this area, however, was the corroborative evidence it supplied for Hutchinson's deduction that a landslip had removed a considerable stretch of the south-western edge of the plateau since Roman times. The abrupt termination of the road on the edge of the precipice, and the broken walls of the most southerly buildings, showed unmistakeably "how vast a portion of the hill had succumbed to the effects of rain and river".(2)

D. THE POTTERY.

No complete report on the pottery from Hooppell's excavations has ever been made, but individual sherds have occasionally been published for comparative purposes.(3) The difficulty is that no record of stratification or find-spot was kept and it is even impossible to distinguish between sherds found within the fort, and those excavated in the civil settlement. Historically, the most that can be done is to review the material in bulk for the light which it throws on the Roman occupation of the site as a whole. At the same time it has been deemed advisable to include certain pieces in the pottery report for their "curiosity value".

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(1) cf. AA., 4, vii, p. 169. (2) Lecture, p. 18.

(3) e.g. M. R. Hull. Rudchester, AA., 4, i, pp. 110-120; and the same writer - Signal Stations, AJ., LXXXIX, 1933, pp. 220-250.

1. Terra Sigillata.

No figured samian attributable to the South Gaulish potteries is to be observed, although the products of the Lezoux potters, dated Hadrian-Antonine, are numerous. Five stamped pieces have been drawn. (Plate XXXI, nos. 1-5).

(1) Bowl, F. 30, stamped MERCATO[R.M] (retro). Not the South Gaulish MERCATOR, as suggested by Petch,[1] but the Lezoux potter of that name. The complete stamp, together with the bird (D. 1010), and the rosette-binding, occur on a bowl of the same form from Augsburg (Augsburg, 1913, Taf. XII, 5, and p. 52). Oswald dates this potter Trajan-Hadrian, but the fabric and the wearing of the mould (note the missing head of the bird) suggest rather the Hadrian-Antonine period.

(2) Bowl, F. 37, Lezoux. In beaded metope, masks (D. 695 and 711). Stamped [PATER]N FE(retro). Period: Hadrian-Antonine.

(3) Bowl, F. 37, Lezoux. Ovolo with plain tongue and bead terminal over bead row. Stamped LASTUC[A] (retro). Period: Hadrian-Antonine.

(4) Bowl, F. 37, Lezoux. Leaf scroll. Stamped [CIN]NAM[I] (retro). Period: Hadrian-Antonine.

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(1) AA., 4, i, p. 8.

(5) Bowl, F. 37, Lezoux. Apollo (D. 56) in beaded metope. Stamped CIN[NAMI] (retro).

Period: Hadrian-Antonine.

In plain Samian I have corrected Hooppell's list of potter's stamps as far as possible omitting fragments (cf. p. 125, nos. 1-36). The bulk of the material dates from Hadrian onwards but there are two exceptions - a platter F. 18, and a cup F. 33 stamped OF CELSI (no. 9), both of which should be ascribed to the Flavian period.

2. Coarse Pottery.

Fifty coarse pottery types from the collection are illustrated. (Plates XL and XLI). The earliest pieces are the mortarium (no. 31) and the carinated bowl (no. 5). The former of these may be safely ascribed to the late first or early second century, while the latter is pre-Antonine. The flagons (nos. 1-4), the jar (no. 9), and the mortarium stamped LOCCI.PR (no. 32), carry the occupation of the site through the Antonine period while the third century seems to be represented by nos. 7 and 8. The bulk of the material is, however, fourth century - the relative abundance of Crambeck and Huntcliff types attesting a vigorous occupation at the close of the Roman era in Britain.

E. COINS.[1]

336 coins were discovered in the course of the excavation and Hooppell identified 311 of these.[2] Mr. W. Percy Hedley, F.S.A., who has recently worked through the coins in the Durham University Museum, has kindly allowed me to make use of his report, which amends Hooppell's mis-readings.[3]

The coin series begins with an *as* of Claudius,[4] and this together with four brass coins of Vespasian strongly suggests a Flavian occupation of the site. The remaining coins are such as might be found on any site occupied from the second to the late fourth century. The suggestion that the barbarous coin of local mint (no. 137) may indicate a survival of occupation into the post-Roman period,[5] requires confirmation.

F. INSCRIPTIONS.

Two inscribed stones were found in addition to stamped tiles, *graffiti*, etc.[6] The most important of these was an altar set up to Aesculapius and Salus by the regimental doctor of the *ala Vettonum*, whose presence in garrison at Binchester is thereby attested.

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(1) Appendix II.B. (2) *Vinovia*, pp.42-7. (3) cf. *AA.*, 4, xiv, p. 98.

(4) Mr. G. H. Askew informs me that only 5 other coins of Claudius are known to him from the Wall area e.g. Coventina's Well (2) (*AA.*, 2, viii, p. 43); South Shields (*ibid.*, x, p. 275); Thorngrafton Hoard (*ibid*, iii, p. 269) and Newsham (*PSAN.*, 2, viii, p. 241).

(5) *Corbridge Guide*, p. 11. (6) *EE.*, VII, 979-980 (16 & 17).

G. CONCLUSIONS.

The results of the excavations of 1879-80 may be briefly tabulated as follows:

(i) No trace of pre-Roman settlement was observed.

(ii) While the circular sudatorium, a few sherds, and several coins suggested a first century occupation, the nature and extent of this occupation was undetermined.

(iii) At some period a stone fort had been erected, whose north-east rampart, over 200 yards in length, was of massive proportions, measuring 8 feet 7 inches at the base, and being reduced by successive internal offsets. Nothing was known of the size of this fort.

(iv) In the third century the garrison was the ala Vettonum (cf. Appendix I, no. 16).

(v) Dere Street appeared to run through the fort and, flanking its western kerb outside the south-east rampart, stood the buildings of the civil settlement noteworthy for their regular planning and excellence of construction.

(vi) A great deal of the plateau, how much it was impossible to say, had been destroyed by a landslip.

(vii) Within the fort the tile stamps on the hypocaust pillars of the praetorium do not, as yet, allow us to date what appeared to the excavators to be

first-period work,[1] while it is again impossible in view of the lack of evidence, to equate reconstruction here with successive periods of rebuilding noted in the vicus and in the circular suadatorium.

(viii) Occupation of the site had certainly survived into the late fourth century.

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(1) The term numerus was in existence in the second century, although the epigraphic records of numeri in Britain appear to date from the third century onwards.

POTTERS' STAMPS IN THE HOOPPELL COLLECTION (1)

A. On Terra Sigillata.

1 (43).	ADVOCISI O	F.38. ADVOCISVS of Lezoux and Lubié. Period: Hadrian-Antonine.
2 (12).	ALBVCIANI	F.33. ALBVCIANVS (ii) of Lezoux. Period: Antonine.
3 (26).	[A]NAILL·F	F.27. ANAILLVS of Lezoux. Period: Trajan-Hadrian.
4 (23).	·A·POL·AVSTI	F.18/31. APOLAVSTER of Lezoux. Period: Antonine.
5 (8)	AVENTINI·M	F.37. AVENTINVS of Lezoux. Period: Hadrian-Antonine.
6 (35).	CAPEL[LIANI]	F.33. CAPELLIANVS of Lezoux. Period: Antonine.
7 (31).	CASSI[VS·F]	F.33. CASSIVS or CASSUS of Heiligenberg. Period: Domitian-Antonine.
8 (28).	CELSIANI·O[F]	F.18/31. CELSIANVS of Lezoux. Period: Hadrian-Antonine.
9 (25).	OF CELSI	F.27. CELSVS of La Graufesenque, dated by Oswald:Claudius-Vespasian. While having the external groove on the foot-stand " a fairly constant pre-Flavian feature " (O.P., p.187) the coarseness of this vessel suggests a Flavian date.
10 (4).	[CIN]NAM[I] (retro)	F.37. CINNAMVS of Lezoux and Lubié. Period: Trajan-Antonine. (Plate XXXI no.4).
11 (5).	CIN[NAMI] (retro)	F.37. ibid. (Plate XXXI no.5).
12 (p.49).	CINNAMI (retro)	F.37. ibid.
13 (14).	CRISPINI M	F.33. CRISPINVS of Lezoux. Period: Hadrian-Antonine.
14 (44).	DOI[I]CCI MA	--(lost) DOECCVS or DOVECCVS of Lezoux and Lubié. Period: Hadrian-Antonine.
15 (22).	DRIPPI·MA	F.18/31. I can find no other record of this potter.

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(1) The numbers in brackets refer to the stamp-numbers in Vinovia, pp.50-52.
Except in one or two instances where the importance of the stamp has required a rather more detailed consideration of the evidence, Dr. Oswald's dating has been accepted (Index of Potters' Stamps on Terra Sigillata, 1931).

16 (30). GEMIN[..] F.33. GEMINVS of Lezoux. Period: Hadrian-Late Antonine.

17 (9). LASTVC[A] (retro) F.37. LASTVCA of Lezoux. Period: Hadrian-Antonine. (Plate XXXI no.3).

18 (16). LVCINA F.33. LVCINVS of Lezoux. Period: Hadrian. The same stamp has been found at Chester-le-Street and South Shields.

19 (24). MAMMI·M F.33. MAMMIVS of Lezoux. Period: Trajan-Antonine.

20 (33). MARIT[...] F.33. MARITVMVS of Lezoux. Period: Hadrian-Antonine.

21 (21). MATERNI F.38. MATERNVS of Lezoux. Period: Domitian-Antonine.

22 (7). MERCATO[R·M] (retro) F.30. Not the South Gaulish potter, as suggested by Petch (AA., 4, i, note p.8), but the Lezoux potter of the same name (cf. Augsburg, 1913, Taf.XII,5). Oswald dates the Lezoux potter Trajan-Hadrian, but on typological grounds this piece can hardly be pre-Antonine (Plate XXXI no.1).

23 (41). [MV]XTVLLI F.38. MVXTVLLVS of Lezoux. Period: Hadrian Antonine.

24 (17). NAMILIANI F.33. NAMILIANVS of Lezoux. Period: Antonine.

25 (34). PATIIRAT[I OF] F.33. PATERATVS of Lezoux. Period: Hadrian-Antonine.

26 (6). [PATER]N FE (retro) F.37. PATERNVS of Lezoux. Period: Trajan-Antonine. (Plate XXXI no.2).

27 (27). [P]AVLI M F.18/31. PAVLLVS of Lezoux and Lubié. Period: Hadrian-Antonine

28 (19). PA[V]LLI F.33. ibid.

29 (13). PAVLLI F.33. ibid.

30 (37). REG[V]L[..] F.27. REGVLVS of Lezoux. Period: Trajan-Antonine.

31 (11). SATVRNNI OF F.33. SATVRNINVS of Lezoux. Period: Hadrian-Late Antonine.

32 (20). SATVRNNI O F.33. ibid.

33 (15). SENILA·M F.33. SENILA of Lezoux. Period: Antonine.

34 (29). [S]OSIMII M F.33. SOSIMVS of ?Lezoux. Period: Late Antonine.

35 (18). VIRILIS F F.33. VIRILIS of Rheinzabern and Heiligenberg. Period: Trajan-Antonine.

36. Eight-petalled rosette. F. Ludowici Tx. Rheinzabern.

B. On Mortaria.

1 (3). LOCCI·[PR] (retro). Plate XLIX no.1.
The same stamp has been recorded at Balmuildy, Pl. XL nos.9 and 10; Old Kilpatrick, Pl. XVIII, no.7; Mumrills, p.528, fig.94, no.4; and South Shields, AA., 2, x, Pl. f. p.274, no.25, while there is an unpublished example from Newstead in the National Museum of Scotland (FRA 1484).
Variants of the stamps of Loccius, all unpublished, have been found in the following forms: LOCCI (retro) - Ardoch and Corbridge; LOCCI M (retro) - Corbridge; and IVNI LOCCI (retro) - Corbridge and Rough Castle.

2. BIRN Sandy-brown mortarium, variant of Wroxeter, 1912, fig.19, no.86. Plate XLIX no. 2.

3. MM (Hooppell. Vinovia, p.63). Lost.

4. ANM (" " "). Lost.

C. On Amphorae.

1. VRTIFI In the Black Gate Museum, Newcastle.

2 (1). ACIRCII[(Vinovia, p.50). Lost.

3 (2). ECCVC[(ibid). Lost.

4. CP.BA. (ibid., p.63). Lost.

D. Graffiti.

1. ARMEA ME DOCVIT On a tile. cf. DUJ., x, no. 6, 1892, p.60.

2. PIE On Samian ware.

3. I AIH do.

4.]VSDOM[do.

5. VIXILATI do.

6. The following numbers, all on Samian ware: III, V, VI (twice), X (twice), L.

COARSE POTTERY FROM THE HOOPPELL COLLECTION IN THE DURHAM UNIVERSITY MUSEUM.

(Plates XL and XLI)

1. Two handled flagon with plain ring-mouthpiece, whitish-buff fabric, twin grooves on shoulder. Rim diam. $2\frac{1}{4}$ in. This type, a development of the "screw-neck" flagon, is commonly found in deposits of the Antonine period, though more frequently with one handle only. cf. Corbridge, 1911, no. 91; Newstead, fig. 33, no. 7.

2. Single handled flagon with ring-mouthpiece, pinkish buff fabric, traces of slate-blue grit. Rim diam. $1\frac{3}{8}$ in. Horizontal grooves below the rim preserve the tradition of the "screw neck" flagon, and the square profile of the handle and straightness of the neck suggest a date earlier than no. 1. cf. Slack, Pl. XXIV, no. 113; Balmuildy, Pl. XLIII, no. 4.

3. Single handled flagon with ring-mouthpiece, hard brown ware, gritty, two faint horizontal grooves round the neck, and three-grooved handle. Rim diam. $2\frac{1}{4}$ in. cf. remarks on no. 2, though the wide curve of the shoulder points to a rather later date. Corbridge, 1911, no. 92, Antonine.

4. Single handled flagon with grooved ring-mouthpiece, coarse brick-red fabric. Rim diam. $1\frac{1}{4}$ in. cf. Newstead, fig. 33, nos. 14-15; Balmuildy, Pl. XLIII, no. 8; Corbridge, 1911, nos. 98-99. Antonine.

5. Carinated bowl, hard coarse cooking-pot fabric, acute-angled lattice decoration. Diam $6\frac{7}{8}$ in. cf. Poltross Burn, Pl. III, no. 4; Slack, Pl. XXIV, no. 65. Hadrian-Antonine.

6. Dish with roll-rim, fumed, slight carination at base. Diam. 9¾ in. Not found at Slack but common on the Antonine Wall (cf. Balmuildy, p. 90). On Hadrian's Wall the type predominates in the third century. cf. Birdoswald, no. 80.

7. Dish with flat rim, burnished, light blue-grey. The pie-dish rim was gradually replaced by the less vulnerable roll-rim, but fabric, and absence of lattice-decoration or carination, suggest a late second or third century date.

8. Beaker, black fumed ware, light core, Diam. 3 in. cf. Birdoswald, no. 36, third century. The type is too long-lived to be of great value for dating purposes.

9. Jar, hard coarse dark-grey ware, smoothed externally. Diam. 8 in. The squat profile of the rim is unusual but a parallel has recently come from the post-Severan level, site 39, at Corbridge.

10. Platter, iron-hard light-grey ware, smoothed. Diam. 6½ in. Fourth century.

11. Platter, black fumed ware, side and base scored with intersecting arcs. Diam c. 18 in. cf. Lanchester, Pl. XLV, nos. 25-6. First half of fourth century.

12. Beaker, light blue-grey fabric, burnished decoration. Fabric third century.

13. Pedestal beaker, buff fracture, chocolate slip. Rim diam. 1¾ in. cf. Caistor, T 17, c. A.D. 200-250.

14. Folded beaker, Castor type,(1) dark brown slip, white fracture. Rim diam. 2¾ in.

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(1) The term Castor "type" is preferred to Castor "ware", for the excavations at Caistor-by-Norwich have not yet yielded sufficient evidence to enable us to localise the pottery from these kilns, while it is certain that a proportion of the so-called Castor ware was made elsewhere in Britain, and in northern Gaul (Haverfield, Roman Occupation of Britain, p. 242). At present, apart from a few well-attested early fourth-century types which may, or may not, be importations (cf. Lanchester, Plate XLV, nos. 1, 5, 7, 8 & 9) Castor "type" ware is of little use for dating purposes. It occurs as early as the Antonine period at Newstead (Newstead, p. 255), and appears to last well into the fourth century.

15. Castor type beaker, chocolate slip, cream fracture. Decoration en barbotine. Diam. 2½ in.

16. Beaker, buff ware with orange slip, body ornamented with applied transverse bands. Diam. 2¼ in; ht. 3 in. cf. Colchester Catalogue, Pl. XLIV, no. 177, and p. 128; Silchester, Pl. LII, type 83, and p. 122.

17. Jar, buff core and dull chocolate-brown slip. Two grooves on the shoulder above a zone of rouletted decoration. Diam. 2¾ in. Castor type.

18. Castor type jar, white core, brown metallic slip, burnt. Decorated en barbotine. Diam. 2¾ in. cf. Colchester Catalogue, Pl. XLII, no. 151, and p. 119.

19. Face-Urn, buff fabric with dull reddish-brown paint. A smaller and rather poorer example of the type discovered in the Constantian deposit at Lanchester (Plate XLV, no. 6). The strip of clay applied at the back of the vessel can hardly have been functional, and it would appear, from finger-prints in the same position on either side, to have been grasped by the neck, (cf. no. 51).

20. Face-Urn, dark-grey ware with faint grit. The features are applied, and the surface below the junction of the neck and the shoulder is decorated with small circular punch-markings. The vessel probably possessed handles. Diam. 5½ in. The type, which has obvious analogy with the painted face-urn, is widely distributed in varying forms both in Britain and on the continent, cf. Colchester Catalogue, Pl. LI, A; Malton Museum; Cologne Museum; Crambeck, fig. 20; York, Proc. Yorks Philos. Soc., 1936 (1937). The closest parallel to the Binchester example come from the pre-War collection of pottery at Corbridge.

21. Fragments of a Smith's Vase, coarse grey ware, applied decoration. cf. Colchester (PSAN., 3, x, f. p. 20); Chester-le-Street, ibid; Aldborough, and Ebchester (unpublished).

22. Rosette-stamped ware, light brown, blue core. cf. New Forest, Pl. IV, no. 1.

23. Lid, Castor type, chocolate slip, rouletted. cf. Caistor, W. 18; Colchester Catalogue, Pl. LIX, no. 290; Colchester Museums, (1928), Pl. X, 203·28 and 6304·27; Corbridge, 1911, no. 63 (bowl only); Aldborough and Piercebridge (unpublished).

24. see no. 23.

25. Cooking-pot, black fumed ware, obtuse-angled lattice decoration. Fourth century. cf. Lanchester, Pl. XLV, no. 2.

26. Cooking-pot, hard blue-grey ware. Diam. 6 in. Profile and fabric are the same as Malton, fig 1, no. 15 (Flavian), but the lattice decoration is absent.

27. Cooking-pot, black fumed ware, obtuse-angled lattice decoration. Diam. $6\frac{7}{8}$ in. cf. no. 25.

28. Similar. Diam. $7\frac{1}{4}$ in.

29. Cooking-pot, light grey ware, smoothed, acute-angled lattice decoration. Diam. $6\frac{1}{2}$ in. Second or third century.

30. Cooking-pot, as no. 27. Diam. $10\frac{1}{4}$ in. Fourth century.

31. Mortarium, coarse pink fabric, large grit rising to the rim. Late first - early second century. cf. Malton, fig. 7, no. 1.

32. Mortarium, buff colour, large sparse reddish grit. Diam. c. 11 in. Stamped LOCCI.[PR] (retro). cf. Pl. XLIX, no. 1, and p. 126.

33. Mortarium, buff fabric, slate-blue core. For the profile cf. Ambleside, 1913, fig. 15, no. 39. Probably second century.

34. Mortarium, pipeclay fabric, large red grit. An intermediate type between the bead and roll rim, and hammer-head mortaria. cf. Wroxeter, 1912, fig. 19, no. 114 "not earlier than the latter part of the second century".

35. Mortarium, hammer-head type, pipeclay fabric, fine black grit. cf. Wroxeter, 1912, fig 20, no. 198; Benwell (1926) fig. 9, no. 24. Fourth century.

36. Mortarium, pipeclay fabric, thick black grit, and thumb depression spout. cf. Segontium, fig. 78, no. 51. Fourth century.

37. Mortarium, whitish fabric, trace of buff slip, black grit, triple grooves on rim. cf. Wroxeter, 1912, fig. 20. nos. 170 and 174; Poltross Burn, Pl. V, no. 1. Fourth century.

38. Hammer-head mortarium, white clay, generous fine black grit, three grooves on rim. Diam. 9¾ in. Late third-fourth century. cf. Birdoswald, nos. 11 and 12.

39. Similar. Diam. 9¼ in.

40. Hemispherical flanged bowl imitating Dragendorff F. 38; pinkish-brown fabric, white slip decoration on the flange. Diam. 7¾ in. Vessels of a similar form were made at Crambeck (Crambeck, Pl. I, nos. 17-23), but neither this example nor no. 42 is a Crambeck product. The excavations of 1934 at the north-east angle of the fort at Piercebridge produced parallels (Piercebridge Museum).

41. Hammer-head mortarium, pipeclay fabric, four grooves on rim which is ornamented with wavy lines in reddish-brown pigment. An exact parallel comes from Segontium, fig. 75, no. 10. Fourth century.

42. As no. 40. Brick-red fabric, blue core, flange decorated with white slip. Diam. 7¾ in.

43. Triple vase, coarse bluish-grey ware. Rim diam. of each section 2 in., ht. 2⅝ in. Three connecting holes. For the type of vessel and its use cf. Kaye. Roman (and Other) Triple Vases, London, 1914, p. 9, where this example is discussed.

44. Part of a triple-vase with a single base, whitish-buff fabric, dull reddish painted decoration. The fabric and type of decoration suggest that this vessel is a product of the Crambeck kilns (Ant. J., XVII, 1937, fig. 3, no. 7b).

45. Mortar-shaped bowl, yellowish-white fabric, orange painted decoration. Diam. 6 in. cf. Lanchester, Pl. XLVI, no. 48.

46. Similar, dark red paint. Diam. 6 in.

47. Jar with internal groove and countersunk handle bordered by small punch-markings, dark grey fabric. Probably a face-vase, cf. no. 20; Colchester Catalogue, Pl. LII.

48. Jar with moulded rim, and two small handles at the neck, hard blue-grey fabric, smoothed, ~~and~~ light core. Diam. $3\frac{1}{4}$ in. cf. Throlam, fig. 13.

49. Lid, Huntcliff type, calcite-gritted ware. Diam. $6\frac{1}{8}$ in. Late fourth century.

50. Dish, faint trace of carination, light blue-grey fabric, broad lattice decoration. Diam $7\frac{3}{4}$ in.

51. Face-Urn from Coventina's Well, Carrawburgh (now in the Chesters Museum). Yellowish-white clay, dull reddish-brown painted decoration. Ht. 11 in., Maximum diam. 7 in. cf. Lanchester, Pl. XLV, no. 6.

Note:

In addition the collection contains the following Crambeck types: 1*b*, 3, 5*b*, 7, 8, and 10 (Ant. J., XVII, 1937, figs. 2 and 3), and numerous sherds of Huntcliff type (JRS., ii, 1912, pp. 215-232), ~~most~~ all of which may confidently be assigned to the second half of the fourth-century.

1880 - 1937.

In May 1891, an altar dedicated to Jupiter and the Matres Ollototae was discovered eighty yards south-east of the fort by workmen employed in laying water pipes to the Hall.(1) Minor finds made at the same time are recorded by Hooppell.(2)

In 1911, as already noted, Dere Street was uncovered at the Sewage Works between the north-west rampart of the fort and the river.(3)

Thirteen years later, Mr. J. A. Petch, in a useful paper on Roman Durham, summarised the materials for the fort at Binchester and pointed out the evidence for a Flavian occupation of the site.(4)

If man has been slow, however, in following up the results of Hooppell's labours, Nature has been ceaselessly continuing the work of excavation and, while no major landslip seems to have occurred within the present century, coins and pottery are not infrequently revealed by the weathering of the cliff face. Below the fort on the south-west side the river is more active in its erosion and Roman sherds can occasionally be found exposed in a new break of the bank.

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(1) EE., IX, 1133 (18).

(2) Vinovia, pp. 59-62.

(3) pp.43-44.

(4) AA., 4, i, pp. 6-9.

In the normal course of events the greater part of this new material would have been lost or dispersed into many ownerships. At Ebchester, for example, in the course of what amounted to a "house to house" enquiry, the writer was able to trace only a single coin, while the pottery yield was nil. Lanchester was similarly unresponsive, although the fields around the fort have been ploughed within living memory and must have produced a wealth of evidence. It will be realised, therefore, how great a debt students of archaeology in the north of England, and none more than the present writer, owe to Mr. James McIntyre, the genius loci of Binchester, and his two helpers, Messrs. J. Sutton and R. Teasdale, who, during the last ten years, have systematically gathered together all the materials which have come to light with careful record of individual find-spots. The importance of this collection, consisting of some 40 coins, 300 pieces of decorated Samian, a similar number of plain forms, and a considerable quantity of coarse ware, cannot be underestimated.

A few of these pieces have already been published by Mr. McIntyre and others,[1] but for the purposes of this

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(1) e.g. (i) The Rev. C. E. Whiting, D.D. A Samian Bowl in the possession of the University of Durham, AA., 4, vii, pp. 175-8.
(ii) Eric Birley. Excavations at Chesterholm-Vindolanda 1931, AA., 4, ix, pp. 220-221, & Pl. XXX.
(iii) PSAN., 4, iii, pp. 135-6.
(iv) AA., 4, x, pp. 94-5.

thesis it was of paramount importance that the whole of the collection should be thoroughly reviewed. Through the generosity of Mr. McIntyre, to whom I am indebted for information on all aspects relating to the Roman occupation of Binchester, I have been able to undertake the study of his material with the results set forth below.

1. Pottery.

The pottery may be classified under two main headings according to find-spot: (i) Pottery from the pits.
(ii) Surface finds from the vicus.

(i) The Pits. (Pl. IX).

The following is Mr. McIntyre's own account of the excavation of the pits.

"A collection of bones and fragments of pottery lying together led to the discovery of these pits in the spring of 1929. The place was in the wood to the rear of the long building whose outline was traced by Dr. Hooppell in 1879/80 and which fronts on to the street running south-west from the fort.

As the position was at the top of the bank, and fearing that in course of time the material would become exposed and scattered I decided to investigate, having obtained permission from the lessees (Messrs. Dorman Long & Co.) through their agent (the late Mr. Wm. Burkett), and also from the tenant, Mr. M. Wedgewood of Binchester Farm.

I was helped during the whole time by J. Sutton and R. Teasdale, both of Bishop Auckland, and to the former much credit is due as he did all the heavy work under difficult circumstances.

A trial trench soon exposed a refuse-pit and this was cleaned out up to the railing which is placed between the wood and the adjacent pasture. We found, however, that the pit extended under the pasture and were on the point of continuing in this direction when Sutton unearthed a newly-buried dead calf hereabouts, and the shock of this discovery, together with the hot weather, decided us to discontinue.

A depression some few yards away led to the discovery of the second pit, and after this we spotted a third and then a fourth.

After each evening's work we removed the collected sherds and washed and boxed them, being careful to mark as from a pit only those pieces of whose provenance we were quite certain; where there was a likelihood that the sherds were surface material they were so marked.

It should be mentioned that the surface over the whole pit was strewn with sherds which covered the whole period of the occupation.

All pits contained a great quantity of bones of the kind usually met with on Roman sites, and these were placed in a heap to dry; one night they disappeared and we are afraid that they found their way to some local marine store.

None of the pits appeared to have been lined, and even the deeper ones appeared to have been just circular holes made in the ground; the filling of these holes being done by alternating rubbish with soil as in modern practice.

I give a short note on each of the pits which we numbered in order from west to east as P.1 to P.5.

P.1. About 5 feet deep from present surface and roughly circular - diameter about 3 yards.

P.2. About 8 feet deep and perhaps 5 feet across at top, tapering to 3 feet at bottom.

P.3. Some 6 feet deep and like P.2 in section.

P.4. 12 feet deep and about 6 feet across at top tapering to 3 feet at bottom. This pit had material in the bottom only and that in small quantity.

P.5. This was proved by a trial hole but not cleared.

It may be stated that, in addition to the characteristic odour of an opened refuse-pit, the soil and decomposed vegetable matter had an unmistakeable feel, being friable and cheesy."

As Mr. McIntyre has observed, the pits are now situated over the field fence which borders the edge of the plateau, and have, therefore, been exposed by the landslip noted by Hooppell. Thus, even while P. 4 was twelve feet deep when fully excavated, the tops of the pits must have been shorn away, a fact which ~~presumably~~ may account for the comparative absence of late pottery.

The significant sherds from the pits are figured on Plates XXXII-XXXVI, and XLII.[1] As will be seen from the report the mass of the pottery from each of the three most productive pits, P. 1, P. 2, and P. 3, is in close correspondence, beginning with Flavian types and continuing without a break to the Antonine period. P. 4 contained only one significant piece of decorated Samian, of Antonine date, but also a group of three coarse vessels, all of the first century, two of which are paralleled at Malton, but none, so far as I am aware, found, as yet, in Scotland. Mr. McIntyre's work, therefore, not only proved the existence of a flourishing civil settlement at Binchester in the Flavian period, but provided the materials for assessing more closely the date of the original occupation.[2]

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(1)

P. 1. Plate XXXII, nos. 1 and 2, 10-24; Plate XXXIII, nos. 25-29; Plate XLII, nos. 14 and 15.

P. 2. Plate XXXII, nos. 3-8; plate XXXIII, nos. 30-41; Plate XLII, nos. 1 and 3.

P. 3. Plate XXXII, no. 9; Plate XXXIV, nos. 42-51; Plate XLII, nos. 4, 6, 7, 9-13.

P. 4. Plate XXXIV no. 52; Plate XLII, nos. 2, 5, 8.

(2) cf. also in this connection the stamps of BAS**SVS** and P**AVLVS** (p. 150, nos. 3 and 13).

(ii) The Vicus.

The pottery from the vicus,[1] amounting to surface finds without the fort at widely separated points, requires little comment here, for it is hoped that Mr. McIntyre will publish a full report on this collection within the near future. So far as it goes, it corroborates the evidence obtained from the pits of an occupation at Binchester from Flavian times onwards. Many of the sherds, particularly the stamped mortaria, possessing an intrinsic interest apart from their historical significance, have been figured on that account.

To complete the materials for the Roman fort at Binchester, preparatory to the excavations of 1937, we may note that in 1934 an inscribed centurial stone was found in a field wall near the station and removed to the Dean and Chapter Library, Durham.[2]

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(1) Plates XXXV, XXXVI, and XLII(nos. 16-21).

(2) JRS., xxv, 1935, p. 255 (23).

DECORATED SAMIAN WARE IN THE MCINTYRE COLLECTION (Plates XXXII-XXXVI)[1]

Nos. 1 and 2. P.1.

1. F. 37. South Gaul. For the ovolo with the large rosette, well prolonged below the egg elements cf. Pompeii, Pls. VII-X. Dog with collar (D.928), as used by PASSENVS (Knorr, 1919, Taf. 63.B) on F. 29. cf. also Rottweil, 1912, Taf. XI, 8; ibid., Taf. XXVII, 1; ibid., Taf. XIX, 1; Brecon, S. 64. Good glaze. Period: Flavian.

2. F. 37. South Gaul. Stag lying left (D. 845 rev.). cf. Brecon, S. 51. Used by GERMANUS (Rottweil, 1907, Taf. VIII, 1), M CRESTIO (Knorr, 1919, Taf. 28. B), and SECVNDVS (ibid., Taf. 74. C). Period: Domitian.

Nos. 3-8. P.2.

3. F. 37. South Gaul. Indistinct ovolo and tongue; dog running right (D. 916) as used by CALVS - CALVVS (Knorr, 1919, Taf. 18, 37), FRONTINVS (ibid., Taf. 33, 1), MERCATOR (ibid., Taf. 57, 6), VITALIS (ibid., Taf. 83), and others. Poor workmanship. Period: Domitian - Trajan.

4. F. 37. South Gaul. Rabbit (D. 943 rev.) as used by CORNVTVS (Knorr, 1919, Taf. 25, 2), PVDENS (ibid., Taf. 67, 10), VITALIS (ibid., Taf. 83, 6). Period: Domitian.

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(1) I am indebted to Mr. J. A. Stanfield for notes on the Lezoux ware in this collection.

5. F. 37. South Gaul. Fan-shaped plant, a common Flavian motif (O & P., V, 7; Newstead, p. 213, no. 7; Gellygaer, Pl. XIII, no. 8) continuing in use up to the time of Trajan (Knorr, 1919, Taf. 26. A. COSIVS; ibid., Taf. 57. H. MERCATOR). For a close parallel cf. Nether Denton, Archaeologia, LXIV. Pl. XXII, no. 14. Poor glaze and workmanship. Period: Domitian - Trajan.

6. F. 37. South Gaul. Fragment showing wavy line and wreath as used by IVCVNDVS (Knorr, 1919, Taf. 43. F), MEDILLVS (ibid., Taf. 73. A). Good glaze. Period: Late Flavian.

7. F. 37. South Gaul. Ovolo with trifid terminal, burnt.

8. F. 37. South Gaul. Ovolo with large rosette tongue - terminal, wavy line below. Tendril binding ending in lanceolate bud. (Knorr, 1919, Textbild 18, 2). Period: Late Flavian.

No. 9. P.3.

9. F. 37. South Gaul. Ovolo with trifid tongue - terminal. Three-leaved plant as used by CORNVTVS (Knorr, 1919, Taf. 25, 3), CRVCVRO (ibid., Taf. 29, 14), PASSENVS (ibid., Taf. 62, 10), and others. Period: Late Flavian.

Nos. 10-29. P.1.

10. F. 27. Central Gaul. Small indistinct ovolo over wavy line, and portion of lion. Reminiscent of the style of the RANTO group. Period: Trajan - Hadrian.

11. F. 37. Central Gaul. Series of small rings, as in this case, were often resorted to by Trajanic potters as an alternative to the usual ovolo. On an unnumbered fragment in the British Museum these rings occur in association with the double D monogram (class I) in the general style of DONNAVCVS, and they are occasionally found on pottery in the styles of other Trajanic potters. Period: Trajan.

12. F. 37. Lezoux. Borders composed of large astragali were used by the potters CENSORINVS, IVLLINVS, LAXTVCISSA, PATERNVS and MERCATOR. This fragment may be attributed to LAXTVCISSA, especially as the group of potters to which he belonged used the small running deer (D. 860). The ovolo too, with wavy line in conjunction with astragali occurs on a form 37 at the

London Museum (A 28102) on which is the peculiar leaflet constantly met with in his work. Period: Hadrian.

13. F. 37 or 30. Lezoux. Part of a narrow cruciform ornament peculiar to the potter DIVIXTUS. Period: Hadrian - Antonine.

14. F. 30. Lezoux work. Large leaf and hares (like D. 950 a). Period: Antonine.

15. F. 30. Lezoux, rather in the style of CENSORINVS who (vide no. 12) used astragali borders. He also used the Cupid (D. 261). Period: Hadrian - Antonine.

16. F. 37. Lezoux. Panel design with corded borders terminated by large stellate rosettes. Remains of a single festoon - astragali in the field. Similar borders and rosettes were used by several potters including BANVVS, IVLLINVS, IVSTVS, MERCATOR, PATERNVS and SEVERVS. Period: Antonine.

17-20. F. 37. Lezoux. All four pieces are in the style of CASVRIVS. The types[1] are nos. 7 (double leaf of no. 18), 27 (bird of no. 18), 19 (leaf on both nos. 17 and 19), 39 (man on no. 20), 43 (slave on no. 19), and on no. 18 the small corded medallion as shown on Plates II, III, IV etc. Period: Antonine.

21. F. 37. Lezoux. The ornament is the vine-leaf tendril with leaves (D. 1148), used by CENSORINVS. Period: Hadrian - Antonine.

22. F. 30. Lezoux. Festoon of the wreath variety enclosing the dolphin (D. 1052) used by so many potters. Period: Antonine.

23. F. 37. Lezoux. The hare is D. 950 a and was used by so many potters (like the dolphin of no. 22) that it is useless as a guide to the work of any particular one. Period: Antonine.

24. F. 37. Lezoux. The design was a large seroll bearing the leaf D. 1168 used by many potters among whom was CINNAMVS. The eight-lobed rosette is a slightly better clue, having been used by AVSTRVS, AVENTINVS and CINNAMVS. Period: Hadrian - Antonine.

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(1) J. A. Stanfield. A Samian Bowl from Bewcastle, with a note on the potters CASVRIVS and APOLAVSTER, (CW., 2, XXXV, pp. 182-205).

25. F. 37. Lezoux, stamped (MAS)CIILIO on the rim. The only other bowl by this potter known to the present writer is one (F. 37) in the free style found at the Bank of England, with the complete stamp MASCIILIO, also on the rim. With the exception of the ovolo and the rows of large beads, none of the types on one bowl appears on the other, but several types on the London bowl occur on a hitherto unpublished 37 from Cotstopitum bearing a blurred stamp which is almost certainly MERCATOR. M retrograde. If the Corstopitum stamp has been correctly read, it would therefore be reasonable to suppose that MASCELLIO bore the same relation to MERCATOR as APOLAVSTER did to CASVRIVS. The types on no. 25 are the dolphin (D. 1052), the dolphin-basket ornament (D. 1069 a) and the warrior (D. 103). Period: Antonine.

26. F. 37. Lezoux, in the style of the potter DIVIXTVS who used this single-bordered ovolo: the leaf also occurs on unstamped fragments with the same ovolo. The figure is the Venus (D. 184) not recorded as yet, it is believed, as the work of DIVIXTVS, though used by several other potters. Period: Hadrian - Antonine.

27. F. 37. Lezoux. The pendant leaflets were used by CENSORINVS, and the satyr (D. 411) by PATERNVS (very frequently). Both potters appear to have worked together during the period of this fragment. Period: Antonine.

28. F. 37. Lezoux, attributable to DIVIXTVS who used the small double medallion enclosed by the festoon, the small ring to the left of the bead-row, and the erotic group to the right. Period: Antonine.

29. F. 37. Lezoux. Apollo (D. 52). This fragment belongs to a large group of pottery as yet lacking name-stamps, on which wavy lines (rather blurred in this case) terminating in triple-pronged ornaments frequently occur. Fragments of cursive signatures are extant but convey nothing. In general the work partakes of the character of the designs used by DOCILIS, CASSITTVS, and PVGNVS (early work). Period: Hadrian.

Nos. 30-41. P.2.

30. F. 37. Central Gaul, in the style of IOENALIS who used beaded rings of this size. Period: Trajan.

31. F. 37. Central Gaul also in the style of IOENALIS, on whose work occurs the sea-horse (D. 30) with a similar ovolo. Period: Trajan.

32. See no. 51, of which this scrap is a part.

33. F. 37. Central Gaul (probably Vichy) by the well-known 'Crown' potter whose name is still to seek. The lattice pillar and the warrior (D. 102) are common on his pottery, and the colour and glaze of this fragment are unmistakeable. Period: Domitian - Trajan.

34. F. 37. Central Gaul, in the second, or rather later style of IOENALIS who used the tripod, the ovolo, the seven-bead rosette and (at this time) slightly larger beadrows. Period: Trajan (late).

35. F. 30. Lezoux, in the style of PATERNVS. He used the horseman (D. 157), who occurs in a more complete form on no. 67, and the animal, and especially the spirally-wound buds in the field. Period: Antonine.

36. F. 37. Lezoux, assignable to the potter PAVLLVS because of the leaflets free in the field. The animals are common to other potters, however, viz., the lion attacking a boar (D. 778), and the small bear (D. 820). Period: Antonine.

37. F. 37. Lezoux, in the style of CINNAMVS, one of whose ovolo's this is, as also the upright leaf. Period: Antonine.

38. F. 37. South Gaul. Wreath of sessile leaves grouped in pairs on either side of stem to form lower border. cf. Slack, Pl. XXI, D. Period: Domitian - Trajan.

39. F. 37. Central Gaul. The dancer occurs on many bowls in the period of Trajan, but this piece appears to be late. Period: Hadrian.

40. F. 37. Straight trefoil wreath forming lower broder. Characteristic of late South Gaulish work and used by BIRACILLVS (Cannstatt, ix, 1), MERCATOR (Knorr, 1919, Taf. 57. B), and LICOSI (ibid., Taf. 28). Poor workmanship. Period: Domitian - Trajan.

41. F. 37. Rheinzabern. The "sprocketed" ornament in the medallion appear to be Ludowici's type K.B.18 used by REGINVS. Period: Antonine.

Nos. 42-51. P.3.

42. F. 37. Lezoux, undoubtedly the work of ALBVCIVS, the ovolo, astragal-beads, leaf impression, seated Cupid (D. 260), and the large striding Cupid, all occurring on his signed work. Period: Hadrian - Antonine.

43. F. 37. Lezoux, in the style of ATTIANVS who employed a similar small ovolo. The vine-scroll however was common to several potters including ATTIANVS. Period: Trajan - Hadrian.

44. F. 30. Lezoux, very like the work of CINNAMVS. Period: Antonine.

45. F. 37. Lezoux. Another fragment by the group of potters referred to under no. 29. The small bud-like ornament at the base of the wavy line is as characteristic as the three-prnnged leaf of no. 29. Period: Hadrian.

46. F. 37. Lezoux, undoubtedly the work of DOCILIS, every type on this piece occurring on his signed bowls. Among these types will be distinguished those afterwards used by CASVRIVS, viz., his types 7, 7A, and 9. Period: Trajan - Hadrian.

47. F. 37. Lezoux. Yet another example of the work of the potters referred to under nos. 29 and 45, the bud at the base of the wavy line (as on no. 45) being discernible. The lion (?) with nose to the ground was used by CASSITTVS (vide remarks on no. 29). Period: Hadrian.

48. F. 37. East Gaulish, possibly from La Madeleine, or Lavoye.

49. F. 37. Lezoux. Corded medallion enclosing what appears to be the small vase D. 1079 not previously met with by the present writer. Period: Hadrian.

50. (also no. 64). F. 37. Central Gaul. Two fragments by a potter whose name up to the present defies discovery, although at least two illegible stamps and part of his cursive signature exist. He must therefore still be referred to as the "potter of the small S" from the use of a small double-spiral ornament resembling that letter (not to be confused with another double-spiral, slightly larger, used by a group of potters allied to DRVSVS and the potter of a double-D monogram, Class IV, as yet unpublished). This "S" is extremely common on the work of the potter of nos. 50 and 64 and is employed in various ways. In no. 50 it is used in place of an ovolo, and in no. 64 as an upright panel.

The bowls of the potter are generally of a very slightly lighter colour and glaze than those of Lezoux ware and it may be questioned whether the kilns were situated there at all. It can be stated

definitely that although all the ornamental types are like those used at Lezoux, the actual stamps were smaller, and these smaller impressions are never found on Lezoux ware. In all probability the pottery works were situated somewhere near Lezoux, perhaps to the east.

51 (also no. 32). F. 37. Lezoux. Period: Hadrian - Antonine.

No. 52. P. 4.

52. F. 37. Rheinzabern, stamped LVPVS. M retrograde, and showing the following Ludowici types: ovolo (R. 66), tree (P. 2), hound (T. 225), pillar with rosettes (O. 348), all ascribed by Ludowici to LVPVS and other potters. Period: Antonine.

Nos. 53-90. Vicus unstratified

53. F. 29. South Gaul. Upper frieze identical with that of F. 29 stamped OF VITAL in the South Kensington Museum. cf. Knorr, 1919, Taf. 81. A. Period: Flavian.

54. F. 29. South Gaul. Debased arrow-heads on the upper frieze and central moulding. Poor workmanship. Period: Late Flavian.

55. F. 37. South Gaul. Ovolo with trifid tongue-terminal and wavy line beneath. Period: Late Flavian.

56. F. 37. South Gaul. Four-pronged tongue-terminal to ovolo as used by M CRESTIO and CRVCVRO (Knorr, 1919, Textbild 5). Period: Late Flavian.

57. F. 37. South Gaul. Below wavy line festoons and bud derived from a type used by NAMVS (Knorr, 1919, Textbild 7) and BELLICVS (ibid., Taf. 15. G). Fair glaze and execution. Period: Flavian.

58. F. 37. South Gaul. Basal wreath as no. 6, two-ringed medallion, and dart-shaped angle-binding, all commonly used by late South Gaulish potters. Period: Domitian - Trajan.

59. F. 37. South Gaul. Ovolo with trifid tongue-terminal turned right as used by BIRACILLVS (Knorr, 1919, Textbild 5). Hare as used by L COS VIRIL (ibid, Taf. 27, 5) and BIRACILLVS (ibid., Taf. 16,8).

Good glaze. Period: Flavian.

60. F. 37. South Gaul. A series of S ornaments forming a lower border to the design, commonly used by Flavian potters and probably continuing to the end of the South Gaulish period. cf. Brecon, S.86 and 89. Period: Late Flavian.

61. F. 37. South Gaul. To right, indeterminate figure in double-ringed medallion; to left, panel divided horizontally by a line of arrow-heads between wavy lines, and, in the lower compartment a festoon with tendril ending in a cuneiform leaf. Poor glaze and execution. Period: Domitian - Trajan.

62. F. 37. South Gaul. Vertically divided panels; (i) conventional tree resembling that used by GERMANVS (Knorr, 1919, Taf. 36. C); (ii) satyr employed by GERMANVS (ibid , Taf. 34, 5) and CORNVTVS (ibid., Taf. 25, 1). Fair glaze, poor execution. Period: Domitian - Trajan.

63. F. 37. Lezoux. The ram's horn upright wreath is reminiscent of Vichy work. Period: Trajan - Hadrian.

64. See no. 50.

65. F. 37. Lezoux, in the style of both CRICIRO and DIVIXTUS who probably worked together in the latter's early period. Both potters used rather wide bead-rows with ring terminals, and the erotic group, the Bacchus (D. 534 a) and the hare (D. 950 a rev.) all occur on their signed work and on work in their style. The little leaf on the right is a legacy from the time of Trajan. Period: Hadrian.

66. F. 37. Lezoux, in the style of CINNAMVS, one of whose ovolo's is of this type and size. The cornucopia is of a later type than those used during the reign of Trajan. The deer (D. 868) was often used by Cinnamus. Period: Antonine.

67. F. 37. Lezoux, attributable to PATERNVS like no. 35, q.v. Period: Antonine.

68. F. 37. Lezoux, showing the ornament D. 1092 occurring with the ovolo on work in the style of DRVSVS. Period: Hadrian.

69. F. 37. Lezoux, probably by a potter of the PATERNVS group, who used the Cupid (D. 261) (vide no. 15). Period: Antonine.

70. F. 37. Lezoux. This may be by AVSTRVS who used astragali athwart bead-rows, also the Apollo (D. 55). Period: Trajan - Hadrian.

71. F. 37. Rheinzabern, in the style of REGINVS who used the concentric rings (Ludowici type R. 120) and similar notched festoons. Period: Antonine.

72. F. 37. Lezoux, undoubtedly the work of IVLLINVS who used the squarish beads, the wavy tendril (ornament at top missing), and the vase (D. 1073). Period: Antonine.

73. F. 37. East Gaul. Period: Antonine.

74. F. 37. Lezoux. Probably the work of CINNAMVS whose use of the ornament (D. 1069) and the ovolo is frequent. Period: Antonine.

75. F. 37 East Gaul. Period: Antonine.

76. F. 37. South Gaul. Cuneiform leaf and stipule in festoon, pendant with four blades. Probably by MERCATOR.

77. F. 37. South Gaul. Vertical shell-wreath between wavy lines. To right, cruciform ornament, a common Flavian type, ending in triple pomegranate stalks. Fair glaze and execution. Period: Flavian.

78. F. 29. South Gaul. Fragment of upper frieze and bead-row of central moulding, too small for determination. Probably Vespasian.

79. F. 37. South Gaul. Common chevron wreath probably by MERCATOR or BIRACILLVS. Period: Domitian.

80. F. 37. South Gaul. Deana and hind (D. 63). For the type cf. Brecon, S. 47. Poor glaze. Period: Domitian.

81. F. 37. Lezoux, with the curiously ligatured stamps of PATERNVS. The figure is Mercury (D. 327, not the similar figure D. 337) which was perhaps used by PATERNVS more frequently than by other potters. Period: Antonine.

82. F. 37. South Gaul. Ovolo with trifid tongue-terminal, and animals similar to those used by M CRESTIO. Period: Domitian.

83. F. 37. South Gaul. Ovolo with trifid tongue-terminal above wavy line. Stag (D. 682) as used

by SECVNDVS (Knorr, 1919, Taf., 73, 9). Poor glaze and execution. Period: Domitian - Trajan.

84. F. 37. South Gaul. Basal chevron wreath of common Flavian type, and large four-stalked leaf as used by SABINVS (JRS., XXVII, fig. 9, no. 29). Period: Late Flavian.

85. F. 37. South Gaul. Ovolo with trifid tongue-terminal, and three-leaved wreath as no. 40.

86. F. 37. South Gaul, most certainly by GERMANVS who used both the characteristic ovolo and tree with spirally-wound buds. (Rottweil, 1912, XIII, 1-5 and 7-8). Period: Flavian.

87. F. 37 Lezoux, possibly by PATERNVS, or IVSTVS. Period: Antonine.

88. F. 37. Lezoux, unmistakeably by ADVOCISVS whose exclusive ornament, a little double-barbed "arrow," is visible at the back of the kneeling Cupid (D. 282 rev.). The remaining types are the Venus (D. 175), the Mercury (D. 327), and the small dog (D. 919 rev.), all met with on his signed bowls. Period: Antonine.

89. F. 37. Lezoux. By the same potter as no. 29. Period: Hadrian.

90. F. 37. Lezoux. This ornament occurs on pottery in the style of MOXIVS, but was also used by CASVRIVS. The fragment, however, is not in the style of the latter potter. Period: Hadrian - Antonine.

POTTERS' STAMPS ON SAMIAN WARE IN THE POSSESSION OF MR. J. MCINTYRE.

1 (V).	ARICI MA	F.33. ARICVS of Lezoux and Lubié. Period: Hadrian-Antonine.
2.	[AV]ENTI.I•M	F.18/31. AVENTINVS of Lezoux. Period: Hadrian-Antonine.
3 (P.2).	OF BASI	F.27. BASSVS of La Graufesenque. Period: Claudius-Early Vespasian. The stamp OF BASSI occurs at Corbridge - seemingly the most northerly instance of this potter's work in Britain.
4 (P.1).	CRACVNA•F	F.18/31. CRACVNA of Lezoux. Period: Hadrian-Antonine.
5 (V).	[C]RACVNA•F	F.33. ibid.
6 (V).	CRACVNA•F	F.18/31. ibid.
7 (P.4).	LVPVS M (retro)	F.37. LVPVS of Rheinzabern. Period: Antonine. Plate XXXIV no.58.
8 (P.1).	MAGIO F	F.18/31. MAGIO of Lezoux. Period: Hadrian-Antonine.
9 (P.1).	[MAS]CILLI	F.37. MASCELLIO of Lezoux. Period: Antonine. Plate XXXIII no.25.
10 (P.1).	PATER[N FE] (retro)	F.37. PATERNVS of Lezoux. Period: Hadrian-Antonine.
11 (V).	[P]ATERN [FE] (retro)	F.37. ibid. Plate XXXVI no. 81.
12.	[PATER]N FE (retro)	F.37. ibid.
13 (P.3).	PAV[L...]	F.18/31. PAVLLVS of La Graufesenque. Period: Claudius-Vespasian. The stamp cannot be completed with certainty but the fabric is South Gaulish.
14 (P.1).	PRIIMI OF	F.33. Potter unknown- ?PRIMVS.
15 (V).	OF PONT	F.27. PONTIVS or PONTVS of La Graufesenque. Period: Vespasian-Trajan.
16 (V).	Seven-petalled rosette.	F. Ludowici Tx. Rheinzabern.

Note. P.1-4 refer to the pit numbers; V. to the vicus. Nos. 2 and 12 were found within the fort, and are in the possession of Mr.H.Thompson of Binchester Hall.

THE COARSE POTTERY IN THE McINTYRE COLLECTION. (Plate XLII).

1. (P. 2) Poppy-head beaker, blue-grey fabric, smoothed, two grooves below the rim, body decorated with vertical lines of applied dots. Diam. $3\frac{1}{8}$ in. cf. Richborough (3), Pl. XXXIX, nos. 306-8; RCHM. London, fig. 64, no. 17. An early type lasting well into the second century. cf. Verulam, fig. 27, no. 12. (160-190 A.D.).

2. (P. 4) Jar, grey ware, polished, twin grooves on shoulder and applied decoration of circles and vertical bead rows. Diam. 4 in. Numerous fragments of this ware occurred in the early layers at Malton(Malton, fig. 15, no. 17). cf. also Corbridge, 1911, fig. 7, nos. 20-21; Neuss, Bonner Jahrbücher, Heft 111,112 (1904), p. 353. A first century type not recorded from Newstead.

3. (P. 2) Jar, coarse grey ware. Diam. $5\frac{1}{2}$ in. cf. Malton, fig. 16, no. 4. Flavian.

4..(P. 3) Rustic jar, hard coarse dark-grey ware, two grooves on shoulder. Diam. $4\frac{1}{2}$ in. First century.

5. (P. 4) Two-handled jar, very hard grey ware, girth grooves. Diam. at mouth 5 in., ht. $13\frac{5}{8}$ in., maximum diam. $10\frac{7}{8}$ in.

6. (P. 3) Rustic jar, same fabric as no. 4, single groove on shoulder. Diam. c. $6\frac{1}{2}$ in. First century.

7. (P. 3) Rustic jar, grey ware, rim polished externally down to the zone of decoration. Diam. $6\frac{1}{4}$ in.

Rustic ware is commonly found on sites in the north of England in pre-Hadrianic deposits. In the Hadrianic period it occurs only as a survival (Poltross Burn, p. 448).

Note: P. 1-4 refer to the Pits, V to Vicus (unstratified).

8. (P. 4) Mortar-shaped bowl, blue-grey ware, fumed, base missing. Diam. 8¼ in. This type begins at Hofheim and appears at Malton (Malton, fig. 17, no. 8. Flavian), Caerleon (Caerleon, 1926, fig. 33, nos. 95-6. Flavian), Haltwhistle Burn (Haltwhistle Burn, Pl. V, no. 3, and p. 266. Trajanic), and Old Kilpatrick (Old Kilpatrick, Pl. XXII, nos. 25-7. Antonine). In fabric and profile the present example is closely related to the Malton bowl. Flavian.

9. (P. 3) Rim and spout of mortarium, hard reddish-buff fabric, stamped ANANVS (Plate XLIX, no. 8). Diam. 10½ in.

Mortaria stamped by this potter are widely distributed in the north of England as shown in Plate L.

The following references are quoted for the index of distribution:(1)

Bainbridge (Bainbridge, fig. 2, no. 1, and pp. 32-4).

Benwell (Benwell (1926), fig. 9, nos. 2 and 3; ibid (1927-8), fig. 8, no. 3). Rim sections only.

Binchester (Plate XLII, nos. 9 and 20).

Birdoswald (Birdoswald 1932, CW., 2, xxxiii, pp. 246-262, two stamps from oven II of west group (fig. 10), and one from section west of south-east angle tower (p. 259). Unpublished).

Birrens (Rim-section from the 1936 excavations. Unpublished).

Camelon (National Museum of Scotland).

Carlisle (Tullie House, Pl. XVII, nos. 1a and 1b).

Chesters (Chesters Museum, no. 2481-3791).

Corbridge (1937 excavations, Site 39, room 2).

Housesteads (Housesteads Museum).

Risingham (PSAN., 2, vi, f. p. 146).

South Shields (AA., 2, x, Pl. f. p. 274, nos. 16, 17, and 21).

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(1) I am indebted to Mr. E. B. Birley for assistance in the preparation of this list.

Unless otherwise stated, the above examples are stamped. Rim-sections, alone, however, may be ascribed to Ananus, for the profile with low bead and grooved lip (cf. no. 20) is seemingly exclusive to this potter. The present example, lacking the grooved lip, is a variant form. The only dating evidence, as yet, is supplied by the Corbridge sherd which appeared in a second century (post 163 A.D.) deposit.

10. (P. 3) Mortarium, red core, white slip, illegible stamp (Plate XLIX, no. 11). Diam. c. 11 in.

11. (P. 3) Mortarium, reddish-buff fabric. Diam. 9 in. Profile and fabric leave no doubt that this is a product of Ananus.

12. (P. 3) Mortarium, reddish-buff fabric. Diam. c. 13 in. Profile and fabric similar to no. 9.

13. (P. 3) Mortarium, reddish-buff fabric. Diam. c. 11½ in. cf. Ambleside (1920), fig. 3, no. 10.

14. (P. 1) Mortarium, coarse dirty-white fabric. illegible stamp (Plate XLIX, no. 3). Second century.

15. (P. 1) Mortarium, yellow slip, white core. Diam. 9 in. Stamped (Plate XLIX, no. 10). The profile resembles Ambleside (1920), fig. 3, no. 11., while the same stamp occurs at Chesters (Museum).

16. (V.) Mortarium, red core, cream slip. The stamp (Plate XLIX, no. 4) occurs twice at Newstead (Newstead, fig. 35, nos. 21-2).

17. (V.) Mortarium, pipeclay fabric. cf. Benwell (1926), fig. 9, no. 20. Late third-fourth century.

18. (V.) Mortarium, hard reddish-brown fabric, blue core. Diam. c. 11½ in. The stamp (Plate XLIX, no. 6) occurs on two other vessels from Binchester and once at Corbridge (unpublished). The hooked rim suggests a second century date. cf. Birdoswald Turret, no. 4; Balmuildy, Pl. XLI, no. 30.

19. (V.) Mortarium, coarse pink fabric. Same stamp as no. 18 (Plate XLIX, no. 7).

20. (Fort, surface in the possession of Mr. H. Thompson of Binchester Hall)
Mortarium, red core, cream slip. Diam. c. 11 in. Double stamp (Plate XLIX, no. 9, and cf. Templeborough, Pl. XXXVIII, no. 19), probably a variant of Ananus, as the rim profile suggests.

21. (V.) Mortarium, pipeclay fabric. Diam, c. 12 in. cf Binchester Pl. XLI, no. 34. Third or early fourth century.

22. (P. 1) Lamp, (not illustrated), stamped EVCARPI. cf. Loeschcke. Lampen aus Vindonissa, pp. 291-2; Behrens. Bingen, p. 208; Colchester Museums, 1928, p. 56. Flavian.

Graffiti.

1. On a lead spindle-whore: TAM VI. The VI has possibly been added later in another hand. Mr. R. G. Collingwood suggests THAMYRIS or some such girl's name.

2. (...)INI on Samian dish F. 18/31 in the possession of Mr. H. Thompson.

THE EXCAVATIONS OF 1937.

Structural and historical problems, the legacy of Hooppell's excavation had been intensified by the discoveries of the succeeding half-century and, accordingly, it was felt desirable that further work should be undertaken by the writer in 1937. The Ecclesiastical Commissioners, owners of the site, readily gave their consent to the work, as did the lessees, Messrs. Dorman Long & Co., while Mr. M. Wedgewood, the tenant of Binchester Farm, put all facilities at our disposal. Finally, we wish to record our gratitude to Messrs. J. McIntyre and H. Thompson, who paid many welcome visits to the site while the work was in progress.

The excavation, carried out under the auspices of the Durham University and North of England Excavation Committees, was limited to five weeks, viz: three weeks in July and a further fortnight in November and for the entire period only two men were employed.(1)

A short-term "dig" of this kind, with a bare minimum of labour, necessitated concentration at a few specific points and even so it was not always practicable to carry out original intentions owing to the unforeseen magnitude

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(1) Messrs. J. and W. Sutton, to whom, for their keenness and powers of observation, much credit is due.

of the work involved. Yet we were, at least, successful in providing a solution to each of the two outstanding problems at Binchester - the definition of the size of the fort and the location of the first-century military occupation.

From all points of view, the ramparts, as at Lanchester, seemed to offer the best promise of speedy and profitable results. To anticipate the results of 1937, it may be said that the visible defences on the north-east, north-west, and south-east sides, including not only the agger of the rampart but a single ditch of massive proportions, are roughly those of the praetentura of the fort. South of the via principalis, the landscape gardener and the ploughman have eradicated all surface indication of the defences, although, as we shall see, the work of demolition has been by no means complete.

To avoid any contamination with previous excavation, the first section (T. 1) was cut directly through the east angle, where the mound of the wall and the depression of the ditch are equally clear.

Section T. 1.

The Fort Wall. (Plates VII, and VIII Section A-A).

The fort wall at the east angle was revealed within a few inches of the turf. Only the core remained, 3 feet 8 inches high and 7 feet 3 inches wide, formed of irregular sandstone blocks horizontally laid and resting on a bedding

course of flags 3 inches deep, which in turn overlay the cobble footings. These features are admirably illustrated in Mr. Pickering's photograph (Fig. 5). The cobbles, packed tightly together to a depth of 2 feet, had not been set in clay but bonded seemingly by a thin spread of mortar, traces of which were still retained by the cobbles nearer the surface. The solid bed of the footings projected 1 foot 6 inches in front of the fort wall and, more surprisingly, was continued for at least 6 feet from the inner face of the existing wall core, making the total width excavated no less than 16 feet. One recalls Hooppell's statement that "in some places explored at Binchester the pebbly foundation appeared to be quite 30 feet wide".(1) This appears to have been the case 30 feet from the centre of the north-east rampart,(2) and the anomaly between the width of the footings there and in section T. 2. (Plate VIII), where they are no more than 11 feet wide, would be difficult to explain, if it was not now certain from the lay-out of the fort that the extended footings occurred at a point where we may now assume the east guard-chamber of the porta praetoria to have been. Similarly, we should account for the rearward projection of the footings at the east corner by the supposition of a building on the angle,

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(1) Vinovia, p. 9.

(2) ibid., and Pl. 2, J.

whose existence seems to be confirmed by the discovery in T. 1 of the core of a wall laid on footing flags and set back 6 feet from the fort rampart. Unfortunately, the complete lack of stratification in this area did not justify continued exploration, so that the size and character of the building must remain, for the time being, conjectural.

There was, however, immediate compensation for this disappointment in the discovery that the foundations of the stone wall had been laid not on natural subsoil, but on a bed of clay which overlay the Roman turf line to a depth of 1 foot 6 inches. Grey in colour, and compressed into a stiff homogeneous mass by the weight of the stone defences, the clay yielded not a single sherd but, from the profile shown in the section, its significance was clear. It had evidently been cut into by the builders of the stone wall for, in one place in front of the wall, a portion was still standing 3 feet high and showed a marked falling away towards the point where it had been entirely removed to allow the construction of a circular tank (Plate VIII). Admitting the lack of dateable evidence, there seemed no doubt that at this point the stone-built defences had superseded an earlier clay rampart. A minor problem was provided by the discovery that the cobble footings did not fill the entire width of the slot in the clay rampart, for in front of the wall there was a gap, 4 feet wide, between the vertical face of the cobbles and the equally clear vertical cut into the clay. This was filled by a few loose cobbles set in a mixture of clay and earth

and overlying several scattered sandstone blocks similar to those used in the construction of the wall core. In view of the fact that these blocks provided no homogeneous bedding, and were themselves unprovided with any foundation but the clay on which they had been loosely thrown (Fig. 5), we cannot admit here evidence for an intermediate rampart, but must rather assume that for some reason, not now apparent, it was decided to complete the filling of the slot in this manner. The problem is of structural rather than of historical significance.

The Ditch. (Plate VIII, Section A-A).

Surface indications of a single ditch of exceptional width at the east angle were soon confirmed by excavation, and it proved impracticable in view of the shortage of time and labour, and the timbering involved, to carry out the original intention of obtaining a complete section. We had, therefore, to content ourselves with determining the angles of the sides and sounding the depth ~~of the ditch~~ in the centre by means of a shaft 2 feet 6 inches wide. In this way it appeared that the ditch, cut into the natural yellow sand, was no less than 40 feet wide and 11 feet 7 inches deep below the existing ground line, while its inner lip, 3 feet 6 inches below the humus, was separated from the fort wall by a berm 19 feet 6 inches wide. The bottom, horizontal where it was reached by the narrow pit, showed no trace of vegetable deposit, being clean as if newly cut and, within a few inches of the

natural sand, were found two sherds, instructive of the care needed in dealing with ditch deposits, viz: a reeded rim bowl of first-century date, and a hammer-head mortarium rim not to be assigned earlier than the late third-century (Plate XLIII, nos. 7 and 8). On this evidence the fort ditch at Binchester was open c. A.D. 300 and the absence of vegetable growth at the bottom suggests that it was either originally cut at that period, or cleaned out, possibly in the course of a Constantian repair of the defences. In view of the discovery of the existence of an early clay rampart the latter inference is probably the correct one.

Evidence was at hand, however, to show that no attempt was made to keep the ditch open until the end of the Roman period. On the contrary, it appeared to have been completely and deliberately filled with soil and refuse yielding no dateable sherds, apart from the two to which reference has been made, but the fragment of an illegible coin, which Mr. W. Percy Hedley would ascribe "probably to the late 3rd. century" (Appendix II.D, no. 7). Over the filling, and seemingly extending from lip to lip, was a clay and cobble floor interrupted ~~only~~ by an oven with stone built sides and flagged base, containing only ash and burnt bone. A few sherds from this floor level (Plate XLIII, nos. 19-22) were all of fourth-century date, two at least (nos. 20 and 22) belonging, like a minim of Constantinopolis type (Appendix II.D, no. 6) found in the same area, to the latter half of that century. A second

oven, laid over the cobble floor near the outer lip of the ditch yielded, from below its flagged base, an Æ 4 of Constans (Appendix II.D, no. 4).

Parallels for a ditch of these dimensions are rare as far as military works are concerned, and it would be unjustifiable to presume that the size of the ditch at Binchester is simply to be accounted for by the comparative ease of digging in the natural sandy-gravel subsoil. The closest parallel, as far as an auxiliary fort is concerned, is at Malton, where the second "Great Ditch" was found to be 35 feet across and 12 feet 6 inches deep from the modern ground line.(1) Further discoveries emphasised the significance of this similarity.

The Tank.

Six feet from the outer face of the wall core in T. 1 a stone built drain, 3 feet wide and 3 feet 8 inches high, crossed the trench at an oblique angle. The clay rampart had been cut back at this point to insert the masonry of the channel, the floor of which was laid 1 foot 9 inches below the level of the Roman turf.

Normally, superfluous water was carried away from Roman forts through the angles and, indeed, a similar drain had already been discovered by Hooppell at the

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(1) Malton, p. 13.

north angle of the ramparts at Binchester.[1] But the analogy between the two was carried a stage further by the discovery that the drain in T. 1 debouched also into a stone tank on the edge of the berm not in this instance rectangular but of circular form.[2] Mr. M. Hayton very kindly undertook the survey of this structure.

The tank measured 6 feet 9 inches in diameter from the topmost stones; the floor 9 inches less owing to a slight batter of the walls necessitated by the fact that masonry was no more than a stone facing backed by a slight clay and rubble-stone revetment. The height of the side walls, where they were most perfect, was 3 feet 8 inches, and the fact that the rim had been levelled, where necessary, by a thin flagging course (Fig. 8), suggests not only that this was the original height, but also that the top had been protected, probably by a timber covering. The excellent preservation of the structure is due to the fact that even in Roman times little, if any, of the masonry can have been above the surface, and soil accumulation, following the disuse of the tank, must speedily have obscured all traces.

The actual stone-work of the tank stood generally four courses high (never less than three) on a thin footing course offset 1½ inches, and the interstices were filled not with mortar but with clay. Well-dressed sandstone

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(1) p. ///.

(2) Plate VIII; Figs. 5, 8-10.

blocks, averaging 1 foot by 9 inches, were employed, and, allowing for the fact that the materials were obviously re-used, the frequency of the straight-joint and the levelling course do not detract from the compact neatness of the work. The floor was composed of sandstone flags laid in crazy-paving style immediately over the natural sand, but the joints, in this case, had not been sealed with clay. Here, too, re-used material was evident, many of the stones on the edge of the tank being heavily burnt, (though not in situ since the adjacent walls were clean), while one large block had been chiselled to receive a cramp. (Fig 8).

Chronologically, it appeared, on structural evidence, that the tank was a later insertion into the drainage-system. The masonry of the culvert, formed of large, roughly-dressed sandstone blocks, showed no relationship to that of the tank, while the junction of the tank and drain was accomplished not, as one would expect, by a gradual splay of the walls, but by the insertion, between straight joints, of a jumbled patchwork of stone and flagging (Fig. 5).

The only other noteworthy features are that the bottom of the tank was filled to a depth of 2 feet by a clean pack of stone and cobbles, and that on several of the flooring slabs, near the inlet, a black deposit was noted in which sand, nitrogen (considerable) and phosphate (small) were found to be present.(1)

(1) For this analysis I am indebted to Dr. Gibby of the Durham University Science Department. He adds that the deposit could not be wood charcoal but might well represent a sewage deposit.

Several of the foregoing features repeat Hooppell's observations on the square structure discovered outside the north angle. While differing in plan, the presence of a single entrance penetrated by a drain, the fact that the walls are merely a lining of ashlar, and the use of discarded building material are common to both and would seem to suggest not only that the purpose served was in each case identical but that the two structures were contemporary. Two distinctions must, however, be noted. The lumps of "bright red clay"(1) on the floor of the square chamber were not repeated in the circular tank, and, secondly, the distance of these tanks from the fort wall does not correspond. The latter point is of some importance for while the circular tank is only 12 feet away in a direct line from the fort wall and fits comfortably on the berm, the square structure 20 feet from the rampart would seem to have lain over the ditch at this point. Indeed, we are even told that it was placed "in the bottom of the fosse".(2)

As far as I am aware these structures are unique,(3) but there is no reason to suppose that parallels will

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(1) Vinovia, p. 8.

(2) DUJ., IV, no. 14. p. 29. This is not to be taken literally for Hooppell does not seem to have excavated the ditch at any point.

(3) Bruce records the discovery of a subterranean chamber outside the south-east angle of the fort at Lanchester, but this is probably no more than the drain (Wall (2), p. 342).

not be found if search be made. The fact that they were deliberately constructed below ground is just as likely to have deceived the archaeologist as, at Binchester at any rate, it cheated the mediaeval stone-robber.

But for certain difficulties we should naturally suppose that the structures represent settling tanks, receiving the discharge of the latrines flushed outwards from the fort. Such an invention would be a radical improvement on the assumed practice of allowing the sewage to flow directly into the open ditch, and would even be essential at the east angle if the latrines were still in use in the late fourth century when occupation over the ditch is attested. The level of the drain which rises towards the interior of the fort, and the analysis of the black deposit on the floor of the tank in T. 1, add confirmation to this theory. On the other hand, Hooppell, who first thought the square structure to be a cesspool,(1) reconsidered his decision when the analysis of the deposit on the stone-trap of the culvert proved it to be caused by the action of pure spring water.(2) But a more important objection is that the first principle of a settling-tank is that the inlet shall be at the same level as the outlet, and even allowing that the pure liquid might have permeated

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(1) DUJ., III, 1878, no. 8, p. 4.

(2) AA., 2, x, pp. 192-3.

through the floor, the cobble pack within the tank, which was certainly not a later filling, would have rapidly caused a choking up of the culvert. At the moment we are bound to defer explanation until the terminus of the drain inside the fort is discovered.

No definite evidence of date was secured in the tank and stratified deposits were hardly to be expected. Two sherds from the upper filling have been illustrated (Plate XLIII, nos. 17 and 18) but there is no guarantee that these were not imported in a subsequent post-Roman filling. Since, however, the drain in Hooppell's section was apparently of one build with the fort wall, now dated to the third century,(1) we have at least a terminus post quem for the construction of the tanks, and one might even be inclined to place them in the fourth century in view of the fact that the rectangular structure appears to overlie a partly filled ditch. Since the problem could easily be solved by an examination of the sealed ditch filling at this point it is not worth while to carry the argument further at this stage.

Rampart Section T. 2. (Plate VIII).

Owing to the lack of stratification in T.1 it was felt necessary to undertake a further rampart section elsewhere, and the most promising sector appeared to be

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(1) p. 168.

the north-east rampart near the north angle, where Hooppell had found the fort wall standing several courses high.

A site was chosen 60 feet from the angle, midway between two of Hooppell's sections (Plate VII, G and H), and we were rewarded by finding seven courses of the inner face of the fort wall still remaining, though all the outer facing stones had been removed (Fig. 6). The masonry was composed of well-dressed sandstone blocks averaging 8 inches by 10 inches and strikingly similar to the third century stonework at Lanchester. Moreover, as at the latter site, the back of the wall, confirming Hooppell's account, was found to be reduced by successive offsets, the lowest offset being formed by two courses of masonry and the next by three. The footings were the same as those noted in T. 1 viz: a flagged levelling course projecting slightly on either side and resting on a 2 foot bed of cobbles bonded by a mortar spread, but the total width of the footings here was only 11 feet. This measurement, however, and the width of the footing flags, allow a wall 8 feet 7 inches wide.(1)

As in T. 1, the stone wall proved to be incorporated into an earlier clay rampart cut down for the reception of the footings to within 1 foot 6 inches of the Roman turf line, but rising behind the wall to a height of 8 feet, 2 feet more than the minimum height required by the military writer Hyginus in the second century A.D.

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(1) Vinovia, Plate 3.

The clay was identical with that observed in T. 1, of a grey silty texture compressed into a stiff homogeneous mass where it underlay the wall footings, and contained a few sherds (Plate XLIII nos. 9-12) all of first century date.

With the stone wall was associated a new rampart backing formed mainly of upcast from the cut in the clay bank, from which it was only to be distinguished by a slight admixture of soil which gave a less compact appearance. That it was contemporary with the wall was proved by the fact that it continued unbroken over the offsets and, accordingly, there can be no hesitation in dating the stone defences by the pottery from the rampart backing. As was to be expected a certain number of the sherds were of Flavian type but there were two dishes which cannot be dated earlier than the third century (Plate XLIII, nos. 13 and 16). In this connection it will be observed that the "stepping" of the inner face of the fort wall is attested at Caerwent, not before the late second century, and, what is more important, at Lanchester under Gordian.(1)

Over the later rampart backing was a tiled oven set in clay heavily fired, and here three unstratified finds were made - a coin of Constantius II (Appendix II.D, no. 5) and two fragments of decorated Samian (Plate XXXVII, nos. 4 and 6). As the Roman ground level within the fort proved to be no less than 12 feet below the existing

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(1) see pp. 185-6.

turf line it was quite impracticable to ascertain either the width of the original clay rampart, or of the composite third century defences.

It will be noted that there was no trace in this section of any masonry, footings, or rampart backing of any period intermediate between the two already described. The conclusions to be inferred from this negative evidence will be considered elsewhere.

The Perimeter of the Fort.

In order to determine, if possible, the perimeter of the fort it was decided to follow the line of the south-east rampart southwards from the last visible point by a series of sections (Plate VII, T. 3 - T. 8). The results of each section will be summarised in order from north to south.

T. 3.

80 feet south of the presumed centre of the gateway in this rampart (cf. Vinovia, Plate 2). The fort wall was found within 1 foot 6 inches of the turf, the outer face standing two courses high, built of well-dressed sandstone blocks and the lower course offset 3½ inches. Footing flags projected 13 inches in front of the wall and were bedded on a cobble foundation, the depth of which was not ascertained. The width of the wall, excluding the offset, was only 5 feet 6½ inches, and the fact that the inner face was not dressed might have suggested a reduction due to stone robbing but for the fact that it

was clearly abutted by a rampart backing of yellow sandy clay which merged into the grey clay of the first century rampart 4 feet 2 inches below the humus.

The inner lip of the ditch was discovered 19 feet from the outer face of the stone wall at a depth of 5 feet 6 inches below the existing ground line.

T. 4.

73 feet south of T. 3. The core of the wall still remained on footing flags 6 feet 10 inches wide, but none of the upper facing stones survived.

T. 5.

63 feet south of T. 4. Here the wall core had been completely removed but the inner and outer footing flags on the cobble foundation were yet *in situ* (Fig. 7) measuring exactly 8 feet in width. As in T. 1 and T. 2, the cobbles had evidently been bonded by a mortar spread.

Continuing the trench north-westwards into the fort the first century clay rampart was found to extend 29 feet from the inner face of the stone wall, at which point the cobbles of the *intravallum* roadway were encountered. From the body of the rampart, still standing to a height of three feet, came several sherds of coarse pottery (Plate XLIII, nos. 1-6) and two coins of Vespasian (Appendix II.D, nos. 1 and 2), while parts of two Samian vessels F. 29 were found lying on the Roman turf below the base of the clay rampart (Plate ~~XXXIX~~ XXXVII, nos. 1 and 2).

A third fragment of South Caulish ware of later date, from the unstratified material over the clay rampart, has been figured (Plate ~~XXXIX~~ XXXVII, no. 3).

T. 6.

17 feet south of T. 5. Only the inner face of the wall was tested. The footing flags and core were still in evidence but none of the facing stones survived.

T. 7 and T. 8.

20 feet and 57 feet south of T. 6 respectively. The wall and footings had been completely removed but the early clay rampart was met with, in each case 2 feet 6 inches from the surface. A third section cut on the same line in the wood a few yards beyond the field fence attested the presence of the clay rampart at this point also. To make reasonably sure that the fort wall had not turned before reaching the edge of the plateau a section was cut southwards from T. 5 inside the fort and parallel to the line of the wall to within 60 feet of the boundary fence. From this point, owing to shortage of time and labour, it was continued by trial pits, but nowhere was any suggestion of the fort wall encountered.

To summarise the results of the foregoing sections, it is clear that, as on the north-east side, the south-east defences of both the first century fort and the later stone-wall forts coincide. The fact that the existing walls in T. 2 and T. 3 differ in width and

construction need not disturb us unduly, for, as Mr. Richmond found at High Rochester, it is not uncommon for intermediate periods of masonry to be lacking in different sections on the perimeters of Roman fort sites.(1) The south-east rampart, contrary to accepted opinion, has undoubtedly extended to the edge of the plateau and has equally certainly been broken away at that point, while the north-west rampart must have suffered even more severely. How are we then to determine the size of the fort? Formal proof, of course, is now impossible, but by allowing the south east defences to have continued a mere 40 feet beyond the field fence we produce a square fort, just over 9 acres in extent within the ramparts, and with the via principalis dividing the fort in the ratio of 41.5 : 100. The parallel with Malton is sufficiently complete to be entirely convincing.(2)

Miss D. Sylvester, Lecturer in the Department of Geography at Durham University, kindly visited the site and, after an examination of the local geological and topographical features, expressed confidence in the view that a major landslip, due to river action, had actually occurred. Furthermore, if added confirmation be needed, the recent discovery, during pipe-laying, of tumbled

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(1) AA., 4, xiii, pp. 174 f.

(2) There the area of the first century fort, occupied significantly "almost without alteration until the end of the fourth century" was 8.4 acres and the fort was divided in the ratio of 40.8 : 100 (Malton, p. 11).

walling stones and Roman pottery, 14 feet below the surface, at the foot of the plateau and on the west side of the modern road, is conclusive.

Since the above excavation took place, the existence of a Roman cemetery in the Bishop's Park, suggested by discoveries in 1757,(1) has been confirmed by further finds of burial urns (Plate XLIV, nos. 1-3). The site lies a short distance east of the bridge crossing the Gaunless within the park and not only pottery but masonry, appearing to the writer to be the rim of a circular stone tomb, was encountered hereabouts at a depth of 7 feet in a trench cut for sewage purpose. Further excavation, however, is needed before this point can be definitely established.

The Pottery (Plate XLIV).

1. Beaker of coarse grey ware, height $3\frac{7}{8}$ in., diam. $2\frac{3}{8}$ in. The vessel is technically a "waster". cf. Ospringe. Arch. Cantiana, XXXVII, Pl. XI, nos. 88-9.

2. Jar, pinkish-buff, hard gritty fabric. Diam. $4\frac{3}{4}$ in.

3. Pedestal beaker, Castor type, chocolate slip, and cream fracture. Pentice-moulding below the neck and body decorated with roulette-hatching. Height $6\frac{7}{8}$ in; diam. $2\frac{3}{8}$ in. This vessel contained burnt bones. cf Ospringe, pl. XLVIII, no. 636 and p. 94. Circa A.D. 300.

Conclusions.

While leaving points of historical detail for the final chapter it will be as well to summarise here the body of evidence for the Roman occupation of Binchester.

The earliest fort, of the Flavian period, had a rampart of grey silty clay, over 30 feet wide, and at least

(1) p. 99 footnote.

one ditch immediately in front of it. Including the ramparts the extent of this fort appears to have been 9½ acres.

Simultaneously with the original military occupation of the plateau, a civil settlement grew up alongside the main road outside the south-eastern defences.

Subsequently, a stone wall was added to the clay rampart leaving the area of the fort unchanged. On the north-east side this wall is of third century date and, while further work is needed before we can be sure that there was no reorganisation of the defences under Trajan or Hadrian, the section in T.2 revealed no trace of an intermediate constructional period.

In the third century the ala Vettonum was in garrison at Binchester, possibly reinforced by a cuneus of Frisii,(1) but evidence for the internal arrangements of the fort at this time is to seek. The hypocaust of the praetorium containing the tile-stamps of a numerus may date to this, or to the succeeding phase in the history of the site.(2)

Constantian activity is only suggested, as yet, by the fourth century pottery from the bottom of the ditch. But subsequently the ditch was deliberately filled in to permit settlement within the shadow of the ramparts.

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(1). CIL., 427 (11).
(2). If, as suggested, the tiles were made at Chester-le-Street (Appendix I, no. 14), it must be noted that numeri appear to have garrisoned that site both in the third and fourth centuries (cf. Chapter IX).

In the vicus, stone buildings, probably replacing timber hutments of the earliest settlement, were rebuilt from time to time and vigorous occupation of the site in the fourth century is manifest.

No evidence of domestic or military occupation of the plateau in the pre-Roman period is yet to hand. In view, however, of the great depth of soil accumulation over the Roman turf level, and the small area so far excavated to subsoil, one would ~~hardly~~ not claim to have exhausted the possibility of such a discovery.

APPENDIX

Reports on turf samples, both from beneath the first century clay rampart in T. 5, by A. Raistrick, M.Sc., Ph.D.

1. A normal turf soil layer, with rather peaty residue of grass and sedges and (?) fern stems. The material is very unresponsive to treatment but gives pollen of oak with abundant grass and some fern spores - suggestive, if anything, of moderately open scrub.

2. Very sandy top soil with grass roots and a very few grass spores. Exactly like much of the turf from the Wall.

COARSE POTTERY FROM THE 1937 EXCAVATION

(Plate XLIII).

Nos. 1-6. From the clay rampart, T. 5.

1. Mortarium, buff colour, sparse grey and white grit mounting on to the rim. Diam. 11½ in. cf. Newstead, fig. 34, no. 5. Flavian; Castleshaw, Pl. 39, no. 29.

2. Mortarium, buff colour, small white grit general on the rim. Diam. uncertain. A typical Flavian section. Cf. Ebchester, Pl. XLVII, no. 4, where parallels are cited.

3. Mortarium, dark-grey to black, no grit visible. Diam. uncertain. Cf. Malton, fig. 15, no. 8. Flavian.

4. Carinated bowl with reeded rim (2 grooves), pink fabric, blue fracture. Diam. 9½ in. Standard type with vertical side and horizontal rim. Flavian.

5. Carinated bowl, light grey ware, double groove below the rim and single groove on carination. Diam. 7¼ in. I have not been able to find an exact parallel but the general profile resembles Richborough (3), Pl. XXXVIII, no. 290, dated A.D. 80-120.

6. Rim of jar, hard sandy-grey ware. Diam. c. 8 in. Cf. Brough (1936), no. 43.

Nos. 7 and 8. From the ditch bottom, T. 1.

7. Reeded rim bowl, hard coarse bright-red clay, upturned rim. Diam. 8¼ in. Cf. Ebchester, Pl. XLVII, no. 7. Late first-early second century.

8. Hammer-head mortarium, white clay. Cf. Ebchester, Pl. XLVII, no. 29 and numerous parallels. Late third-fourth century.

Nos. 9-12. Clay rampart, T. 2.

9. Jar, coarse dark-grey gritty fabric, twin grooves below rim. Diam. 6 in. Cf. Newstead, fig. 25, no. 3. Flavian.

10. Mouth of screw-neck flagon, smooth buff fabric. A common Flavian type. Cf. Newstead, fig. 33, nos.1-4; Brecon, C. 34; Malton, fig. 15, no. 25; Corbridge, 1911, Pl. XI, nos. 1-2.

11. Jar, coarse dark-grey ware. Cf. no. 9.

12. Fragment of base of Samian cup form 27, excellent glaze, South Gaulish manufacture. The groove on the footstand is said to be a pre-Flavian feature (Oswald and Pryce, p. 187 and Pl. XLIX nos. 1-10, 13).

Nos. 13-16. From the backing of the stone rampart wall, T. 2.

13. Dish, fumed ware, acute-angled lattice decoration on side. Diam. 9¼ in. The broad lattice pattern and absence of carination, suggest a third century date.

14. Rim of bowl, ochre clay, smoothed. An imitation of samian F. 29.

15. Fragment, light-grey clay, smoothed externally. I have not been able to find a parallel.

16. Dish with roll-rim, fumed ware, decorated with burnished lines. Diam. 9 in. Cf. Chapel House M/c., no. 40. Third century.

Nos. 17 and 18. From the filling of the circular tank, T. 1.

17. Neck of large jar, bright red clay, burnished. Diam. 5¾ in. Cf. Manchester, Pl. 73, R. 24.

18. Rim of cooking-pot, Huntcliff type. Cf. Ebchester, Plate XLVII, no. 24. Late fourth century.

Nos. 19-22. From the cobble floor over the ditch - filling, T. 1.

19. Lid of cooking-pot, hard blue-grey ware. Diam. 8¼ in. Cf. Corbridge, 1911, no. 87.

20. Rim of cooking-pot, Huntcliff type. Cf. no. 19.

21. Hammer-head mortarium, pipeclay fabric. Cf. Birdoswald, nos. 11 and 12. Late third-fourth century.

22. Flanged bowl, dark metallic slip, cream fracture. Cf. Signal Stations, fig. 1, no. 1. Late fourth century.

DECORATED SAMIAN WARE

FROM THE EXCAVATIONS OF 1937

(Plate XXXVII, nos. 1-6).

Nos. 1 and 2. From beneath the clay rampart, T. 5.

1. F. 29. South Gaul. The festoon enclosing cuneiform leaf, bordered by bead rows, is not an infrequent motif employed in the upper frieze in the Flavian period. Cf. Pompeii, Pl. XI, no. 57. Good glaze and execution. Period: Vespasian.

2. F. 29. South Gaul. Upper frieze: panels divided by triple wavy lines, animals (indeterminate) and rows of imbricated pinnate leaves (O.P. XXXVII, no. 39).

   Lower frieze: (i) in medallion - lion, as used by COELIVS, L COSI, MASCLVS, MOMMO, PASSENVS, RVFINVS and SASMONOS; (ii) cruciform device with triple pomegranate stalk, trefoil leaf-tip and rosette terminal, all used by COELIVS. Glaze excellent. Period: Vespasian.

Nos. 3-6. Unstratified.

3. F. 37. South Gaul. Ovolo with trifid tongue-terminal. In panel, boar as used by PASSENVS, RVFINVS, SASMONOS and others. Poor glaze and execution. Period: Domitian-Trajan.

4. F. 37. Lezoux. Fragment.

5. F. 37. South Gaul. Ovolo with trifid tongue-terminal.

6. F. 37. Lezoux. Compound stalk scroll as used by Cinnamus and his group of potters. Poor workmanship. Period: Antonine.

VI

THE ROMAN FORT AT LANCHESTER

"It still ... exhibits one of the most conspicuous remains of a Roman camp, now to be seen in South Britain."

(Hodgson. Poems, 1807, p. 75).

The fort at Lanchester stands on the line of Dere Street[1] 12 miles 3 furlongs from Binchester, and 6 miles 4 furlongs from Ebchester by the Roman road. At an elevation of 500 feet, the station commands the crossing of the River Browney, half-a-mile to the south, the valley of the Stockerley burn to the east, and the low foothills of the Pennines to the north, but from the west rampart the ground rises steadily to the rock outcrop of Humber Hill (850 ft. O.D.), a vantage-point for the surrounding country.[2]

With brief intermission, the site has been owned, since 1633, by the Greenwell family residing at Ford,[3] and it is largely due to this ownership that the fort remains to-day in a comparatively unique state of preservation. While the plough has levelled the area within the ramparts, and stone-robbing has destroyed the greater part of the outer

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(1) The exact course of the road in the neighbourhood of the fort is not yet certain. cf. pp. 183-4.

(2) Plate XV. B.

(3) Surtees. Durham, II, p. 317.

facing of the walls, these are distinctly traceable on all four sides, and, unencumbered by modern buildings, the ground was practically undisturbed by previous excavation until 1937.

Happy, indeed, in its possessors, the site has been equally fortunate in its friends, and to these we owe the fact that not only the bibliography of Lanchester, but also the epigraphic materials, are more complete than for any other fort in the county, providing all that the student could wish for as a working basis for excavation.

As an introduction to the Roman fort at Lanchester, collecting and assessing all previous accounts, and summarising the structural, numismatic and epigraphic evidence has already been published,(1) ~~and the conclusions set fort.~~(1) ~~Here~~ we may note only that the fort is rectangular in shape, the ramparts roughly facing the cardinal points, and the east-to-west axis a little less than an eighth larger than the corresponding north-to-south axis. The area within the walls ($5\frac{3}{4}$ acres) is larger than that required for a quingenary regiment, but affords good accommodation for a milliary cohort.(2)

MacLauchlan observed traces of a ditch round the fort,(3) although the width he gave - 60 feet - can only be accepted if we allow it to have been an overall measurement of the

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(1) TDNS., VII, pp. 200-215. By the present writer. The paper (henceforth referred to as Lanchester) is included with this thesis.

(2) Housesteads, another milliary cohort fort is barely 5 acres in size.

(3) Memoir, p. 14.

double ditch visible on the western, and more vulnerable, side of the fort. The rampart was of stone. Originally over 12 feet in height, with interval towers, it measured 8 feet at the base, and was stepped internally. ~~to a width of something like 5 feet at the top.~~ Buildings which have been identified within the fort include the principia, the praetorium, and traces of barrack-buildings; while notice of other structures includes a number of hearths, and a drain which ran from the centre of the fort, out through the south-east angle. Without the ramparts, the aqueducts, the bath-house, and certain structures suggestive of a vicus near the north-east angle and on the eastern hill-slopes, seem to have been the most important discoveries.(1)

Three branch roads have been suggested: to Chester-le-Street (R. VI), to South Shields (MacLauchlan. Map), and to the west (R. VIII), but while there is a certain amount of presumptive evidence for the former route, direct archaeological confirmation is, in each case, to seek.

As regards the occupational history of the site, prior to the excavations of 1937 we had only the epigraphic evidence for the presence of the first cohort of Vardulli at Lanchester c. 175 A.D., and for re-occupation of the fort in the reign of Gordian by the first cohort of Lingones and a regiment of Suebian cavalry. The coin list including ~~including~~ four Imperial coins earlier than Claudius, and

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(1) Lanchester, passim.

a coin of Julian, seemed to extend both the upper and lower limits of occupation, but beyond this point speculation was unprofitable.

THE EXCAVATIONS OF 1937

Under the auspices of the Durham University and North of England Excavation Committees, and by kind permission of Col. W. B. Greenwell, the owner of the site, the writer undertook a three weeks excavation at Lanchester in May, 1937. The number of men employed varied from three to four, and to Messrs. J. Graham, W. Hutchinson, and A. Johnson, much credit is due for their energy and enthusiasm.

It was decided to concentrate operations on:

(i) A rampart section.
(ii) An internal building.
(iii) The determination of the orientation of the fort by the fixing of the south gateway.

As events turned out, however, the fact that the original rampart section encountered an interval turret, enabled the work on points (i) & (ii) to proceed simultaneously.

The Ramparts.

The core of the wall is visible on all four sides of the perimeter, but a complete examination of the defences on the north and west sides is prejudiced by the presence of field walls and land drainage. Accordingly, it was decided to commence work on the east defences, 100 feet

from the south-east angle, at a point where the wall core, and the indications of a ditch are equally clear. An additional advantage here was the possibility of extending the section to test the line of Dere Street, shown on the 25 inch O.S. map 60 feet east of the fort wall.

Section I. (Plates X & XII).

Only a single ditch existed on this side of the fort, 15 ft. 3 in. wide and 5 ft. deep, cut into the natural sandy subsoil. In profile it was V-shaped with a flat bottom 1 ft. 9 in. wide, and traces of rough stone revetting were observed on either lip. The width of the cobbled berm was 13 ft.

From the homogeneous filling of the ditch came a group of sherds (Plate XLVI, nos. 48-57) of third and early fourth century date. If the ditch was part of the defences of the original fort, as seems most likely, subsequent cleaning-out had removed all the first period dating evidence.

Eastwards from the outer lip of the ditch the section was continued to a point 72 ft. from the fort wall. Slight traces of foundations and considerable pottery came to light but although the excavation was carried down to subsoil (hereabouts from 4 to 6 ft. below the turf) no trace of road metalling was anywhere observed. Mr. R. P Wright kindly took over the search for Dere Street at this stage, and I am indebted to him for the following note on the results of his activities:

"The ditch section described above was continued as a series of short trenches, with intervals of only six feet left unexcavated between them, reaching to a point 85 yards east of the fort wall. Here and there rough building-foundations and unstratified pottery were found. There was nothing that resembled a road, either in width, material, or structure, still less a Roman trunk-route like Dere Street. The trench thus disproved the line laid down on the Ordnance Survey map and also the suggestion of MacLauchlan(1) that it ran within about 75 yards of the fort on the east. East of this point the ground falls away sharply, which makes it seem very improbable that the road-builders took this less favourable course; and probing, for what it is worth, gave no indication of any solid road structure beyond the end of the trench."

With this negative evidence we must, at present, be content. In view of the orientation of the Hadrianic fort it would be natural to suppose that the main road ran on the east side, but a course to the west must not be overlooked in the light of Hutchinson's sketch-plan,(2) and a tradition to that effect.(3)

When excavated, the fort wall was found to be standing to a height of 7 ft. 6 in. As the difference of ground level inside and outside the ramparts is as much as 6 ft., a considerable depth of digging was required to expose the

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(1) Memoir, p. 13. (2) Durham, II, p. 358.

(3) AA., i, iv, p. 292.

inner face of the defences, compared with the slight clearing involved in uncovering the external foundations. There was compensation, however, in the discovery that the accumulation of soil within the fort had served as a deterrent to stone-robbing.

Two periods of masonry were involved (Plate XI). The original fort wall was 8 ft. 7½ in. wide at the base and bedded on footings of blue clay 1 ft. 3 in. deep. All that remained of its facing stones was a fine massive chamfered plinth course (Fig. 11) on which the masons' line for the upper masonry was plainly evident. set back 2 in. from the edge of the chamfer, and three courses of the inner face, the lower of these being offset 6 in. (Fig. 13).(1) Roughly trimmed blocks averaging 9 in. high and varying in length from 1 ft. 3 in. to 2 ft. 2 in. had been employed.

Subsequent rebuilding was attested by the distinctive masonry of the upper eight courses of the inner face of the wall (Fig. 13). The stonework was now composed of well-dressed ashlar ~~blocks~~ 9 in. by 12 in., and a striking feature of this second period work was the reduction of the wall by a 5½-6 in. offset at every third course giving the impression of a "stepped" rampart. ~~From Hutchinson's observation(2) that this "stepping" was continued until the~~

(1) From the photograph it appears that the footing course and the three upper courses are uniform, but close examination showed that the second offset course abutted the third century masonry of the turret wall, with which it must, therefore, be contemporary.

~~(2) An Excursion to the Lakes, etc., 1776, pp. 316 ff.~~

width of the wall was 3 ft. (it cannot, for practical reasons have been much less), it has been possible to reconstruct the rampart to a height of 23 ft. including the timber palisade (Plate XII).

Behind the wall, the clay rampart-backing was standing 6 ft. 1 in. high and, as at York,[1] appeared to have been cobbled (Fig. 14). Again two periods were to be distinguished in the side of the section, corresponding to the two periods of masonry. The earliest rampart backing of stiff blue clay, remained only 4½ in. high, having been cut down for the rebuilding of the wall; it was based not immediately on the Roman turf line but on a thin band of masons' chippings and occupation debris which produced only a single sherd (Plate XLVI, no. 38). A second occupation deposit overlay the first period backing to a depth of 5 in., and above this the upper clay rampart backing extended to within a foot of the top of the wall. What pottery there was from the upper material is illustrated on Plate XLVI, nos. 44-47, and Plate XXXVIII, nos. 1-3. None of the coarse sherds are closely dateable, but their affinities are with ~~the third century rather than~~ the second century.

Owing to the depth of excavation required it was not found practicable to investigate the width of either period rampart backing, but as the question is structural rather than historical it could be deferred with good conscience.

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(1) JRS., XV, 1925, p. 180.

Section II (Plates X & XIV).

A second section, cut on the south side of the fort between the gateway and the south-west angle, concentrated on the ditch system and was not continued within the rampart. As appeared from surface indications, the south side of the fort is defended by double ditches: (i) an inner ditch 13 ft. wide and 4 ft. 6 in. deep, similar in section to that on the east side, and having a berm 17 ft. wide; and (ii) an outer ditch 15 ft. wide and 4 ft. 6 in. deep, more irregular in profile than the first, from which it is separated by a counterscarp 7 ft. wide

No dating evidence was found in either ditch and it is not possible to say, therefore, whether they are contemporary.

The Interval Turret. (Plates X & XI).

Section I happily encountered the south wall of an interval turret placed midway between the east gateway and the south-east angle of the fort. The excellent state of preservation of this structure invited complete excavation, for it was hoped that the second part of the programme viz., the investigation of sealed deposits in an internal building, might be completed without further search. The following report shows that these hopes were not without foundation.

As in the case of the fort wall in this section two periods of masonry were evident:

Period I. The original turret was represented only by the footings, two courses high on the north, east, and south sides, and one course high on the west side (Plate XI). The turret appeared to have been recessed slightly into the first-period fort wall with which it was evidently contemporary for the base course of the latter was continued through the turret as an 8 in. offset footing course. Moreover, the clay bed supporting the ~~upper~~ masonry of both wall and turret clearly indicated a single planning (Fig. 13). The side walls of the turret appeared to have been set back a little way from the footings (Fig. 12), and must have been about 4 ft. thick, allowing the maximum internal size of the building to have been 7 ft. by 6 ft.

As in the later period the entrance would seem to have been at the junction of the north and west walls.(1)

No trace of the flooring of the original turret remained, the second-period floor sealing only a mixture of occupation debris and sand infilling. From this debris, however, were recovered two coins, a denarius of Vespasian and an as of Trajan (Appendix II. E, nos. 8 & 12), and a single cooking-pot rim (Plate XLVI, no. 39).

Period II.

The turret had subsequently been rebuilt upon the

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(1) Considerable wearing was visible on the footings at this point. ~~In the second period these were obscured.~~

earlier footings but with narrower walls (av. 3 ft. 3 in.).[1] The internal dimensions were further enlarged to 8 ft. 9 in. by 7 ft. 2 in. by reducing the thickness of the fort wall to 5 ft. 10 in. by means of a further offset course, but although the second periods of both wall and turret were evidently contemporary,[2] no attempt was made to preserve the "stepping" of the rampart within the turret itself. The doorway was 3 ft. 4 in. wide (Plate XI), and the height of the walls above the first period masonry varied from 5 ft. 9 in. (on the east side) to 3 ft. 3 in. (on the west side).

Associated with this reconstruction was a well-built flagged floor overlying the late offset course of the east wall, and bedded on a thick spread of mason's chippings.[3] The slight occupation material over the floor was sealed, somewhat imperfectly, by the floor of period III, and the shallow depth of the occupation debris (Plate XI, Section A-A), which contained only the sherds illustrated on

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(1) The levelled core of the first period turret walls is clearly visible on Fig. 12 projecting from beneath the later masonry.

(2) The north and south walls of the turret were keyed into the fort wall (Fig. 13, uppermost course), and the masonry was identical.

(3) Fig. 15. The large rectangular flag in the centre of the turret represents this floor. The flag in the doorway is period III.

Plate XLV, nos. 27-30 and Plate XXXVIII, no. 7, suggested that the turret had been constantly swept out in the second period. This was confirmed by excavation outside the west wall, where a cobble road of period III sealed an extensive deposit of pottery (Plate XLVI, nos. 31-37) containing the rim of a coarse red-brick bowl, fragments of which had already been found on the second-period floor (Plate XLV, no. 30). As at Birdoswald[1] we may suggest a window here, of which no structural remains have survived.

Period III.

No masonry of this period could be detected; if reconstruction had taken place it must have been at a higher level than is represented by the existing remains, and this factor gives comparative evidence for the extent of the destruction at the end of periods I & II respectively.

The latest floor, as already noted, was raised less than 1 ft. above that of period II, and consisted of no more than tumbled masonry and loose cobbles (Fig. 15) levelled, doubtless, with a soil spread which could not be distinguished from the occupation debris above it. To this period we must ascribe the single irregular flag found in the doorway (Fig. 15), and the cobbled road outside the western wall (Plate XI, Section B-B) from whose surface a few sherds (Plate XLVI, nos. 40-43, and XXXVIII, nos. 4, 5, and 8) and a coin of Constantine I (Appendix II. E, no. 57) were recovered.

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(1) CW., 2, xxx, p. 176.

No attempt had been made in this period to prevent the gradual raising of the floor level so that the accumulation was found to be as high as 2 ft. 6 in., extending to within 1 ft. 3 in. of the uppermost course of the fort wall. From this deposit came two coins, a plated denarius of Severus, and an Æ 3 of Constans (Appendix II. E, nos. 23 & 61), and a fine series of pottery types (Plate XLV, nos. 1-26), all characteristic of the first half of the fourth century.

Reversing the chronology, it is now possible to date the three periods described above, and to apply these periods to the excavations at the south gateway. Period III undoubtedly represents a Constantian occupation of Lanchester, but it would be unwise to deny a Theodosian occupation of the site in view of the fact that the later levels in the wall turret may easily have been peeled away. Period II, represented by the reconstruction of the interval turret, and the "stepped" fort wall, and dated by the pottery from without the western wall of the turret, may safely be ascribed to the third century, and would seem, therefore, to reflect the re-occupation under Gordian, attested by independent evidence.(1) Period I, the original construction of the stone fort wall and interval turret, must fall within the second century, and from the coin evidence(2) and structural analogies on the Wall, can hardly be dated otherwise than to the reign of Hadrian.

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(1) CIL., 446 (35) and 445 (36).

(2) Appendix II. E, nos. 8 and 12.

The South Gateway.

Hutchinson's account of the fort at Lanchester mentions that "an access appears in the centre of each side,"[1] and both Hodgson[2] and MacLauchlan[3] declared the east and west gates to be visible thus situated. In the middle of the nineteenth century, however, the north and south gates were "so obscured by rubbish," that it was found impossible to tell exactly where the entrances were.[4]

Assuming that in the case of a rectangular fort such as Lanchester the gates in the longer axis would not be centrally placed, search was directed towards a point on the south rampart 200 ft. west of the south-east angle, where the core of the fort wall was not apparent.

A little digging soon uncovered the central spina of the gateway, and a further week's work sufficed, to clear the remains of the eastern guard-chamber. As was to be expected, the gateway proved to have been much more severely robbed then the interval turret, but at least three periods of buildings could be detected.

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(1) Excursion to the Lakes, p. 317.

(2) Poems, p. 91.

(3) Memoir, p. 13.

(4) ibid.

Period I. The Hadrianic Gateway.

The gateway measured 62 ft. overall, and comprised two roadways, each 9 ft. 6 in. to 10 ft. wide, flanked by two rectangular guard-chambers built flush with the front of the fort wall, and projecting some 12 ft. behind it. The plan thus compares with the more or less standardised type of double gateways found in the Hadrianic Wall forts.(1) The T-shaped end of the spina which supported the twin arches of either portal, still remained in situ, one course high, set on a massive base course 11 in. deep and offset 9 in. which no doubt served incidentally to protect the pier from damage by wheeled vehicles. The upper masonry consisted of four grit blocks, 1 ft. 5 in. deep, tied with elaborate dove-tailed cramps, the bonding material of which, whether lead or timber, was lacking (Fig. 17). The two rear blocks were rebated, reducing the width of the spina from 4 ft. 4 in. to 2 ft. 3 in. and in addition to the cramp-holes, a dowel-hole had been chiselled in either stone. The foundations continued into the fort but were not traced for their full extent. It was clear, however, that the spina had been discarded in the Roman period, for one of the blocks of the upper masonry was found to be re-used in the east guard-chamber (Fig. 16) Finely cut, and measuring 2 ft. 3 in. by 1 ft. 11 in., and 1 ft. 6 in. deep, it was provided with

(1) cf. Birdoswald. AA., 1, iv, pl. f. p. 74; Rudchester. ibid., 4, i, pls. II & IV; Housesteads. ibid., 2, xxv, pl. XIX; Halton Chesters. ibid., 4, xiv, fig. 5.

a drafted margin and a ~~sunk "rusticated" panel~~ hollowed surface so that it could be keyed to a stone similarly dressed with a clean joint at the edges & a liberal coating of mortar within.

Most unusually, no pivot-hole was to be observed in the normal position on the west side of the spina, and the inference that the blocking of this portal dates to the original construction of the gateway is unlikely.(1) The corresponding site of the pivot-hole for the western door of the east portal was obscured by a late blocking wall (Plate XIII).

The east guard-chamber was set on a hollow rectangular stone platform(2) 19 ft. by 21 ft., built of massive, roughly dressed sandstone blocks bedded on clay footings 1 ft. 6 in. deep. On the south side, the width of the footings corresponded with that of the fort wall, indicating contemporaneity of lay-out, but the fact that the east and west foundations of the guard-chamber were not set squarely on their footings (Plate XIII), suggests a slight deviation from the original plan. Extensive disturbance had taken place and only six stones of the superstructure survived, three at the internal junction of the fort wall and the guard tower, and another group of three buried beneath the masonry of a later period (Fig. 18). From these, however, it appeared that the width of the east, west, and south

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(1) See p. 197 .

(2) As, seemingly, at Birdoswald. AA., 1,iv, pl. f. p. 141.

walls of the tower was in every case 4 ft., and, accordingly, the internal dimensions of the building would be some 13 ft. by 11 ft.(1) While the side walls had been composed of neat ashlar ~~blocks~~ (av. 1 ft. 3 in. by 1 ft.), there was a suggestion that the front wall had been more elaborately treated, for the mortar-line of the wall core was plainly to be seen, set back 1 ft. 10 in. from the edge of the platform, allowing for at least one more course of large masonry. Further evidence of this must, however, be sought elsewhere on the perimeter.

Amongst other architectural features to be observed was the foundation of the outer impost, recessed 4 ft. 6 in. from the front of the tower, and projecting 1 ft. 3 in. into the roadway. The rear impost foundation ~~had been~~ was suggested by a slight projection of one of the sandstone blocks ~~removed.~~ The junction of the guard-chamber and the fort wall (here 8 ft. 9½ in. wide, and standing three courses high on the inner face), was accomplished by a straight-joint, a well known feature in Roman construction, safe-guarding against the unequal settlement of adjacent masses.(2) No evidence for the site of the entrance to the tower was forthcoming, and no stratification was to be observed at any point (see below).

Period II. The Gordianic Reconstruction.

The only evidence for this period was the widening of

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(1) The first figure is only an estimate for the entire foundations of the north wall had been torn out. Even so the Lanchester guard-tower ~~is~~ must have been slightly larger than corresponding structures at Housesteads and Birdoswald.

(2) cf. Brecon, p. 35.

the front wall of the tower by the construction of a new inner face set back 7 ft. 3 in. from the edge of the platform, and resting on an independent footing course of re-used Hadrianic blocks, offset 1½-2 in. The upper masonry, five courses high at the western end (Fig. 16), was identical with the period II masonry of the interval turret and fort wall, and may, therefore, be ascribed to the third century rebuild. As already noted the core of this wall overlay three stones of the east wall of the Hadrianic tower, and, at its western extremity, the five upper courses of the wall were straight-jointed showing that here it had been built against the massive masonry of the pier. Fig. 16 shows traces of wall-plaster still adhering to the stonework.

Within the guard-chamber was an unsealed accumulation of debris, particularly wall-plaster, lying on the natural sandy subsoil, without any trace of flooring or of stratification. The material was carefully searched but failed to yield any coins[1] or sherds worthy of record, and consequently only structural analogies can be cited to date the various periods represented.

Blocking-Walls.

Both portals proved to have been blocked up. The blocking-wall of the east portal, only traced eastwards for a distance of 2 ft. from the spina (Fig. 17), was 1 ft. 6 in. wide and set on an offset footing course.

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(1) A denarius of Elagabalus (Appendix II. E, no. 33) was found on the surface hereabouts.

The masonry was seemingly re-used and the construction was poor, making it hardly credible that the portal had been closed before ever the gateway was in use.

The blocking-wall of the east portal was entirely uncovered. Three courses high and 9 ft. 6 in. in length it over-rode the foundations both of the spina and of the impost, and, as the eastern extremity terminated in a straight face (Fig. 19), we may presume that here it abutted the masonry of the jamb. With this blocking up would seem to be associated the flagged drain shown on Fig. 19, whose significance is not yet clear. No doubt it is to be explained by the conversion of the gateway into living quarters, a transformation common on Wall sites,(1) but further work is required before this can be assured.

The complete walling up of one or both portals is a common phenomenon on Roman forts in England and Wales. The process goes back to the time of Hadrian and, as already noted, on several of the Wall forts, appears to have taken place simultaneously with the building of the gateway or, at least, before the sill-stones and pivot-holes were worn in any degree. As Collingwood has pointed out,(2) we are not entitled to infer any decline in morale but should see rather a development in military strategy. From the time of Hadrian the policy of narrowing and blocking gateways continued until the final phase of the Roman occupation,(3) and Dr. Wheeler

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(1) eg. Rudchester. loc. cit., p. 94; Housesteads. Guide, p. 12. etc.

(2) JRS., xiii, 1923, pp. 69-81. (3) Malton, p. 68.

has gone even further with the suggestion that the walling-up of the south and east gates at Brecon may have taken place in the sub-Roman period.(1)

Until further work has been done, therefore, all that we are entitled to say is that typologically both blocking walls at Lanchester would seem to be of late construction, and, in view of the Gordianic re-building of the east-guard chamber, may well prove not to be earlier than the fourth century.

Completing the plan of the stone defences the east gateway and a second interval tower were located. The former was placed centrally in the rampart and measuring 62 ft. overall, would seem to be of the same type as the south gateway with double entrances, flanking a central spina. The interval tower was proved in the south rampart midway between the gateway and the south-west angle and standing to within 6 in. of the humus, gave every promise of being in a fine state of preservation.

Conclusion.

Summarising briefly the results of the excavation of 1937 we note, first of all, an entire absence of evidence for a first century occupation of the site. In view of the limited extent of the work done this may, of course, be purely accidental, but at present the historical starting-point must be with the first period stone fort, rectangular in shape, some $5\frac{3}{4}$ acres in extent, and facing

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(1) Brecon, p. 12.

eastwards.[1] The general lay-out of this early fort, notably the situation of the wall turrets and gateways, and the typology of the latter, leaves no doubt that Lanchester was included within the Hadrianic re-organisation of the frontier system.

Sharing in the general destruction which befell the northern forts at the close of the second century, Lanchester was not apparently re-occupied until the reign of Gordian, a consideration which gives added import to the stratified pottery of this period and to such structural peculiarities as the internal "stepping" of the rebuilt rampart.

In the first half of the fourth century vigorous occupation of the site is attested, and although evidence for reconstruction of the ramparts is still to seek, it is possible that the ditches were cleaned out or re-cut at this period.

The latest dateable pottery consists of two Huntcliff-type cooking-pot rims found in surface soil over the remains of the south gateway (Plate XLVI, nos. 58-9).

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(1) This accords with the supposition that the hypocaust (Plate X) is associated with the commandant's house.

SAMIAN WARE

from the

EXCAVATIONS OF 1937
(Plate XXXVIII).

By J. A. Stanfield.

1 & 2. F. 37. Lezoux. Large, neat ovolo over a fine wavy line. The design was a large scroll but only parts of the upper and lower tendrils remain. Period: Hadrian - Antonine.

3. F. 37. Lezoux. The single medallion, the female bust (D. 665), the series of free rings arched over the medallion, the large eight-lobed rosette separated from the lowest ring by an astragalus are all exactly as occurring on a bowl by AVENTINVS found at Corstopitum (K. 909-1911) stamped [AVEN]TINI.M, as yet unpublished. The only difference is that on the Corstopitum bowl, a free ring occurs below the medallion instead of the astragalus of the Lanchester fragment, which accordingly may be confidently ascribed to Aventinus. Period: Antonine.

4. F. 37. Lezoux. Upper part of small male figure and the ornament D. 1116 used by many potters, more frequently during the reigns of Trajan and Hadrian than later. Period: Hadrian.

5. F. 37. Lezoux. The ovolo is a common one and slight variations of it were used by many potters. Scroll design with tail of a bird (Probably D. 1009). Period: Antonine.

6. F. 30, stamped COBN[ERTVS·F]. The drawing has been accidentally inverted on the plate, and should be looked at the other way up, when it will be seen that the name-stamp is not the retrograde one also used by this potter. The complete design is illustrated by Knorr (Blickweiler, etc., Textbild 31, Form 30, Regensburg) and No. 6 preserves the following parts of it, viz., a cruciform ornament, a double festoon, containing part of the tail and hind-quarters of a squatting lion, a ring over the name-stamp and part of the latter, so that No. 6 is clearly from the same mould as the Regensburg example. Period: Hadrian.

7. F. 37. Lezoux. Scroll design with leaf as used by CINNAMVS (Form 37. Carlisle, stamped CIN̄NAMI·ŌF). Period: Antonine.

8. F. 37. Rheinzabern. Concentric rings in place of ovolo. These rings are Ludowici's type R. 120 and, together with a plain ridge (not a bead-row) immediately underneath, were used by REGINVS. Period: Antonine.

POTTERS' STAMPS ON TERRA SIGILLATA

(All unstratified)

1. ARICI M — F. 33. ARICVS of Lezoux and Lubié. Period: Hadrian - Antonine.

2. ATTILLI M — F. 38. ATTILLVS of Lezoux. Period: Domitian - Hadrian.

3. COB[NERTVS·F] — F. 30. cf. no. 6 above.

4. [MASCI͞I]LLIO — F. 33. MASCELLIO of Lezoux. Period: Hadrian - Antonine.

POTTERS' STAMP ON MORTARIUM

(Unstratified)

1. [S̄A]R·RI (Plate XLIX, no. 12). For this and variant forms of the stamps of SARRVS cf. Newstead, fig. 35, no. 28; Aldborough, Pl. 33; Birrens, p. 186; Rough Castle, p. 492; Bar Hill, p. 472; Balmuildy, Pl. XL, B. 11. Fourteen examples, four of the Lanchester type, have been found at Corbridge.

COARSE POTTERY

from the

1937 EXCAVATIONS

(Plates XLV & XLVI)

Nos. 1-26. Interval Turret, floor 3. Constantian deposit. cf. coin of Constans (Appendix II. E, No. 61).

1. Folded beaker, Castor type, dull brown metallic slip coating, pick fracture, slight groove on the base and three bands of rouletting on the body. Diam. $2\frac{5}{8}$ in. Ht. $6\frac{5}{8}$ in. For the shape cf. Ospringe, Pl. XLI, No. 498. Similar unpublished examples of this type have occurred at Piercebridge and Housesteads in early fourth century deposits.

2. Large cooking-pot, light blue-grey fabric, light fracture, obtuse-angled lattice decoration. The rim and shoulder, down to the zone of decoration, are burnished. Diam. 8 in. The wide outbent rim, and the type of lattice decoration, are characteristic of fourth century cooking-pots. cf. Birdoswald, no. 19; Segontium, fig. 78, nos. 54-6; Silchester, p. 160, type 197, etc.

3. Cooking-pot, fumed black ware, obtuse-angled lattice decoration. Diam. $5\frac{1}{4}$ in. cf. general remarks on no. 2.

4. Cooking-pot, as no. 3. Diam. $4\frac{3}{4}$ in.

5. Beaker, Castor type, silver-blue mica-dusted surface, buff fracture, slight groove below the rim. Ornamented with three pick rouletted bands. cf. Tullie house, no. 116; Brough (1936), no. 93; Niederbieber, Taf. 11, type 31; Silchester, Pl. XLII B, No. 8. The type is derived from Dragendorff form 55, but the differences of fabric and date (190-260 A.D.) of Niederbieber example may indicate a more local provenance for this particular vessel.

6. Face Urn. A large jar, the neck of which is modelled to represent a lady's face. The base, and several fragments of the side of this vessel were recovered, but not sufficient to enable a complete section to be drawn.

Buff fabric, red fracture, painted. The hair, including the bun at the back of the head, is dark brown, the lips red, and the belly of the jar is ornamented, near the shoulder, with three dull reddish-brown bands. Maximum girth 9½ in. Base 4¼ in. Ht. c. 15 in. Dr. W. E. Collinge has recently published a classification of similar Mask, or Face Vases, in the Yorkshire Museum, at York, (Proc. Yorks. Philos. Soc., 1936 (1937)), and on the basis of that work the present vessel falls into type C.

For parallels cf. York (op. cit.) Pl. VI; Binchester (Vinovia, p. 48, and Pl. XL, no. 19 in this thesis); Richborough (2), Pl. XXXIII, no. 184, and p. 104; Carrawburgh, Coventina's Well, (now in the Chesters Museum , Pl. XLI, no. 51 in this thesis): Colchester Catalogue, LXXXVII, Graves 95-97; ibid., LXIII, no. 301; ibid., Text, fig. 4 (three examples). The 1934 excavations at Piercebridge produced fragments of a vessel of this type (Piercebridge Museum).

Painted Face Vases are fairly widely distributed in Germany, Britain, and the north of France, and the continental examples have been assigned to the third and fourth centuries (Dechelette, vol. II, p. 324, and Pl. VIII, fig. 3). One of the principal centres of manufacture was at Worms from the mid-third to the early fourth century, (cf. Behn, Röm. Keramik, p. 115, no. 798; ibid., p. 199, nos. 1328-1330; ibid., p. 251, nos. 1700-1703) and another at Trier (ibid., p. 198, no. 1323, and Pl. VI, nos. 3-6).

Of the British examples quoted above, that from Lanchester certainly dates to the early fourth century, and the Piercebridge fragments would seem to fall within the same period. We have, therefore, evidence for the importation of pottery into Britain from the continent during the Constantian epoch.

7. Neck of a tall, bulbous beaker, Castor type, dark greenish-black metallic fabric, red fracture. Ornamented with a double row of rouletting on the shoulder above a zone of floral decoration en barbotine. Diam, 3 in. cf. Silchester, Pl. XLI, 2.

8. Folded beaker, Castor type, silver-blue, buff fracture. Decorated with scale pattern. Diam. 3 in. The shape of this handsome vessel recalls Birdoswald, No.30 (dated to first half of fourth century), but the fabric is different, and I have not been able to find an exact parallel.

9. Folded beaker, Castor type, very thin ware, dark-green lustre glaze, red fracture, three rows of rouletting on the body. Diam. 2¾in. The extremely fine texture of this type of vessel, which surely represents the highest perfection of the potter's art, has apparently discouraged attempts to reconstruct and draw it, and consequently published parallels are few. Cf., however, Tullie House, No.119b, from Bewcastle (not illustrated). A fourth century unpublished deposit from Corbridge has recently produced fragments of a similar vessel.

10. Cooking-pot, fumed black ware. Diam. c.9 in.

11. Cooking-pot, hard blue-grey ware, coarse texture, decorated with crude burnished lattice pattern. Diam. 6¼ in.

12. Cooking-pot, fumed black ware, obtuse-angled lattice decoration. Diam 6¾ in.

13. As No.12. Diam 6¾ in.

14. As No.12. Diam. 5½ in.

15. Cooking-pot, hard blue-grey ware, smoothed. Diam. 5 in.

16. As No.12. Diam. 6½ in.
For the dateable features of Nos. 10-16, cf. general remarks on No.2.

17. Neck of jar (probably with single handle), hard light-grey ware, smoothed. Diam. 5 in. cf. Throlam, No.95.

18. Hammer-head mortarium, whitish-buff colour, black grit, two grooves on rim. Diam. c.11 in. cf. Birdoswald, No.11; Malton, fig.5, No.3; Poltross Burn, Pl. V, Nos. 1-4, and p.452.

A characteristic late third and early fourth century type.

19. Platter, coarse brick-red fabric, orange rim. Diam. c.12 in. I have not been able to find parallels.

20. Carinated bowl, hard dark-grey ware, burnished externally. Diam. 3¾ in. Cf. Rudston (4), No.13 (early fourth century deposit), where parallels are given.

21. Flanged bowl, fumed ware, broad acute-angled lattice decoration on the side. Diam. c.8 in. Cf. Birdoswald, no. 91.

22. As no. 21. Diam. 11½ in .

23. As no. 21; decorated with intersecting arcs. Diam. 10¼ in.

24. As no. 23. Diam. 10 in.

25. Dish, fumed ware, side and base decorated with burnished intersecting arcs. Diam. 9½ in. cf. Birdoswald, no. 84; Brough (1936), no. 150. Early fourth century

26. As no. 25; decorated with intersecting wavy lines. Diam. 9 in.

Nos. 27-37. Third century deposit.

Nos. 27-30 were found over floor 2, and beneath floor 3, in the Interval Turret; nos. 31-37 outside the turret, sealed beneath a fourth century roadway, and representing the sweeping-up of floor 2 (cf. no. 30).

27. Jar, hard coarse black ware, with particles of fine crystalline grit on the rim. Diam. 5¾ in.

28. Jar, hard light-grey ware, internal groove on the rim, and, on the outside, a slight cordon at the junction of the rim and the shoulder. Diam. 5½ in.

29. Shallow dish, iron-hard blue-grey ware, smoothed, very slight carination at the base. Diam. 5½ in. cf. Malton, fig. 14, no. 29, for a third century dish with the same carination, but in a different fabric.

30 Bowl, coarse brick-red gritty fabric, not a mortarium. Diam. 10 in. For the shape cf. Malton, fig. 7, no. 27. Fragments of this vessel were found both on floor 2 of the Interval Turret, and under the late roadway outside the turret, demonstrating the homogeneous nature of the two deposits.

31. Bowl, coarse orange-red fabric, no grit. Stamped with fern-frond. Diam. c. 12 in. This seems to be a rather larger example of no. 30.

32. Cooking-pot, fumed ware, decorated with acute-angled lattice pattern. Diam. 5¼ in.

33. Cooking-pot, iron-hard blue-grey fabric, light core. Diam. 5 in.

34. As no. 32. Diam. 6½ in. A typical third century section. cf. Denton Hall, no. 15.

35. Jar, dark-grey coarse ware, light core. Diam. 6¼ in.

36. Mortarium, light buff colour.

37. Rough-cast beaker, dull yellowish-brown paste, twin grooves on shoulder. Diam. *c.* 4 in. This type of vessel is common on the Rhine, and as far south as Switzerland in the late first and early second centuries. For early examples in Britain cf. Richborough (3), nos. 298 - 301. It occurs on the Wall in Period I (Birdoswald, no. 27) and also in the second century at Brough (Brough (1936)), coarser than either of these, and may well be a later development of the type. but the Lanchester example is larger and

No. 38. From the Hadrianic rampart-backing

38. Cooking-pot, fumed black ware, with acute-angled lattice decoration. Diam. 5 in. The short, squat rim, and external profile are reminiscent of Birdoswald, no. 18 (second century).

No. 39. Interval Turret, below floor 2.

39. Cooking-pot, fumed ware, acute-angled lattice decoration Diam. 5 in. Third century rebuilding had destroyed all trace of the Hadrianic floor inside the turret, so that this sherd was not stratified, although sealed, with coins of Vespasian and Trajan, below floor 2.

Nos. 40-43. On the roadway outside the Interval Turret, communicating with floor 3. Nos. 41 and 43 give a fourth century date.

40. Mortarium, buff-coloured, grit large and sparsely distributed, illegible stamp.

41. Dish, fumed ware, decoration as no. 25.

42. Mortarium, light-brown, fine black grit. The bead projects well above the rim.

43. Cooking-pot, fumed ware, obtuse-angled lattice decoration. Diam. 7 in. cf. no. 2.

Nos. 44-47. From the third century rampart backing.

44. Beaker, dark-grey, light core, smoothed externally on neck and rim, but internally on rim only. Traces of lattice decoration.

45. Cooking-pot, fumed ware, acute-angled lattice decoration. Diam. 5¼ in.

46. As no. 45. Diam. 5½ in.

47. Flanged bowl, blue-grey, smoothed, acute-angled lattice decoration.

Nos. 48-57. From the ditch filling, T.1.

48. Small mortar-shaped bowl, yellowish-white fabric, rim ornamented with dark red painted beads in painted orange circles, slight foot-ring. Diam. 5½ in. The same type of vessel occurs at Corbridge amongst the pre-War pottery (cf. nos. 60-66), at Binchester (Hooppell Collection, Durham University Museum, figured Pl. XLI nos. 45 and 46), and at South Shields (South Shields Museum). Two subdivisions of the type seem to exist:

(a) in which the bead is level with the flange, (cf. no. 48 above; Corbridge, nos. 60 and 66; Binchester, Pl. XLI no. 46).

(b) in which the bead rises above the flange, (cf. Corbridge, nos. 61-65; Binchester, Pl. XLI no. 45).

The flange, while invariably down-turned, differs in section from a pronounced hook (Corbridge no. 64) to a gentle curve (Binchester, Pl. XLI no. 45), and the termination may be either rounded or pointed (compare nos. 48. and 61). The decoration, occurring only on the rim, is painted in dark red or orange, and a variety of design is employed, the pear-shaped motif being most commonly used (cf. nos. 61-64). The fabric is uniformly yellowish-white, and, of the examples quoted, the maximum and minimum rim diameters are 9½ in. and 5½ in. respectively.

The colour of both fabric and decoration is typical of fourth century painted Crambeck ware (cf. Antiquaries Journal, XVII (1937), p. 403), and it is significant that three vessels of this form were found on the Crambeck pottery site (Crambeck, nos. 74-67), although the type is not distinguished in Mr. Corder's recent analysis of Crambeck ~~types~~ ware (Antiquaries Journal, loc. cit., pp. 392-413).

49. Mortarium, pipeclay fabric, dark-green grit. The rim section is intermediate between the bead and curved rim, and the hammer-head type. cf. Wroxeter, 1912, no 114, "probably not earlier than the latter part of the second century." The fabric suggests a late third or early fourth century date. cf. Birdoswald, no. 10.

50. Mortarium, light-brown, trace of buff slip, dark-blue core.

51. Jar, hard dark-grey coarse gritty fabric. Diam. 7 in.

52. Cooking-pot, fabric as no. 51. Diam. 7 in. cf. Ebchester, Pl. XLVII no. 20, for a third century example of this type in light-grey ware.

53. Roll-rim bowl, fumed ware, slight chamfer at the base and acute-angled lattice decoration. Diam. c. 11 in.

A common type on the Scottish Wall, cf. Balmuildy, Pl. XLVII, nos. 11-12. On Hadrian's Wall it predominates in the third century. Cf. Birdoswald, nos. 79 and 80.

54. Wall-sided platter, red with buff slip-coating, badly worn. Diam. 8 in. Similar vessels were made at Crambeck, Pl. III, no. 54.

55. Cooking-pot, iron-hard blue-grey ware. Diam. 5½ in.

56. Straight-sided dish, hard coarse grey ware, faint chamfer at the base and external groove below the rim. A similar dish without the chamfer was made at Crambeck probably in the fourth century (Antiquaries Journal, loc. cit., Type 2a. and p. 409); cf. Poltross Burn, Pl. V, no. 22 (fourth century).

Presumably the Lanchester sherd is a rather earlier example of the type, which is "too common and too lacking in dateable features" to admit close dating (Antiquaries Journal, loc. cit., p 409).

57. Bowl, light-grey, smoothed, decorated with external wavy line.

While there is every reason to suppose that the ditch was an integral part of the Hadrianic defences of the fort, no stratification was to be observed in the section, and the sherds recovered from the ~~ditch~~ filling are predominantly third and fourth century, suggesting that the ditch was cleaned out at least once, *or*, more probably, twice during re-occupation of the site.

Striking evidence of similar cleaning of the ditch system has recently been observed at Binchester (cf. p. *160*).

Nos. 58-59. Unstratified.

58. Two cooking-pot rims, Huntcliff type, with characteristic
& wheel-made rim and internal groove. cf. Birdoswald,
59. no. 20 (fourth century); Huntcliff, nos. 17-29 (late fourth century).

Nos. 60-66. Small painted mortar-shaped bowls from Corbridge. (Now in the Corbridge Museum). cf. no. 48.

60. Diam. 6 in. Orange paint.

61. Diam. 6 in. Orange paint.

62. Diam. 7 in. Dark-red paint.

63. Diam. 6½ in. Orange paint.

64. Diam. 6½ in. Orange paint.

65. Diam. 9½ in. Dark-red paint.

66. Diam. 7 in. Orange paint.

VII

THE AQUEDUCTS AT LANCHESTER

Introduction

The existence of an aqueduct at Lanchester seems to have been first noticed by Dr. Hunter, but it is reasonable to suppose, in the light of Stukeley's passing reference,[1] that there was at that time no realisation of the extent of the aqueduct system, and that the north catchment remained undiscovered.

This is not surprising, for in the first half of the eighteenth century the land for many miles west of the fort was waste ground, "covered with ling, fern, broom and, bad grass, and rushes in the wet places,"[2] and considered so barren that upon its enclosure by Act of Parliament in 1773, when the commissioners appointed to carry the act into execution were empowered to sell various parcels of the land, Thomas White obtained 227 acres, tithe free, for no more than £260. Another 300 acres were disposed of to the same purchaser for a perpetual rent-charge

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(1) Iter Boreale (Itin. Sept.), p. 72.

(2) PSAN., 3, vii, p. 219; cf. also Hodgson, Poems, "Woodlands," pp. 3-64.

of 2/- per acre.(1)

Established in his newly built house at Woodlands, White immediately undertook a systematic improvement of his estates by extensive afforestation, in the course of which the western extension of the Roman aqueduct was discovered; part of the north channel, indeed, was diverted to carry water to the "fishponds" at Woodlands Hall.(2)

Thus it came about that the Rev. John Hodgson, curate at Lanchester from 1804-6, and a personal friend of Thomas White(3) was able to publish in the first volume of Archaeologia Aeliana (1822), an invaluable first-hand account of the entire aqueduct system, illustrated by a plan copied from a survey made by White and a Mr. Fenwick of Dipton.(4)

At that time the two main branches of the aqueduct were, in many places, "as visible as in the day they were made."(5) The northern channel, originating in the high ground some three miles north-west of the fort, could be traced from the catchment, across Dyke Nook fell, and, on the east side of Knitsley lane, in the grounds of Woodlands Hall. From there its course was conjectural for about half a mile, but it could be picked up again on the north side of Humber Hill and followed, between Upper

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(1) PSAN., 3, vii, p. 218. (2) AA., 1, i, p. 119.
(3) cf. the dedication of his Poems. (4) Plate XV A.
(5) AA., loc. cit.

Houses and Hollingside, to a point on the south side of the Newcastle-Wolsingham road where it effected a junction with the south channel. The latter was fed, seemingly, by a rill near Rippon burn, two and a half miles west of the fort, and less than half a mile from the northern branch. Its course was visible to within a quarter of a mile of Humberhill lane, and again on the west side of the Newcastle-Wolsingham road, crossing the latter at *Fines House* and running on the south side of the modern highway past Colepike Hall (where its embankments were 9 ft. high) to join the north aqueduct about half a mile from the station. From that point a single channel fed the reservoir outside the south-west angle of the fort.

While afforestation in the Woodlands area protected the remains, elsewhere cultivation rapidly levelled the channel and its slight embankments, so that, less than thirty years after the publication of Hodgson's paper, MacLauchlan could see no signs of the watercourse "within half a mile of the station, or the reservoir to which it led."(1) To-day the only definite traces of the north aqueduct lie on the open fells in the catchment area, and in the grounds of Woodlands Hall, where the protective timber has recently been cut down; the south aqueduct is still evident in Saw Mill wood, and on the south side of the road opposite Colepike Hall, where the embankments are still well preserved but nothing like the height

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(1) Memoir, p. 14.

recorded by Hodgson.[1] Elsewhere it has been obliterated.

The opportunity to investigate the aqueduct system came in May 1937, when the excavations at the fort had been concluded. By kind permission of the Consett Iron Company, Colonel Sprott and the tenant of Woodlands, and Mr. S. H. Armstrong of Dyke Nook Farm, we were able to take sections of both the north and south channels, and, by examining the structure of the remains, to throw some light on the practical organisation of the water supply of an auxiliary fort — a department of military engineering which has received far less attention than it deserves.

THE EXCAVATIONS

West of the fort at Lanchester, a tongue of high ground juts out between the valleys of the Browney and Smallhope burns to the stone outcrop at Humber Hill. From this point the contours fall gradually to the bed of the Stockerley beck.

The Lanchester-Wolsingham road skirts Humber Hill on the south side, but at the Five Lane Ends at Browneybank a road named Longedge Lane strikes off in a north-westerly direction to the highest point of the spur, and, keeping

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(1) The visible remains are shown on the following O.S. 6 in. maps: XVIII, N.E.; ibid., S.W; ibid., N.W. Slight corrections are shown on Plate XV. B.

for a space to the high ground, leads first to the Woodlands cross-roads and ultimately to Castleside.(1) On the north side of this road, west of Woodlands, a number of small nameless springs issue from the fell-side and flow northwards to the Dykenook Burn. Here, to quote Hodgson "the earth embankment at the head of the channel of this branch (i.e. the north aqueduct), where two small rivulets fall into one, partly remains; it has been rudely faced with stone, and raised to the height of thirty feet, in order to obtain level for throwing the water into the channel of the aqueduct."(2) The sketch-plan (Plate XVI) shows how the dam, some 110 yards long, has been built on the curve to intercept each of the two springs at right-angles, and the water has been forced into the aqueduct at the south end of the embankment. The latter, at the present time, shows extensive denudation, and in several places has been completely worn down by spring action.

The Catchment. Section I (Plates XVI & XVII).

A trench 3 ft. wide cut at the point marked on the sketch-plan (Plate XVI), indicated that the width of the embankment had originally been 17 ft. 9 in. As Hodgson had observed, it was roughly faced with freestone boulders, quarried no doubt in the immediate vicinity. A line of

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(1) Plate XV. B.

(2) AA., 1,i, p. 119.

these stones, one course high, is still visible on the west side, while a similar revetment, two courses high, on the outer face of the dam is obscured by a wash down of sand consequent upon the disuse and decay of the catchment.

The foundations consisted of a spread of stiff blue clay, 1 ft. - 1 ft. 6 in. thick, laid immediately over the dark peaty vegetation of the bed of the original water-course. Above this was a band of silty yellow clay, only 9 in. high at the face of the dam but rising at the back to a height of 2 ft. 6 in. The two rear blocks were toothed into the clay, but the inner facing stone, while externally bedded on clay, was otherwise slotted into the clean sand deposit forming the upper part of the mound. As we must postulate a batter of each face of the embankment it would seem that this stone had tilted forward from its original inclined position at a time when the upper masonry had broken away. Behind the dam, for a distance of 8 ft., was a layer of mixed clay and silt, averaging 1 ft. in depth, and representing the wash down of the core. Like the yellow clay of the embankment this was covered by an unstratified deposit of clean sand.

It seems clear that the barrier was a composite one some 18 ft. wide built of clay with an inner and outer facing of masonry. Hodgson's "earth embankment" is, therefore, quite incorrect, though understandable in view of the silt spread covering the remains. His second point, that the height of the dam was 30 ft. was

contradicted by the levelling instrument which showed that the channel of the aqueduct was no more than 10.89 ft. above the existing stone of the inner revetment,(1) but further levelling was required before we could approximate more closely to the original size of the barrier.(2)

The North Aqueduct

On Hodgson's plan(3) the north aqueduct divides into two branches soon after leaving the catchment, and these branches, never more than 100 yards apart, unite again before Knitsley lane is reached. The O.S. 6 in. map (XVII, N.W.) marks the line of the north branch as visible, and that of the south branch conjectural, but this is in error, for both channels are evident for some distance, the north channel being the less prominent of the two. Three sections of the aqueduct were cut on the fell, two of the main south branch (Plate XVIII, Sections A & B), and a single section of the subsidiary northern channel (ibid., Section D).

Section A

Fifty yards east of the catchment (Plate XV. B). This proved to be a V-shaped cut into the sandy subsoil, 4 ft. wide and 1 ft. 6 in. to 2 ft. deep, clear of the natural rock by a few inches, and subsequently filled by a sand accumulation. There was no trace of stone-work, or of piping.

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(1) Plate XV. B.

(2) see p. 220 .

(3) Plate XV. A.

Section B.

Two hundred yards east of the catchment (Plate XV. B). Similar to section A, except that the channel had been cut rather more squarely, and it was possible to detect slight upcast on the north mound (Fig. 20).

Section D.

Seventy yards from the catchment (Plate XV. B). The channel here was of small proportions 12 ft. by 1 ft. 6 in.), and round in section. At the bottom was a thin band of clay 2 in. deep, quite insufficient to carry water, but suggestively serviceable as a bedding for pipes.

Section C. Woodlands.

A further section of the north aqueduct was cut on the Woodlands estate 550 yards west of the field path from Longedge Lane to the Hall, where the depression in the ground is clearly visible (O.S. 6 in. XVIII, N.E.). Here the construction, ~~was~~ in complete agreement with Hodgson's observation,(1) consisted of a puddled clay and stone channel 20 in. wide and 16 in. deep, perfectly watertight and laid immediately over the natural rock sandstone (Fig. 21). No trace of covering flags remained, and the probability is that the watercourse was entirely open.

East of Woodlands the north aqueduct is no longer to be traced on the ground and it was quite impossible, therefore, to obtain corroborative evidence for the construction

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(1) AA., loc cit., p. 119.

revealed by section C, between that section and the fort. Plotting Hodgson's course on the O.S. 6 in. map, however, (Plate XV. B), we note a remarkable correspondence with the 700 ft. contour line until the lower contours are attained on the north side of Humber Hill. Although formal proof cannot now be secured, there seems to be no doubt that a gradual fall was maintained between Woodlands and the reservoir, and for this an open channel would suffice.(1)

On the other hand it is impossible to suppose that the same method of construction was used for some distance east of the actual catchment. Sections A, B, and D showed no trace of a rubble channel and the size of the cut into the sand is, in each case, too small to allow the suggestion of subsequent demolition. Moreover, while the eye is an untrustworthy guide in such matters, the contours of the ground seemed to forbid a gravitational flow in an open channel. At this stage it was essential that levels should be taken, and for the readings given on Plate XV.B(8) I am indebted to Mr. M. Hayton, who kindly undertook charge of the work, and to Messrs. Cordingley and McIntyre, who put their instruments at our disposal.

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(1) And would be preferred for economic reasons, just as a stone channel is used to-day in the Croton Aqueduct supplying New York City. (Banister Fletcher. History of Architecture on the Comparative Method, p. 185).

(8) ~~These readings supersede an earlier series given on Plate XVI.~~

At the point where the main branch of the aqueduct leaves the catchment (7) it is 10.89 ft.[1] above the level of the single inner revetting stone at the base of the dam. From here the channel rises 1.25 ft. to section A (8), falls .07 feet at point (9) between sections A & B, rises again 1.65 ft. at section B (10) and, where it is crossed by the field wall bordering the fell (11), is 14.28 ft. above the base of the dam, having risen 3.39 ft. in just over half-a-mile. On the far side of the field wall, where (12) the remains are still visible in a small patch of scrub, the channel proved to have risen a further 3.55 ft., or a total of 6. 94 ft. from point (7).

Only one other reading was taken, on the west side of Knitsley Lane (13). Here there was not only a fall of 11.37 ft. from the last reading (12), but the level was 4.43 ft. below that at the mouth of the catchment (7).

The subsidiary channel , at a lower elevation of c. 8 ft., showed a rise of 2.07 ft. from the point where it is first visible to the boundary wall of the fell, beyond which all trace of it has been eradicated.

The fact that both loops of the north aqueduct rise

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(1) This and the following readings were necessarily taken from the existing turf line and not from the bottom of the channel, but as the depth of filling is comparatively uniform the conclusions are not prejudiced.

steadily from the catchment is thus conclusively proved.[1] How far this rise was maintained cannot now be determined, but from reasons which will appear it might be suggested that the highest point was coincident with the junction of the two branches (Plate XV. B). At all events we must now accept the archaeological evidence from sections A, B, & D, that, from the catchment to some point between a mile and a mile and a half to the east, a siphon system was employed,[2] the water being conveyed in pipes until the high ground was overcome, and then debouching into the open channel in which it was conveyed to the reservoir. From this conclusion two deductions may be made. The first is that the height of the dam cannot be less than 15.83 ft.[3] for, as the Roman engineers did not employ the pressure system, the head of water in the dam must have remained constantly above the highest point in the siphon. Allowing for the fact that the level of this point is undiscovered we may suggest an approximate height of 20 ft. Secondly, the fact that two branches

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(1) For an open channel Vitruvius specifies a minimum fall of .5% (De Architectura, viii, 6); between points (7) & (12) the north channel rises .4%

(2) There must be no confusion between a pressure siphon, and a non-pressure siphon depending on the principle that water rises to its own level. The Roman engineers only used the latter. (Ashby. The Aqueducts of Ancient Rome, pp. 35-6)

(3) i.e. the difference between levels (12) and the revetting stone, deducting 2 ft. for the depth of accumulation within the channel.

of the aqueduct are found only where the siphon was necessary can hardly be a coincidence.(1) In view of our common agreement that the subsidiary duct was not fed from the main channel (as Hodgson Pl. V), but entered the reservoir independently at a lower elevation,(2) Mr. Hayton suggested that two sluices were used according to the height of water in the dam, but this pre-supposes that the subsidiary duct always maintained a lower elevation than the south channel. The only satisfactory explanation occurring to the writer is that owing to the low tensile strength of the material employed, a sufficient volume of water could not be secured except by running two pipes in series. Such practice has been observed on the Palatine siphon of Nero(3) but, as far as I am aware, is unique in this country.

No actual traces of piping were found, and, indeed, the evidence may well have been removed in Roman times. Vitruvius(4) specifies pipes of lead,(5) earthenware,(6) and leather, and to these we may add wooden pipes with iron collars as found at Silchester(7) and Kastell Bendorf

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(1) Hodgson's thesis that the subsidiary duct served to "save the leakage of the original" (AA., 1, i, Pl. V) requires no comment.

(2) This is clear on the ground. (3) Ashby. op. cit., p. 35; see ibid., note 5, for a modern parallel.

(4) op. cit., viii, 6; vi, 8. (5) As found at London (Lethaby. Londinium: Architecture and the Crafts, p. 32).

(6) Terra-cotta pipes have been found at Lincoln. Gough's Camden's Britannia, II, p. 366.

(7) Archaeologia, LV, 1897, p. 422.

on the German limes.[1] Any discrimination as far as the Lanchester aqueducts are concerned would be purely arbitrary.

The South Aqueduct.

On the south side of Longedge Lane, between Browneybank and the cross-roads at Woodlands, the ground falls away rapidly to the bed of the Rippon burn, a stream fed by numerous small springs rising in the higher slopes on either side of the valley. From one of these springs, a gushing torrent in summer and winter alike, the south aqueduct has taken its water. Hodgson noted that the remains of the catchment had long since been obliterated,[2] but the track of the watercourse is still very clear to the point where it leaves Saw Mill Wood and enters an open pasture field (Plate XV. B). A single section was taken 127 yards east of the catchment (Plate XVIII, section E), and showed similar features to that of the main aqueduct on Dyke Nook fell (section B), though here the V-shaped flat bottomed cut into the sandy subsoil was 8 ft. wide and 3 ft. deep, and the upcast had been thrown on to the lower, or south side. In the absence of evidence it was impossible to say whether the water had been piped or led away in an open channel. Levelling, however, confirmed the impression given by the contours that a steady fall was maintained, and, in this case, an open duct would have sufficed. The only point at which difficulty might have

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(1) ORL., no. 2, 1937, p. 9, A66. 1.

(2) loc. cit., p. 120

been experienced would be near Colepike Hall, and here, as Mr. Penman suggested to me, the embankments once 9 ft. high may well have represented the upcast from excavation necessary to preserve a gravitational flow.

Conclusions.

The aqueducts in Italian cities, so Vitruvius tells us,(1) were required first for public fountains, secondly for the public baths, and thirdly, where the supply allowed, for private consumption. In an auxiliary fort the primary need to be served was that of bath-house, the secondary, that of the latrine building.(2) As Hodgson observed(3) there is an adequate supply of spring-water within easy reach of the fort at Lanchester to be tapped by wells for ordinary consumption purposes, but for a constant supply of running water, in an age when the high-pressure system was not understood, it was necessary to search the higher ground west of the fort for suitable springs.

The Lanchester aqueduct is remarkable, in the first instance, for the scale upon which it is planned, though this is not considerable in relation to the aqueducts of the Italian cities. The closest parallel in Britain for size and general construction seems to be the watercourse at Aesica, originating in Saughy-Rig Wash Pool and

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(1) op. cit., viii, 6, 1,& 4.

(2) cf. Piercebridge. TDNS., VII, p. 261, where it is suggested that a single duct fulfilled this double purpose.

(3) op. cit., p. 120

pursuing a tortuous path for a distance of six miles along the slopes of the moderately elevated hills.[1] Apart from one or two instances the table of levels shows a gradual fall from the catchment to the station,[2] while the sections given[3] exhibit precisely similar features to that of the channel of the Lanchester north aqueduct in Woodlands Park.

We have already observed that the preservation of the catchment at Lanchester and the proof that piping was employed for a considerable distance are, at present, unique features as far as the aqueducts of auxiliary forts in Britain are concerned. In the historical aspect, however, there is less satisfaction, for the site has not yet provided the necessary epigraphic material to enable us to appreciate the date of the original construction of the water-supply, or to determine whether the two major channels represent the work of different periods.[4] Until such evidence comes to light we must be content with a record of the structural remains, useful if only for the fact that the march of progress seems likely to erase these at any time without warning.

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(1) Bruce. Wall (2), pp. 225-8.

(2) ibid., p. 226. (3) ibid., pl. f. p. 225.

(4) cf. however Inscription no. 52 (Appendix I).

VIII

THE ROMAN FORT AT EBCHESTER

"Ebchester ... is inferior to no place I have mentioned for antiquitys."

(John Warburton writing to Roger Gale, November, 1717).

From Lanchester, Dere Street strikes a due north-westerly course, striding boldly across the Pennine spurs which thrust eastwards between the waters of the Browney and the Derwent. Avoiding, on the one hand, the heights of Pontop Pike and, on the other, the difficult scarps of Shotley and Black Hill, the route chosen for the descent to the Derwent is that of the present Ebchester road, where the fall of the ground though steep, is not so precipitous as to east and west, while between the 250 and 300 ft. contours there is a break in the escarpment in the shape of a narrow terrace sloping gently northwest-westwards. On this terrace, 200 yards east of the line of Dere Street, stands the Roman fort of Vindomora.(1)

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(1) Plate XIX.

To-day the fort is traversed by the highway from Newcastle to Shotley Bridge which, it would seem, incorporates not only the line of its via principalis but also the Roman road linking the porta principalis sinistra with Dere Street.(1)

The station itself is a little under 4 acres in extent, measuring some 400 ft. square across the stone defences. Although dominated by the heights of Medomsley the site is protected on the south and west sides by the wooded ravine of the noisy Ebchester burn, and on the north by the rapid fall of the ground for 100 ft. to the bed of the Derwent. Pre-eminently Vindomora is a bridge-head fort, as accessible as the ground allows to the crossing thus guarded.

The village of Ebchester has grown up on ~~the~~ and around the Roman site, and owing to the levelling of the ramparts involved in stone robbing for church and farm building(2) Vindomora remained undiscovered until the early eighteenth century.(3) "Here not many years since," writes Gibson, "was observed a Roman station about 200 yards square (sic) with large suberbs."(4)

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(1) p. 231 .

(2) Several sculptured fragments, no doubt from Ebchester, are preserved in the neighbouring church at Medomsley.

(3) cf. Hunter. Philos. Trans., no. 278. 1702, where an uninscribed altar, a sculptured stone, and the inscription CIL., 470 (65) are recorded.

(4) Gibson's Camden's Britannia, (1722), col. 940.

To Horsley's practised eye, however, the ramparts were "very visible,"[1] while careful examination of the stone-work in cottages and field walls near the site brought to light one complete inscription,[2] and a number of fragments.[3] Moreover, the distances from Corbridge and Binchester respectively[4] left no doubt that Ebchester was to be equated with Vindomora of the Antonine Itinerary.[5]

The next account comes from the pen of the local historian William Hutchinson.[6] Three further inscriptions, an altar to Mars and two building stones are recorded,[7] and the dedication to Minerva,[8] wrongly attributed by Horsley to Carvoran, is, on Hunter's authority, correctly referred to Ebchester. Important notes appended from Hunter's MSS. include the observance of a signal-tower on Dere Street a mile and a half south of the fort, the

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(1) op. cit., p. 398. (2) CIL., 460 (56).

(3) CIL., 465 (60), 467 (62), 469 (64).

(4) Iter I. of the Antonine Itinerary places Vindomora nine Roman miles from Corstopitum, and nineteen miles from Vinovia. Ebchester is ten miles from Corbridge, and eighteen miles seven furlongs from Binchester by Dere Street.

(5) op. cit., p. 398. (6) Durham, II, pp. 429-434.

(7) CIL., 457 (53), 461 (57), 462 (58).

(8) CIL., 458 (54).

discovery of a stone channel at the south-west angle in 1727 (possibly an aqueduct conveying water from the Ebchester burn), and of the ploughing out of a stone cist burial with grave furniture in the following year.(1) Hutchinson found the square of the fort to be "about a hundred and sixty paces. ..."(2)

Surtees(3) gives a brief, but more detailed, sketch of the condition of the ramparts in the early nineteenth century, which may be quoted because it is substantially the picture presented to-day. "The vallum and agger" he writes, "are most perfect on the North, where they stretch along the very edge of the hill towards the river for a hundred and sixty paces. The North-West angle is perfect, and part of the Western agger, though cut through by roads and footpaths. On the South side, also, the vallum is extremely distinguishable, just within the Southern wall of the Church-yard, part of which at least seems built out of the ruins of the Roman ramparts, and the moss-grown crumbling walls of some neighbouring cottages on the West betray a similar origin."

MacLauchlan(4) estimated the area to be about 4 acres and made the reasonable suggestion that the highway from Newcastle to Shotley Bridge overlies both east and west gateways. Moreover, from "faint traces of a ditch running to the westward", he conjectured that there had once been

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(1) Durham, II, note p. 434; cf. p. 67, note 1.

(2) ibid., pp. 431-2. (3) Durham, II, p. 299.

(4) Memoir, p. 16.

"an outwork on that side, as a procestrium, advancing to the edge over the brook, where the present road ... reaches to."

In 1882 the whole of the evidence realting to the fort was reviewed by the Rev. R. E. Hooppell in a contributory paper to Neasham's little known History and Biography of West Durham.(1) The introductory pages of this paper refute the tradition of the establishment of a monastery at Ebchester by Ebba the first Christian princess of Northumbria,(2) from which connection the name of the village is held to be derived.(3) "At the Ebchester with which we are concerned" writes Hooppell, "not the slightest remains of monastic buildings are to be found at the present day, or have ever been found within the memory of man,"(4) while late mediaeval biographers would seem to have been led astray by the masonry of the Roman fort.(5)

The problem does not warrant further discussion here,

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(1) Durham, 1882, pp. 113-134.

(2) "Sancta Ebba construxit monasterium feminarum apud Ebchestre juxta ripam Derventionis fluminis, eique exnomine suo vocabulum indidit ex dono fratris sui Oswini." Vita S. Ebbe, Cotton. Julius 2.

(3) Ekwall. Dictionary of English Place Names, s.v.

(4) Neasham, p. 119.

(5) e.g. Capgrave: "it (the monastery) plainly shows now, by its ruins of what kind it was, and how great it was in itself formerly when it was standing." (Sanctilogium, London, 1516).

and more pertinent to the Roman student is the suggested derivation of Ebchester from Ptolemy's Epiacon.(1) Etymological considerations apart, the placing of Epiacon in Durham county involves the dangerous assumption that Ptolemy's latitude and longitude are as much in error as in the case of Vinnovium,(2) while the archaeological evidence is silent.

The second part of the paper, illustrated by a useful sketch-plan(3) prepared by J. W. Taylor, Hooppell's draughtsman at Vinovia, lists the inscriptions, sculptures, and miscellaneous structures found within or around the fort. Of the latter, two discoveries made by the Rev. H. Linthwaite in 1876 attract attention. The first of these was a line of channelled stones running at right angles to the south rampart and extending from the rampart for at least 14 yards into the interior of the fort.(4) As Hooppell suggested, this must have been the drain on the west side of the north to south road within the station, and thus the positions of the north and south gateways are fixed centrally in their respective ramparts. From analogy with

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(1) Surtees. Durham, II, p. 300 note i.

(2) cf. the claim of Blackrod, in Lancashire (TDNS., viii, 1937, p. 41).

(3) Plate XX.

(4) ibid., A.

the lay-out of other square forts[1] we are entitled to carry the argument a stage further and to assume that the east-to-west road at Ebchester was the via principalis, for this is never centrally placed owing to the extended accommodation needed in the retentura for the praetorium, principia, and horrea. As already noted,[2] it is reasonable to suppose that the line of the via principalis is substantially that of the Newcastle-Shotley Bridge highway at the present day and, accordingly, the fort will have faced north-westwards.

The second discovery made by Linthwaite consisted of two cubical stones and a line of draining tiles, unearthed at the junction of the main road and Shaw Lane.[3] Hooppell supposed this to have been the entrance to an important building, but we rather incline to believe that the stones were pillar-bases supporting the roof of the west portico of the forecourt of the principia,[4] from which the gutter may well have taken the eaves-drip. Added support is thus given to the orientation of the fort suggested above.

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(1) e.g. Caerhun, Slack, and Templeborough.

(2) p. 226. (3) Plate XX B-B, S-S.

(4) As at Housesteads. AA., 2, xxv, f. p. 210.

The north-west gateway is said to have been uncovered in 1886[1] but no plan would seem to have been made. In fact, while incidental finds continued to be recorded in the late nineteenth century,[2] no serious excavation was undertaken at Ebchester until 1936, and historically our knowledge of the site was no more than that afforded by the slender epigraphic materials.

THE EXCAVATIONS OF 1936.

As in Surtees' day, traces of all four ramparts are visible,[3] and the omission of the southern half of the fort from the Ordnance Survey maps is unaccountable (25 in. D. XI. 2., N. CVIII. 2.). Commencing at the west angle, still the most perfect (Fig. 22), the south-west agger can be traced to a field wall bordering the Demesne Farm estates, from which point to the modern road the ground has

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(1) Consett Guardian, May 16, 1913.

(2) PSAN., 2, iii, p.55 (EE., VII, 1122a (71)).
ibid., p. 387. Pottery.
ibid., iv, p. 186. Mortarium stamped EXON.
ibid., viii, p. 269. Brooch - 4th century from the description.

(3) Plate XXI has been prepared by the writer from an independent survey. Although it was not possible to ascertain the exact perimeter of the stone rampart no major discrepancy is anticipated in view of the pronounced surface indications.

been levelled by the plough. South of the road, however, the line is roughly that of the Rectory garden wall, and the curve of the south angle is well pronounced within the angle of the churchyard wall. The south-east ditch and rampart, though cut through by Shaw Lane, are evident both in the churchyard and in the orchard of the Mains Farm, while the north-east rampart is very plain in a nearby stack-yard on the south side of the Newcastle-Shotley Bridge road. Lastly, the north-west rampart is still well-developed and rendered even bolder by its position on the brow of the escarpment facing the Derwent.

Permission to excavate was readily given by the Sherburn Hospital Trust, the owners of the land, through the good offices of their agent Major H. E. Cradock, and by the tenant of the Mains Farm, Mr. J. Dixon. With the exception of two trial pits in the allotment gardens to the east, the whole of the three weeks work in June 1936 was concentrated at the west angle.(1)

The Defences.

Rampart Section T. 1. (Plates XXII & XXIII).

The first section (T.1) taken across the south-west defences 85 ft. from the west angle of the fort, revealed the inner lip of the ditch 2 ft. 6 in. below the present turf line. Further examination of the ditch system, however,

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(1) Two paid men, Messrs. W. Marsh, and W. Graham, were employed throughout this period.

was made impracticable by the presence of water within a few feet of the surface, a factor which handicapped work generally in this area. No vestige remained of the facing stones or core of the wall but two lines of cobble stones 8 ft. 6 in. apart and set in blue clay, marked its footing kerbs. Abutting against the inner kerb, the rampart backing of yellow clay was clearly to be distinguished standing to a height of 3 ft., and the vertical face of the rampart, set back, one must imagine, from the stone wall, indicated that the latter was a secondary work. Corroborative evidence was supplied by the narrow width of the berm which was no more than 3 ft. 3 in., and the discovery of a fragment of the carination of a samian bowl F. 29 (Plate, ~~XXXVIII~~ XXXIX, no.4) in the body of the rampart conclusively established the existence of a first century fort at Ebchester.

The width of the clay rampart was 36 ft. which is quite exceptional for the size of the fort.(1) The Flavian fort at Malton, for example, with an area of 8.4 acres, had a rampart no more than 30 ft. wide,(2) while the rampart of Newstead II, four times the size of Ebchester, was only 2 ft. wider.(3) Although there is, in general, a variation

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(1) The first century ramparts of 4 acre forts are usually c. 20 ft. in width. cf. Caerhun (AC., lxxxiv, 1929, plan f. p. 60).

(2) Malton, p. 23.

(3) Newstead, p. 33.

in width according to area,[1] we note that the little fort of Cappuck, barely an acre in extent, had a rampart 24 ft. wide on the east, the weakest side, and 8 ft. elsewhere.[2] Until, however, further work has been done we are not justified in assuming any analogy exists between the latter site and Ebchester.

The Ovens.

Set into the base of the rampart, 4 ft. from the heel, was an oven floor 2 ft. 6 in. below the surface. This was 4 ft. in diameter and constructed of flags from 3-4 in. thick. The oven walls were 1 ft. 4 in. high, and the flue was indicated by the continuation of the flagging to the heel of the rampart, the clay of which showed signs of heavy firing hereabouts. The oven had been twice re-built, a second floor standing 7 in., and a third 12 in. concentrically over floor 1. In each case the filling between the floors consisted of stiff brown clay. No evidence for dating the original oven was recovered, but sealed between floors 1 and 2 were pieces of two samian dishes F. 18/31, and a decorated fragment F. 37 (Plate ~~XXXVIII~~ XXXIX, no. 8) dateable to the Antonine period. Over floor 3 was the neck of a coarse grey jar (Plate XLVII, no. 25), ~~seemingly~~ also of second century date.

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(1) Collingwood. Archaeology of Roman Britain, p. 36.

(2) PSAS., xlvi, p. 453.

Behind the rampart the ground had been seriously disturbed and although traces of road metalling were observed at three different levels there was a complete absence of stratification. All that can be said is that the earliest road was apparently contemporary with floor 1 of the oven, but its eastward extension had been destroyed in digging the foundations for the wall of a barrack building, set back 9 ft. 8 in from the heel of the rampart, and still standing two courses high. Associated with this wall was a stone-built culvert consisting of two rows of roughly dressed blocks 10 in. apart with a bedding of puddled clay and cobbles. At the time when this culvert was in use the intravallum road must have been less than 7 ft. wide, demonstrating in a striking manner how the abnormal width of the rampart was met by economy of spacing within the fort.

Section T. 2. (Plate XXII).

The object of this section, cut 34 ft. 6 in north of T.1, was merely to check the line of the defences. The outer edge of the footings was found 3 ft. 3 in. below the surface, but as the fort wall had again been completely robbed away no attempt was made to enlarge the trench into a full rampart section.

Section T.3. (Plate XXII).

A third trench was cut into the north-west rampart to investigate the condition of the defences on this side.

Here, not only the fort wall, but the footings also, had been removed, although the vertical face of the clay rampart banking was clearly visible as in T.1.

Structural Remains.

The Barracks (Plate XXII).

Since little was to be gained, seemingly, by further investigation of the ramparts, operations were transferred to the barrack-building in T.1. From the latter point the west wall was followed southwards to the boundary wall of the Demesne Farm, and northwards with a short break, for a distance of 28 ft. 6 in. The west corner of the building had been entirely uprooted but sufficient of the north and east walls remained to allow reconstruction of the ground plan within the limits of the excavation. Owing to the irregular lay-out, the width of the building varied slightly, but averaged 36 ft., while from the supposed line of the *via principalis* the length would be *c.* 125 ft. A partition wall allowed a room 18 ft. by 33 ft. at the northern end. At Caerhun[1] the barracks measured approximately 32 ft. by 170 ft. but again the greater width of the ramparts at Ebchester would account for the reduced area of the internal buildings. With the above dimensions before us, we may postulate six blocks of barracks in the *praetentura*, three on either side of the *via praetoria*.

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(1) *loc. cit.*

Architecturally, the chief characteristic of the building was its poorness of construction. The walls, which nowhere survived more than one course high above the footings, were irregularily laid and the materials employed - large roughly dressed blocks with occasional re-used stone - were badly coursed, and rarely showed a straight facing. The foundations varied from one to two courses, while the offset course, at some points as much as 8 in., elsewhere receded to the barest margin. The construction had evidently been undertaken by unskilled workmen at a time when it was no longer possible to requisition the services of legionary masons. On structural evidence alone we could hardly place the existing barrack-building before the fourth century.(1)

It is significant that at no point did the walling uncovered overlie that of an earlier period, but whether this is because the latter had been entirely rased to the ground, or lies on a different orientation, we cannot say at the present state of knowledge. In this connection, however, it is instructive to note the relative closeness between early and late levels at all points on the site where stratification was preserved.

On the east side of the barrack-building a second stone drain was discovered, 14 in. wide, of neater construction

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(1) cf. Richmond's observations on the Constantian masonry of the barracks at Birdoswald (CW., 2, xxx, p. 171).

than that without the west wall and, seemingly, disused at a later period, for the gulley was choked with clay and broken covering flags.(1) From this filling a large number of coarse pottery rims were secured, uniformly of third century type (Plate XLVII, nos. 9-21).

A trial pit, sunk in the room at the northern end of the building, showed traces of a rough floor 11 in. below the surface over which an unstratified group of fourth century sherds, mostly mortaria, were found (Plate XLVII, nos. 26-31). Beneath this floor a fragment of a flanged bowl (Plate XLVII, no. 32) of third century affinity, was recovered from a patch of stone flagging suggestive of an earlier occupation level, but again disturbance was general. At a depth of 3 ft. 3 in. from the humus, however, was a stone built sump (Fig. 23) consisting of a single flag 3 ft. by 2 ft. surrounded by dwarf walls, and drained by a channel 8 in. wide which presumably made its way out through the north-west angle of the fort. The floor of the sump and the mouth of the drain contained several sherds, both samian and coarse types, uniformly late first - early second century (Plate ~~XXXVIII~~ XXXIX, nos. 5 & 6; Plate XLVII, nos. 5-8).

The West Angle Turret (Plate XXII).

A section cut across the apex of the curve of the west angle revealed the back wall of an angle turret whose

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(1) cf. Caerhun, loc. cit., p. 72; Brecon, p. 55.

internal dimensions proved to be 7 ft. by 10 ft. The south-west wall was the most perfect, standing eight courses high at the east end where there was a doorway 1 ft. 10 in. wide through which a stone drain entered level with the footing course to debouch without the fort. The north-east wall survived to a height of four courses at the east angle, but between that point and the site of the fort wall it had been robbed down to the flagged levelling course, bedded on a clay foundation (Fig. 25). The back wall was 2 ft. 5 in. thick, the side walls 2 ft. only, and the masonry, composed of small well-dressed ashlar, contrasted strikingly with that of the barrack-building in the good quality of its workmanship. Unfortunately, stone-robbing and calf-burials had destroyed all stratification down to the original floor level, represented at the west corner by a heavy flagstone 7 in. deep set in chocolate-brown clay. Historically, all that one can say is that of the considerable quantity of pottery found in the course of excavating the turret[1] only a single piece (Plate ~~XXXVIII~~ XXXIX, no. 7), which had washed into the drain, could be ascribed to the second century. The bulk of the material had third century affinities (Plate XLVII, nos. 22-24 & 33-40), while a fragment of a Crambeck painted platter (Plate XLVII, no. 23; type 10) is noteworthy in that it carries the occupation of the site into the last quarter of the fourth century.

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(1) All the rim-sections have been figured.

Two sections were cut through the rampart in continuation of the north-east and south-west walls of the turret. Again stone robbers had done their work effectively, removing all trace of the fort wall except for a few loose discarded facing stones lying on the wall footings. The latter in both cases were composed of a bed of cobbles set in blue clay (Fig. 24), in marked contrast to the footings in T.1 and T.2 where cobbles has merely been utilised for the kerbs. This anomaly can no doubt be explained by the need for more solid foundations at this point owing to the added stress imposed by the angle turret, and the rapid fall away of the ground below the rampart.

The Latrines (Plate XXII).

Between the barrack-block and the angle-turret the corner of a latrine building was exposed, exhibiting two structural periods. The earliest walls were 2 ft. 3 in. thick, built of the same neat ashlar as had been employed in the angle-turret, and clearly representing contemporary workmanship. The north-west wall was standing 2 ft. high;[1] the north-east wall somewhat less owing to reconstruction in the second period, while the floor was composed of clay with a stone facing (Fig. 26). A tiled gulley ran round the edge of the platform and presumably drainage was conducted

(1) Measurement could not be strictly accurate since the entire foundations were waterlogged (Fig. 27).

through the west corner of the fort by way of the channel already observed in the angle-turret.

The gulley, however, had subsequently been filled with clay to provide a foundation for a thickening of the north-east wall, and the building had been crossed by a roughly built flagged drain, apparently the continuation of the drain observed in T.1. While this entered the turret over the surviving three courses of the back wall, general disturbances within the building had removed all trace of its outlet from the fort.

The Garden Pit (Plate XXI).

Prior to the excavations already described, Mr. J. Charlton, tenant of one of the four allotment gardens in the praetentura of the fort, kindly allowed the writer to dig a trial pit 4 ft. 6 in. by 8 ft. to seek evidence for the earliest occupation of the site. 18 in. below the surface a heavy flooring was met with, consisting of large, roughly dressed blocks, bedded on a clay spread 21 in. thick and incorporating much re-used material including several fragments of quern-stones. For a depth of 2 ft. below this was an unstratified filling of clay and occupation debris, overlying the slight remains of a cobble floor resting on the natural subsoil. From this filling came a number of sherds including first century samian forms 15/17, 18, 27, and 37 (Plate XXXVIII, nos. 1-2), pre-Hadrianic coarse types (Plate XLVII, nos.

1, 2, and 4), second century samian forms 18/31 and 38 (stamped QVINTI M), and a single third century grey beaker (Plate XLVII, no. 3). As it was not possible to extend the excavation the nature of the building must be conjectural, but it is reasonable to suppose from the suggested lay-out of the fort[1] that it was a barrack-block fronting on to the via praetoria. The absence of intermediate floors between those of the early and late periods is noteworthy, but no explanation can be advanced until further work has been undertaken hereabouts.

Permission was also granted by Mr. R. Vasey, tenant of the adjacent garden to the east, to test for the roadway on the line of the central axis of the fort. On either side of the axis the metalling of the road was found within 2 ft. of the surface establishing the central position of the north-west and south-east gateways, and confirming the impression that the station faced north-westwards.

Three coins, denarii of Faustina I and Severus, and a sestertius of Antoninus Pius, all unstratified, were found during the course of the excavation (Appendix II. F. nos. 5-7), while stamps of the potters GENITOR and VICTORINVS were included amongst the surface finds of samian ware.

Conclusions.

The excavations of 1936 were hampered by the general disturbance of the structural remains down to the earliest

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(1) see p. 237 .

levels, and by the waterlogged nature of the ground. Stratified deposits were practically non-existent and, consequently, the occupational history of the site is by no means certain even in general outline. The most useful result of the work is the discovery of a Flavian fort as anticipated on general grounds by Bosanquet in 1927,[1] while the upper limit of occupation has been carried into the last quarter of the fourth century.[2] For the intermediate periods, particularly the date of the remodelling of the fort by the substitution of stone for clay defences, the evidence is far less satisfactory. All one can say is that from the relative scarcity of Hadrianic pottery compared with the ~~enormous~~ quantity of third century types (cf. the angle-turret), it may well be that the conversion of the ramparts into stone did not take place until the reorganisation of the frontier by Severus and his successors,[3] and that in the second century the garrison was either withdrawn or materially reduced. Such a hypothesis, however, raises wider issues which must be deferred for consideration until it is possible to review the Roman occupation of the county as a whole[4]

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(1) PSAN., 4, i, p. 100.

(2) cf. Crambeck and Huntcliff types (Plate XLVII, nos. 22-4).

(3) CIL., 458 (54).

(4) see Chapter XII.

DECORATED SAMIAN WARE

from the

EXCAVATION OF 1936.

(Plate ~~XXXVIII~~ XXXIX).

1. F. 37. South Gaul. I am indebted to Dr. T. Davies Pryce, F.S.A., for the following note:

"for the ovolo with the large rosette, well-prolonged below the egg-elements, compare Atkinson, Pompeii, JRS., IV, figs. 39-53. 'The potter of the large rosette.'

Upper zone: the seated figure appears to be in a garland-festoon rather than in a medallion. If so, this decoration is in imitation of a pre-Flavian motif which was used by many early potters (cf. Knorr, 1919, 6A, AMANDVS; 30B, DARIBITVS) and in the early work of Nero-Flavian potters (cf. op. cit. 17B, CALVVS; 37 GERMANVS; 43B, IVCVNDVS). It is rare in the Domitianic period. The bird perched on the top of the wavy diagonal line of the cruciform ornament is also a copy of an early decorative arrangement (cf. op. cit. 41 G.H). Birds in a similar position occur on a bowl by MEMOR, at Pompeii (Atkinson op. cit. XIV, 74). See also Richborough, Rep. III, XXIV. 8.

Lower zone: The two-leaf scroll has the low curvature not uncommon in early work. The decoration is well-spaced - evidently the designer did not suffer from the horror vacui. The many-lobed leaf is an imitation of an early type, frequently occurring in the work of pre-Flavian potters, such as SENECIO, when the terminal lobe is more pointed than in later examples such as the Ebchester bowl. For somewhat close 'approximates' see Knorr, 1919, 56, MELVS, and Ritterling, Hofheim I, XXVII, 14; but there are differences, particularly in the number of lobes.

This leaf is rarely found on Domitianic Sigillata. The serrated leaf is also an early type and has many "approximates' in the pre-Flavian period (cf. Knorr, op. cit., 66E, OF PRIMI from Hofheim). Late variants, typical of the Flavian period are heavier and coarser (cf. Knorr, op. cit., 23A, OF COELI).

The decoration of this bowl displays many features of pre-Flavian work. Typologically it must be assigned to the principate of Vespasian and, as far as my recollection goes, it is certainly earlier than any thing, as yet, found in Scotland."

Dr. Felix Oswald, F.S.A., informs me that, as far as he is aware, the only other instance of the seated figure occurs, together with the same ovolo, on a F. 37 from Margidunum (too incomplete to be included within his Index of Figure-types). He would confidently ascribe the Ebchester bowl to FRONTINVS.

2. F. 37. South Gaul. Ovolo with trifid tongue-terminal bent left. Fair glaze and execution. Period: mid-Flavian.

3. F. 29 or 30. Lezoux. Bead within plain medallion; bead row to right. The fabric recalls the South Gaulish rather than the Lezoux kilns, but the bead row points unmistakably to the latter.

4. F. 29. South Gaul. Fragment of central zone showing straight wreath as used by L COSI (Knorr, 1919, Taf. 25, 2), between bead-rows. Tendril and leaf below. Worn. Period: mid-Flavian.

5. F. 37. South Gaul. Rinceau decoration. The stalks of the scroll terminate in large pointed leaves with serrated edges, as used by BIRACILLVS (Knorr, 1919, Taf. 16), COELIVS (ibid., 23), and M CRESTIO (ibid., Text, fig. 30). In the lower concavities of the scroll are (i) animals; a boar (D. 837) used by the Flavian potters COSIVS RVFVS, PRIMVS, GERMANVS, SASMONOS, PASSENVS, and CRVCVRO (Brecon, S. 46), and a panther. (ii) triple row of arrow-heads demarcated by wavy lines. Basal wreath of chevrons. Glaze good, fair execution. Period: mid-Flavian.

6. F. 37. South Gaul. Tendril terminating in a debased cordate-bud, a common Flavian motif (cf. Knorr, 1919, Text. 10) Rolls on either side. Period: Domitian.

7. F. 37. Rheinzabern. Free style. The dog is Ludowici's type T. 201, used by COBNERTVS, CERIALIS, FIRMVS, VICTOR, PRIMITIVS, COMITIALIS and IVLIVS. Period: Antonine.

8. F. 37. Lezoux, in the style of CINNAMVS, both the ovolo and the sitting deer (D. 847) having been much used by him. Period: Antonine.

Potters Stamps on Terra Sigillata.

1. QVINTI M — F. 38. QVINTVS of Lezoux. Period: Hadrian - Antonine.

2. GENITOR — F. 18/31. GENITOR of Lezoux. Period: Domitian - Trajan.

3. VICTOR[INVS] — F. 18/31. VICTORINVS of Rheinzabern. Period: Hadrian - Late Antonine.

COARSE POTTERY

from the

EXCAVATIONS OF 1936
(Plate XLVII).

Nos. 1-4. Trial Pit in the Garden, Level 2.

1. Carinated bowl with reeded rim, iron-hard coarse light-grey ware, two grooves immediately below the rim. Diam. 6¼ in.

A standard Flavian-Trajanic type which persists, in a debased form, until the time of Hadrian. cf. Newstead, p. 250, fig. 26; Gellygaer, Pl. X, nos. 1-4; Corbridge, 1911, fig. 5, nos. 4-6; Poltross Burn, Pl. III, nos. 1-3, etc. The neat well-made appearance of the Ebchester sherd suggest a Flavian or early Trajanic date.

2. Cooking-pot, fabric as no. 1, bead rim and two girth-grooves on the shoulder. Diam. 4¼ in. cf. Corbridge. 1911, fig. 7, no. 34 (Flavian).

3. Beaker, hard blue-grey fabric, light core, well-marked shoulder decorated with burnished lattice pattern, Diam. 3¾ in. cf. Poltross Burn, Pl. IV, no. 30, and p. 451 (single-handled beaker, as this may well have been). Third century.

4. Mortarium, buff colour, grey and white grit which rises on to the rim. Diam. 12½ in. A typically Flavian profile, cf. Corbridge, 1911, Pl. 11, no. 12; Newstead, fig. 26; Brecon, fig. 94, C. 5; Malton, fig. 16, no. 7.

Nos. 5-8. Early Sump below the Barrack Building.

5. Jar, hard grey ware, light core, slight offset at the junction of the rim and the shoulder. Diam. 5¾ in. The offset is not in itself a dateable feature (cf. Malton, fig. 5, no. 14, late third or fourth century). The closest parallel would seem to be Haltwhistle Burn, fig. V, no. 15 (Trajanic).

6. Cooking-pot, hard thin buff ware, two girth-grooves. Diam. 4¾ in. Flavian type.

6a. (not illustrated). Fragments of 'rustic' jar.

7. Carinated bowl with reeded rim slightly up-turned. Hard coarse grey ware, two horizontal grooves above the carination. Diam. 8 in. The up-turned rim is said to be a late feature of this type of vessel (Collingwood, Arch. Roman Brit., fig. 52, no. 20), and occurs after 100 A.D. at Brecon, fig. 94, no. 1; and Haltwhistle Burn, Pl. V, no. 1.

The relative coarseness of this vessel suggests a date later than no. 1. Probably Trajanic.

8. Jar, fumed ware. I have not been able to find an exact parallel.

Nos. 9-21. Alley of Barrack Building.

9. Cooking-pot, light sandy colour, micaceous grit general. Diam. 5½ in. The rectangular rim section is a characteristic feature of the Knapton cooking pots (cf. Langton, fig. 30, and pp. 97-99), but the fabric is different. cf. Brough (1934), fig. 6, D. 1. where the same type of ware is ascribed 'probably' to the third century.

10. Cooking-pot, hard dark-grey ware, light core. Diam. c. 6½ in. A typical third century profile. cf. Denton Hall, no. 15.

11. Cooking-pot, hard smooth light-grey fabric. Diam. 5¾ in. Fabric and rim section are third century, cf. no. 10.

12. Cooking-pot, fabric as no. 9. Diam. 5¾ in. Two more rims of this type occurred in the deposit.

13. Cooking-pot, fabric as no. 9. Diam. 5½ in. A good third century profile, cf. no. 10.

14. Bowl, iron-hard, light grey fabric, burnished externally. Diam. c. 8 in. The fabric and absence of lattice decoration suggest a third century date.

15. Dish with roll-rim, fumed ware. Six more examples of this type occurred, varying from black fumed, to hard light-grey fabric. cf. Birdoswald, nos. 79 and 80; Malton, fig. 6, no. 28, (all third century).

16. Flanged bowl, coarse light-grey ware. cf. Malton, fig. 14, no. 23. (late second - early third century).

17. Dish with roll-rim, fumed ware, slight carination at the base. Diam. 8½ in. For an exact parallel cf. Malton, fig. 6, no. 28. Third century.

18. Dish with roll-rim, fumed ware. cf. no. 15.

19. Flanged bowl, dark-grey, smoothed, light core. Diam. c. 10 in.

20. Jar with double roll-rim, hard light-grey fabric with fine crystalline grit. Diam. 7 in. cf. Corbridge, 1911, fig. 9, no. 111, dated to the second half of the second century.

21. Pedestal beaker, chocolate slip, white core. Diam. 2½ in. A standard post-Antonine Castor type.

Nos. 22-24, and 33-40. Angle Turret. Unstratified

22. Cooking-pot, calcite-gritted ware, Huntcliff type, without internal groove. cf. Huntcliff, Pl. II, no. 11, and p. 243. Last half of fourth century.

23. Platter, cream colour, rim ornamented with red painted chevron decoration. Diam. 7½ in. Crambeck. Ant. J., xvii, type 10.

24. Cooking-pot, as no. 22 but with internal groove.

33. Bowl, hard light-grey ware, girth-groove on the shoulder. Diam. 10 in. cf. Throlam, no. 42.

34. Castor type beaker, orange-brown, smooth fabric. Diam. 3¼ in.

35. Dish with roll-rim, hard light-grey. cf. no. 15.

36. Jar, fabric as no. 9.

37. Cooking-pot, very hard grey ware, smoothed. Diam. 6 in. Profile and fabric third century.

38. Cooking-pot, fabric as no 9. Diam. 6 in.

39. Cooking-pot, fabric as no. 9. A good third century profile, cf. no. 10.

40. Jar with double roll-rim, fabric as no. 9. For the type cf. no. 20.

41. Flanged bowl, coarse dark-grey ware, burnished.

No. 25. Oven III.

25. Neck of jar, very hard coarse dark-grey ware, gritted, groove on shoulder. Diam. 3 in. cf. Willowford, fig. 11, no. 44 (second century).

Nos. 26-31. Barrack Building, floor 3.

26. Mortarium, pipeclay fabric, oblique rim slightly curved, but tending towards the hammer-head type. Two grooves on the rim. cf. Poltross Burn, Pl. V, no. 2. Fourth century.

27. Mortarium, bead and roll-rim type, fabric as no. 26. For the dating of mortaria, fabric would seem to be more reliable than rim section(cf. Birdoswald, no. 10). In this case fabric, and association with definitely late types (nos. 28 and 29), justify a date c. 300 A.D.

28. Hammer-head mortarium, pipeclay fabric, fine red grit. Diam. c. 12 in. An unusual profile.

29. Hammer-head mortarium, fabric and grit as no. 28, three grooves on the rim and thumb-depression spout. Late third-fourth century. cf. Malton, fig. 7, no. 36; Birdoswald, nos. 11 and 12.

30. Cooking-pot, hard coarse grey ware. The oblique outbent rim is a typical fourth century feature. cf. Birdoswald, no. 19.

31. Cooking-pot, hard coarse grey gritty fabric. cf. Chesterholm, AA. 4, viii, p. 199, fig. 3, no. 1; Poltross Burn, Pl. V, nos. 16 and 17 (all fourth century); Brough (1936), nos. 143-7 (third century).

No. 32. Barrack Building, floor 2.

32. Flanged bowl, coarse grey ware, not Crambeck fabric. The profile is reminiscent of Denton Hall, Pl. LI, no. 21, an unstratified sherd, possibly third century.

No. 42. Churchyard, 1936. Unstratified.

42. Mortarium, pipeclay fabric, red grit. Diam. c. 12½ in. Stamped IVNIV (Pl. XLIX no. 13).

IX

THE ROMAN FORT AT CHESTER-le-STREET

"In tracing out an obscure military way, I have sometimes found it of service to consider the towns that go by the name of Stretton, or somewhat equivalent to it ... Thus the name of Chester on the street, between Newcastle and Durham, does not a little confirm the opinion that there has been a Roman settlement there of some kind or other, and that a military way has passed from Newcastle to it."
(John Horsley. Britannia Romana, 1732, p. 391)

The Roman fort at Chester-le-Street is situated on a low glacial gravel plateau sloping gently eastwards to the junction of the river Wear and the Cong burn. In former times the burn swept the foot of the plateau within a stone's throw of the north-east angle of the station, but subsequently its course has shifted slightly northwards, leaving a flat expanse of alluvial deposit between the original bed, and the present watersmeet.(1)

In its immediate aspect a bridge-head position guarding the road-crossing at the Cong burn, Chester-le-Street, like Binchester, is a key-site to the occupation of the north-east area, for it controls not only the narrow passage between the valleys of the Wear and Team, of vital importance to the Hadrianic Limes, but also the routes inland from Wearmouth to Lanchester and the west. No doubt all these routes were in use in Roman times. Certain contact has,

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(1) Plate XXIV.

indeed, been established with the forts at Newcastle[1] and South Shields,[2] while the road from Chester-le-Street to Binchester can hardly be doubted in the light of recent discovery.[3] On the other hand, suggestions for a continuation of the south road to the Tees crossing at Pountey's Bridge,[4] and for branches to Lanchester[5] and Sunderland,[6] while based on reasonably good presumptive evidence, still await archaeological confirmation.

THE BIBLIOGRAPHY OF THE SITE

Although the name of the place, and its proved connection with a Roman road suggested the existence of a castellum at Chester-le-Street, none of the eighteenth century writers could locate the site. "No inscriptions or other Roman remains have been discovered here", writes Hutchinson, "and the name of Chester-on-the-Street derived from its situation on the Roman way, has hitherto been all that has led the antiquaries to conceive it was of Roman origin."[7] Some, indeed, would have fixed the fort at Walridge, a mile west of the town.[8]

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(1) R. II(2).

(2) R. III.

(3) R. IV.

(4) R. II (1).

(5) R. VII.

(6) *ibid.*

(7) Durham, II, p. 399. But coins had been found in the Cong burn (Gough's Camden's Britannia, iii, p. 369, quoting Gibson).

(8) AA., 1, iv, p. 289.

In the early nineteenth century an aureus of Galba came to light,[1] but it was not until the middle of the century that the exact situation of the Roman fort was determined. The first notice of the ramparts is given by Bruce,[2] but the materials are acknowledged to have been supplied by the Revd. W. Featherstonhaugh, whose excellent paper on the site appeared in Archaeologia Aeliana in 1855.[3]

Mr. Featherstonhaugh observed that the parish church stood within the north-east angle of the fort, whose rampart and ditch could be traced on the east and south sides. The west rampart was practically obscured by buildings, but from surface indications of the north-west angle it appeared to run parallel to, and within a few yards of, the Durham-Newcastle turnpike road.[4]

It was thus possible to calculate that the fort was almost square in shape (the north-to-south axis being slightly the longer of the two) and contained an area of about six acres. Two modern streets, the Church Chare and the Middle Chare, seemed to represent the lines of roads within the station, while, we may quote Featherstonhaugh: "In an open space to the west of the church, in the centre

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(1) Surtees. Durham, II, p. 136.

(2) Wall (2), pp. 296-8.

(3) 1, iv, pp. 289-295: "Chester-le-Street: On the Evidences of its Occupation by the Romans; with an Account of the Discoveries made, and an Attempt to determine the Site and Roman Name of the Station."

(4) Plate XXV.

of the area, were discovered the foundations of a house, with the remains of its contrivances for warming; viz., three hypocaust pillars of rough freestone; a stone trench, two yards long by one foot broad; some slabs of tufa; part of a pipe tile, stamped with letters; and several small hearths, containing cinders."(1)

On the sloping ground between the north rampart and the Cong burn the discovery of coins, pottery, and a group of three small altars (probably the furniture of a household shrine)(2) suggested the existence of a vicus, while it is interesting, in the light of present knowledge, to note Featherstonhaugh's conjecture that Chester-le-Street was "in all probability a cavalry as well as an infantry station".(3) The coins recorded at this time range from Hadrian to Gratian.

In 1856 the foundations of a hypocausted building, interpreted as a "villa", were discovered immediately outside the south rampart of the fort "and running parallel with it". Excavation hereabouts produced roofing tiles, a building stone of the second legion,(4) and a mass of iron weighing 2½ cwt. The latter had "apparently been formed by the agency of charcoal, and seemed as if it had come from the puddling furnace". No coins were

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(1) op. cit. p. 291. cf. Plate XXV.

(2) CIL., 452-4 (73-5).

(3) op. cit., p. 291.

(4) CIL., 455 (76).

found and "but small fragments of Samian and other pottery ware".(1) Unhappily the plan of the remains prepared by the owner of the field, Mr. T. Murry, seems to have been lost, but from the evidence of a conduit near at hand "intended probably to bring water from a neighbouring spring",(2) it is probable that this was once the fort bath-house, later, perhaps, converted as at Binchester, for industrial purposes.

No further structures came to light in the nineteenth century, the only recorded discoveries of importance being two pieces of chain armour, presented to the Black Gate Museum, Newcastle, by the Revd. Walker Featherstonhaugh;(3) the two altars found north of the fort in 1886;(4) and the fragment of a building inscription from the vicinity of the church in 1888.(5)

In 1912 sherds said to have been found at Chester-le-Street were exhibited at a meeting of the Newcastle Society of Antiquaries and notice was given of the discovery of an aureus of Vespasian.(6)

Seven years later a more important group of pottery, consisting of five stamped bases of plain samian forms, three decorated pieces, a samian mortar F. 45, and a fragment of a "smith's vase", were exhibited before the

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(1) PSAN., 1, i, pp. 121-2.

(2) Bruce. Wall (3), p. 312.

(3) PSAN., 1, i, p. 169.

(4) EE., VII, 984 (78) and 985 (79).

(5) ibid., 986 (80).

(6) PSAN., 3, v, p. 223.

same society by Lt.-Col. G. R. B. Spain.[1] From the historical standpoint, the outstanding piece in this group is a cup F. 27 stamped by the potter MOMMO of South Gaul, which, if found at Chester-le-Street, would practically determine a Flavian occupation of the site. Unfortunately, while there is very strong probability that the cup was discovered there, certain contact cannot now be established.[2]

Between 1920 and 1923 a number of coins, ranging from Domitian to Julian, were found in the bed of the Cong during the rebuilding of the bridge at the northern end of Front Street. These were identified by the Keeper of Coins and Medals at the British Museum, and published by the Revd. A. D. E. Titcombe.[3]

Subsequent observations are due to the interest and activities of Canon F. H. Jackson, rector of Chester-le-Street, from 1919-1935, who has kindly furnished the writer with a list of coins and potters' stamps in his possession.[4] The following structural discoveries noted by Canon Jackson, will, it is hoped, receive independent publication in the near future.

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(1) ibid., x, pp. 18-21. (2) The collection, which had lain for some time in a school museum at Chester-le-Street, was lent to Lt.-Col. Spain by the Revd. A. D. E. Titcombe. It was supposed that the pieces had been found from time to time in the graveyard north of the church and, on the evidence of one piece previously figured in PSAN., 2, ii, p. 287, this would seem to be the most likely origin.

(3) PSAN., 3, ix, pp. 273-4; ibid., x, pp. 41 and 112; ibid., 4, i, p. 11. cf. Appendix II. G.

[redacted]art of Canon Jackson's collection has been deposited on loan with the [redacted]nderland Museum. Of intrinsic interest is the light-grey cinerary urn [redacted]h ringed handles (Plate XLVIII, no. 1), $7\frac{1}{2}$ in high and $5\frac{1}{2}$ in. in diam. [redacted] Corbridge, 1911, p. 181, fig. 110; Poltross Burn, Pl. III, no. 27.

In 1929 and 1933 the foundations of the east wall were located at the north-east angle of the fort.(1) The southward extension of the rampart underlies the Secondary School, and it is recorded that the removal of stone foundations added greatly to the difficulty and cost of construction of this building in 1912.

In 1933 the west wall was seemingly uncovered at a depth of 5 feet on the south side of the Middle Chare 20 yards from the junction with Front Street. In the core of the masonry were found two sestertii of Trajan. Neither the north nor south walls have been exposed, as yet, but surface indications, particularly at the north-east and south-east angles corroborate Featherstonhaugh's line for these ramparts.

Within the fort, foundations were observed on the north side of the Middle Chare in 1931 in the course of excavation for telephone cables. This would appear to be the hypocausted building marked on the plan of 1855.(2)

Outside the south-east corner of the rampart an apsidal or circular structure,(3) having rubble walls faced with brick was located in 1927. This may well be part of the bath-house found in the same field in 1856, although it would be unwise, at the present state of knowledge, to interpret it as a round sudatorium of the type

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(1) Plate XXVI (W.1).

(2) Plate XXV.

(3) Thus described in JRS., xvi, 1926, p. 219, but the evidence was by no means conclusive.

found at Binchester.

A short distance east of these foundations the cobbled surface and kerbstones of a road running in a N.N.E. direction were uncovered at the same period. The slender evidence, however, does not allow us to estimate the general trajectory or purpose of the road.

In 1930-31 the crossing of the Cong was more exactly determined by the discovery of large blocks of masonry with cramp and lewis-holes on the south bank of the stream in line with the western rampart (Plate XXVI). The main north-to-south highway, therefore, would seem to have passed the fort on this side, while the site of the bridge suggests,also,that its course north of the Cong may well have been by Picktree and Portobello rather than by the line of the present Great North Road.(1)

Numerous finds of pottery and coins, and occasional burials outside the north, east, and south ramparts,testify to an extensive vicus at Chester-le-Street, and possibly the remains of culverts observed at widely different points indicate a regular and systematic town-planning such as appears to have been the case at Binchester. Since no stratified deposits appear to have been observed, however, it is impossible to estimate the date of the original civil settlement.

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(1) cf. R. II (2).

Surface finds of pottery, chiefly from without the fort include the following plain samian forms: 15/17, 27, 18/31, 31, 36, 40, 45, 46, 79, and 80. Of decorated samian, no form 29 has yet been discovered, or any forms 30 or 37 attributable to the South Gaulish kilns, though the products of the Central and East Gaulish potters are well represented. Amongst the potters' stamps no. 27 MUR on F. 27 is the only stamp in Canon Jackson's collection to be ascribed to the first century.

The coarse wares in the Sunderland Museum cover the second, third and fourth centuries; Crambeck and Huntcliff types carrying the occupation of the site into the Signal Station period. No Flavian types seem to be represented here, or amongst the drawings I have seen of coarse sherds still retained by Canon Jackson.

Amongst the more recent discoveries at Chester-le-Street may be noted a gold solidus of Valens,[1] and a sculptured head of Romano-British workmanship (Fig. 28) found in April 1937 on the left bank of the Wear, about 150 yards downstream from the junction with the Cong burn. I inspected the site of this discovery and found that it lay below the flood-level of the river, so that the head has no doubt been washed down from the vicus on the north side of the fort.

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(1) PSAN., 4, vi, p. 352.

SUMMARY.

The fort at Chester-le-Street stands at a river junction and at a focal point for routes from all quarters of the county. Though defensible by nature on two sides, the site is overlooked by steadily rising ground to the south and west, and is, therefore, technically a bridge-head position rather than an outpost-fort.

In the absence of excavation the occupational history of the place is largely dependent upon inference from neighbouring sites where archaeological investigation has made more headway, but it will be convenient at this stage to appreciate the slight independent evidence at our disposal.

Æ of Vespasian and Titus, and samian forms 15/17 and 27 suggest original Roman occupation in the Flavian period, and, in view of the strategical importance of the site and the proved communication with the first century castellum at Binchester, it is highly probable that this occupation was of a military character. If, as seems likely, a military post was established at South Shields in the Flavian period,(1) this conclusion is strengthened, for the thirty miles between Binchester and the Lawe demands an intermediate castellum, and protection of the Gong crossing.

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(1) cf. Chapter X.

Of only secondary importance, however, to the stations on Dere Street in the Agricolan epoch, the crystallisation of the frontier under Trajan and his successor would bring the Chester-le-Street site into full prominence, and it is probable that the stone defences were erected at this time.(1) The perimeter of the stone fort has not been exactly determined but surface indications suggest over-all measurements of c 180 yards from north-to-south, and 170 yards from east-to-west, giving an area of 6.2 acres. From the position of the Church Chare, it might be inferred that the fort faced westwards on to the main highway. The area is larger than any of the ala forts on Hadrian's Wall, but approximates to that of Brecon Caer which also housed a cavalry regiment.(2) Potters' stamps and coins witness active occupation of the site in the second century, but it must be remembered that the majority of these have been found without the fort in circumstances which make them of doubtful historical value.

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(1) "Recent evidence, coins found in the base of the wall when uncovered in Middle Chare in 1933, would show that the stone fortress was of the period of Hadrian" (Jackson. Guide to Chester-le-Street, p. 24). The coins are presumably the two sestertii of Trajan already referred to, so that the dating of the stone defences to Hadrian is not assured.

(2) One notes that at Brecon and Binchester, for example, the size of the stone fort is dependent on the perimeter of the clay defences which it supersedes, but one cannot, on these grounds, postulate a first century occupation of Chester-le-Street, for the size of the Hadrianic milliary cohort fort at Lanchester is similarly larger than any of the Wall forts.

In the year 216 A.D. we find the garrison of the fort, a cavalry regiment whose name has not survived on the inscription, commemorating the construction of an aqueduct.(1) This indicates that the defences had already been repaired following the catastrophe at the end of the second century, and suggests that the re-occupation of Chester-le-Street followed swiftly upon the recovery of the province.

Neither structural nor epigraphic evidence of military occupation in the third Wall period, the Constantian epoch, has yet appeared, but if the identification of the site with Concangium of the Notitia is correct(2) the fourth century garrison would be the numerus vigilum.(3)

Coins (the latest an Æ of Theodosius) and pottery carry the occupation into the third quarter of the fourth century .

The Roman Name of Chester-le-Street

The early forms of the name vary between Cuncaceastre, Cuncacestre and Cunceceastre - the stem showing evident etymological affinity with the name of the burn, the Cong.

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(1) EE., VII, 986 (80). (2) see below.

(3) The term numerus, previously indicating regiments with specialised duties (e.g. exploratores) is, in the fourth century, applied generally to all regiments. Thus the numerus vigilum "the troop on the alert" has no correspondence with the vigiles of Rome.

Ekwall[1] suggests a connection on the assumption that Cunuc, or the like, was the old name of the massive of hills from which the Cong took its source, Cunce-ceastre being the genitive case, and with this evidence before us we may surely identify Chester-le-Street with the Concangium of Notitia Dignitatum.[2]

This identification is attractive not only on etymological grounds, but because the sector of the Notitia in which Concangios occurs has evident reference to the sites in or on the fringe of Durham county, while attention has ~~already~~ been drawn to the possibility of reading numerus Concangi*ensium* on the Binchester hypocaust tiles.[3]

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(1) English River Names, p. 92.

(2) Occ. XL, 24. Probably the same as Coganges in the Ravenna List.

(3) Appendix I, no. 14.

POTTERS' STAMPS FROM CHESTER-LE-STREET.

A. On Terra Sigillata.

1.	ADVOCISI	F.37. ADVOCISVS of Lezoux and Lubié. Period: Hadrian-Antonine.
2.	ALBILLI·M	F.33. ALBILLVS or ALLBILLVS of Lubié. Period: Hadrian-Antonine.
3.	ALBVCI	F.37. ALBVCIVS of Lezoux. Period: Trajan-Antonine.
4.	AMMI	F.33. AMIVS or AMMIVS of Lezoux. Period: Hadrian-Antonine.
5.	ARICI MA	F.33. ARICVS of Lezoux and Lubié. Period: Hadrian-Antonine.
6.	ATTILLO M	F.31. ATTILLVS of Lezoux. Period: Domitian-Hadrian.
7.	]ATTO[(retro)	F.37. ATTO of Rheinzabern. Period: Antonine.
8.	BILLINIICCI	F.79. BELLINICCVS of Lezoux. Period: Trajan-Antonine.
9.	BELS[A]	F.33. BELSA AVERNICVS ? of Lezoux. Period: Antonine.
10.	CAMBVS F	F.33. CAMBVS of Lezoux. Period: Antonine.
11.	CADG[...]	F.80. CADGATIS or CADGATVS of Lezoux. Period: Hadrian-Antonine.
12.	CAPELLIV F	F - CAPELLIO or CAPELLIVS of Lezoux. Period: Hadrian-Antonine.
13.	CELSIANI	F.31. CELSIANVS of Lezoux. Period: Hadrian-Antonine.
14.	DOVIICCVS	F.31. DOECCVS or DOVECCVS of Lezoux and Lubié. Period: Hadrian-Antonine.
15.	[DOMITIAN	F.18/31. DOMITIANVS of Heiligenberg and Kräherwald. Period: Trajan-Antonine.

Note. Nos. 12, 17, and 28 = Bruce. Wall (2), p.439.
Nos. 23 and 32 - AA., 2, iii, p.259.
Nos. 8, 15, 22, 24, and 26 - PSAN., 3, x, pp.18-19.

The remaining stamps have been kindly supplied by Canon F.H.Jackson.

16. GENIALIS F.18/31. GENIALIS of Lezoux. Period: Hadrian-Antonine.
17. GENIALIS FECI F -. ibid.
18. HABILIS M.A F -. HABILIS of Lezoux. Period: Hadrian-Antonine.
19. IVLLINI (retro) F.37. IVLLINVS of Lezoux. Period: Flavian-Antonine.
20. [I]VSTI•MA• F.18/31. IVSTVS of Lezoux. Period: Hadrian-Antonine.
21. IVVENIS F.18/31(sic). IVVENIS of Heiligenberg and Rheinzabern. Period: Hadrian-Late Antonine.
22. LVCINA F.33. LVCINVS of Lezoux. Period: Hadrian.
23. MACRINI F -. MACRINVS of Lezoux. Period: Hadrian-Antonine.
24. MARTII O F.33. MARTIVS or MARTO of Lezoux. Period: Domitian-Antonine.
25. [M]ERCVSSE MA F.27. MERCVSSA of ?Lezoux. Period: Hadrian-Antonine.
26. MOM F.27. MOMMO of La Graufesenque. Period: Claudius-Vespasian. The stamp OF MOM occurs on F.27 at Corbridge (AA., 3, xii, p.283).
27. MVR F.27. MVRRVS or MVRVS of La Graufesenque. Period: Claudius-Vespasian.
28. MVXTVLLI•M F -. MVXTVLLVS of Lezoux. Period: Hadrian-Antonine.
29. NAMILIANI F.33. NAMILIANVS of Lezoux. Period: Antonine.
30. NVMI[...] F.33. NVMIDVS of ?Lezoux. Period: ?Hadrian.
31. PATIIRATI F.33. PATERATVS of Lezoux. Period: Hadrian-Antonine.
32. PATERCLINI F -. PATERCLINVS of Lezoux. Period: Hadrian-Antonine.
33. PATERN FE (retro) F.37. PATERNVS of Lezoux. Period: Trajan-Antonine.
34. PATERN FE (retro) F.37. ibid.
35. [PR]ISC•I•M F.31. PRISCVS of Lezoux. Period: Hadrian-Antonine.
36. PROBVS F F.31. PROBVS of Ittenweiler and Rheinzabern. Period: Hadrian-Antonine.
37. SACERI•MAN F.31. SACERO or SACERVS of Lubié. Period: Domitian-Antonine.
38. SACERI[...] F.33. ibid.
39. SENN[...] F.33. SENNIVS of Lezoux. Period: Hadrian-Antonine.
40. SIIVIIRI F F.18/31. SEVERVS of Lezoux. Period: Trajan-Antonine.

41. SIIXTI M — F.79. SEXTVS of Lezoux. Period: Trajan-Antonine.

42. TASGILLI[.] — F.18/31. TASGILLVS of Lezoux. Period: Domitian-Hadrian.

43. VERTECISSA F — F.33. VERTECISSA of ?Lezoux. Period: Hadrian-Antonine.

44. [V]ITALI M — F.31. VITALIS of Lezoux. Period: Domitian-Antonine.

45. [VXO]PILLI — F.38. VXOPILLVS of Lezoux. Period: Antonine.

B. On Mortaria.

1. CVKNV in triplicate.
2. VI[

C. Graffiti.

1. NIIMI on an amphora.
2. SPY do.
3. IVVIR IANVARI on the base of no.24 above (PSAN., 3, x, p.19).

X

THE ROMAN FORT AT SOUTH SHIELDS

"Monachi Tinenses dicunt, civitatem fuisse in ulteriore ripa ostii Tinae flu(minis): Caerurfe nomine, ubi natus erat rex Oswi."
(John Leland. Collectanea, ii, 1715 editn., p.290)

Tynemouth has always been a natural gateway into Britain from the east. Bronze Age seafarers from the Rhineland, sailing northwards beyond the zone of major continental contacts, found convenient entry by way of the broad, slow-moving, river Tyne. In later times, Roman convoy and trading vessels, Saxon fleet, and Danish marauding bands frequently navigated the estuary and sought shelter in the extensive harbourage of Jarrow Slake.

Until the last century the mouth of the river, choked by a bar, was dangerous to shipping, but as late as mediaeval times an alternative passage was afforded by a salt water channel known as the Cut, which isolated South Shields Lawe at high tide.(1) Hence the importance of the Roman fort crowning the limestone promontory, as a sea-port garrison and a base for convoy-services supplying the needs of the eastern flank of the Hadrianic frontier.

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(1) Cf. map of the time of Henry VIII in the Cottonian MSS. (AA., 2, xix, f. p. 68). In the seventeenth and eighteenth centuries the eastern end of the Gut gradually silted up and in 1816 the Newcastle Corporation undertook the filling-in of the Mill Dam valley, thus permanently incorporating the Lawe within the mainland. The timbers of a vessel were found in the channel (now Ocean Road) c. 1850, "embedded in sea sand mixed with shells". (Hodgson. South Shields, p. 2).

BIBLIOGRAPHY OF THE SITE.

The earliest written notice of the fort at South Shields occurs in Leland's Collectanea, wherein he reports the tradition, gleaned from the monks at Tynemouth Priory, that Oswin, king of Deira, was born in a civitas called Caerurfe on the south side of the river.(1) This tradition is repeated in two subsequent passages, in which the name of the place "cuius fundamenta pro parte manent" is variously given as Urfa and Burgh.(2) The significance of the etymological evidence is considered elsewhere; here we may note one further sentence by the same author in which the course of Riknild street is traced "per Wigorniam, per Wicombe, per Brimingham, Lichefeld, Darbe, Chesterfeld, Eboracum usque ad ostium Tinae flu:"(3) As Hodgson suggested, the termination of the road at South Shields had obviously the authority of the known causeway of the Wrekendike.

From Saxon times onwards the Lawe was ecclesiastical property, and the fort, conveniently situated for sea-transport, apparently served as a quarry for churches as

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(1) Collectanea, ii, p. 290. Oswi is evidently an abbreviation for Oswinus (patron saint of the Priory), and has no reference to Oswy, king of Northumbria, the instigator of Oswin's murder. cf. (2)

(2) "E.regione Tinemuthae fuit urbs vastata a Danis Urfa nomine ubi natus erat Oswinus rex" (ibid., iii, p. 43) "Ferunt quidem regem Oswinum natum in quodam castro Burgh antiquitus nuncipata, cuius fundamenta pro parte manent ex australi parte aquae de Tina prope Southe sheles in territorio quod nunc est Prioris Dunelmi" (ibid., ii, pp. 396-7).

(3) ibid., ii, p. 370.

far afield as Jarrow[1] and Old Seaham.[2] Thus, while Lister published an inscription from the site towards the close of the seventeenth century,[3] and Horsley added a fragmentary tombstone[4] and an uninscribed altar, the latter noted that the visible remains of the station were "but slender", and concluded that it had been abandoned before the end of the Roman period.[5]

Hunter's Roman wharf is suspect,[6] but in 1791 a hypocaust was discovered near the Lawe House on the east side of the fort.[7] Notes on this and other foundations uncovered about the same period have been preserved on a rough sketch-plan drawn by Nicholas Fairles,[8] but tell us little apart from the fact that settlement existed without the fort. The coins in Fairles's possession are said to have included an aureus of Marcus Aurelius, and æ or antoniniani ranging from Claudius Gothicus to Valentinian.[9]

These brief records practically exhaust the materials for the Roman site prior to the excavations of 1875-7. The size of the fort was undetermined, presumably owing to the depth of accumulation over the remains and the havoc wrought by Saxon stone-robbers, while no structure within the ramparts seems to have been recorded.

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(1) CIL., 498 a-b (106).

(2) cf. p. 301.

(3) CIL., 496 (84).

(4) CIL., 497 (85).

(5) Horsley, p. 450.

(6) Surtees Soc., LXXVI, 1883, p. 139.

(7) Sykes. Local Records, i, p. 139.

(8) PSAN., 2, ix, p. 215.

(9) Hodgson. oc. cit., p. 12.

Historically, the only evidence for dating occupation was provided by Fairles' coin-list, and by the altar set up, as Bruce first conjectured, in the early third century for the welfare of the emperors Caracalla and Geta.

The story of how Roman South Shields was rediscovered under the threat of municipal extension has often been told,(1) and deserves to be remembered with pride since it led the way to similar "rescue work" under pressure on other sites. Although the excavations were continued by "relays of pilots in the evenings after the ordinary workmen had left",(2) the townsfolk were fortunate in securing the help of the Revd. Dr. R. E. Hooppell, whose abilities contributed largely to the success of the work. "Very rarely" writes Richmond, "do early excavations boast such careful records"(3) and, indeed, the written accounts, plans, and photographs of the work accomplished, together with the ceramic, epigraphic, and numismatic by-products now secure in the South Shields and Black Gate Museums, provide a wealth of material for an archaeological study of the site.

Three contemporary papers on the excavations were written, the best by Hooppell,(4) and the other two by

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(1) The best account is given by Hodgson. op. cit., p. 14.

(2) ibid.

(3) AA, 4, xi, p. 84.

(4) NHT., VII, pp. 3-44.

Bruce.[1] Naturally, the structural problems which presented themselves were too intricate to be successfully solved by the excavators, but as these have recently been admirably interpreted by Richmond[2] in the light of modern knowledge, only a brief summary is required here.

1. Pre-Hadrianic work is possibly attested by re-used material employed in the hypocaust below building V;[3] the hypocaust itself being apparently contemporary with the Hadrianic principia and perhaps a relic of the commandant's house of this period. We must add, however, the coin and pottery evidence considered below.

2. The first stone defences must have been raised under Hadrian - the forecourt of the principia being of late-Trajanic or early-Hadrianic type, and dated to the upper limit by a building stone of the sixth legion found in the wall of the cross-hall.[4] Nothing is known of the size of the fort in this period, but it evidently faced south-eastwards.

3. In the Severan period the fort was laid out anew, the structural remains of the fort wall and the internal buildings noted by the excavators principally to be assigned to the third century. The north-to-south and east-to-west ramparts measured over-all 622 feet and 361 feet respectively, enclosing an area of a little over 5 acres, the normal size

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(1) Archaeologia, xlvi, pp. 163-170; AA., 2, x, pp. 223-318.

(2) AA., 4, xi, pp. 83-102.

(3) Plate XXVIII.

(4) EE., VII, 1005 (100).

for the milliary-cohort forts on the Wall. While the via principalis was now placed behind the principia, the latter still fronted south-eastwards and could only be approached by the via praetoria. This suggests that the east and west gateways of the Hadrianic fort are yet to seek, while of the known gateways only that in the west rampart can be typologically assigned to the third century. Evident reconstruction of the east gateway indicates that this is later still. The principia[1] at this time was provided with a magnificent strong room, while the whole of the central area was packed with oblong buttressed buildings of the granary type, at least twelve of which were revealed by the excavators. The space required by these storehouses, numerically far in excess of those in an ordinary fort, explains the abnormal size of South Shields in relation to the strength of the garrison of this period - the cohors quinta Gallorum.[2] No third century barrack-buildings were recovered unless the fragmentary walling in the praetentura is to be interpreted as such; the retentura was not examined.

4. Constantian reconstruction is to be detected at the east gate(whose known guard-chambers so closely resemble those of the Constantian age at Chesterholm), and in several of the storehouses, particularly building VIII,[3] which were transformed into dwellings in the early-fourth century.

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(1) Plate XXIX.

(2) EE., IX, 1140 (105). The cohort was of quingenary type.

(3) Plate XXX.

Evidently the activity which had brought about the conversion of the fort into a storage-base in Severan times had now lost impetus, and must be regarded as an isolated epoch in the history of the site.

5. A final reconstruction in the Roman period, organised, it would seem, by Count Theodosius, has slight authority from the recorded structural remains, but cannot be doubted in the light of fifth century coins and "Signal Station" pottery. This brings us to a consideration of the available ceramic and numismatic evidence for the general occupational history of the site.

Attention was first drawn to a small group of South Gaulish samian ware in the museum at South Shields by Bushe-Fox in 1913.(1) By kind permission of the Librarian, Mr. E. Bailey, I have been able to draw these, and an additional fragment of F. 37ø omitted from Bushe-Fox's list.(2) The earliest bowl, F. 37 (three pieces),(3) could hardly be dated before the end of the principate of Vespasian; the other three pieces(4) typologically must be assigned to the period Domitian-Trajan.

Amongst the earlier coins(5) the aurei of Claudius, Nero, Domitian, and Trajan, and the denarii of Nero, Galba, Vespasian, Titus, Domitian, Nerva, and Trajan, might

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(1) Archaeologia, LXIV, 1912-13, p. 305, and Pl. XXIV, nos. 37-9.

(2) Plate ~~XXIX~~ XXVII, nos. 7-10.

(3) ibid., no. 7.

(4) ibid., nos. 8-10.

(5) Appendix II. H.

conceivably have appeared on a site not occupied until the second century, but the fact that brass of Vespasian and Domitian have been found, if not conclusive, at least suggests a first century occupation of the Lawe. The excavators, it is true, did not observe any structural remains of a Flavian settlement, but it is highly improbable that they established contact with the earliest levels. Alternatively, it may be that the sites of the Flavian and Hadrianic forts do not coincide, for three brass coins, one of Vespasian, and another of Domitian, were found together on clay at a depth of eight feet "near Thornton Street and a little to east of road leading to Tyne Dock".(1) Further excavation directed towards the elucidation of this problem is urgently required.

Lists of potters' stamps on samian ware from South Shields have been published by both Bruce(2) and Hooppell.(3) As these differ in many cases and contain patent misreadings it has been thought advisable to prepare an independent list, omitting fragmentary stamps which could not be assigned with certainty to a particular potter.(4) The total number of vessels covered by the list is 61. Of these only two (nos. 14 and 56), are those of potters whose activity Dr. Oswald would assign to a pre-Hadrianic

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(1) AA., 2, x, pp. 276-277.

(2) ibid, pp. 273-4.

(3) NHT., VII, pp. 27-32 and 44.

(4) pp. 283-4.

period, while we are prepared to accept a later date in each case. The potters' stamps, therefore, give no support to a first century occupation.(1)

Fort-one, or approximately 75 per-cent of the total stamps are on products of the Central Caulish kilns, and all but six of these are of potters whose activity is represented in the Index as extending into the Antonine period. The remaining 25 per-cent are of East Caulish and trans-Rhenish origin, and include stamps of Capitolinus, Commius or Comus, Graca, Iulianus, Iulius, Lugetus, Matina, Parentinus, Venerandus and Victor - rare or, in several instances, unrecorded in Britain. The high proportion of these later types at South Shields, compared with the proportion of Rheinzabern pottery on other sites in the north of England, can only indicate direct trade between the mouth of the Rhine and the Lawe fort in the reign of Marcus,(2) and we might infer from analysis of the other potters' stamps that the shipping of samian to the Tyne began at least as early as the Antonine period, and continued into the third century. As Miller has concluded that Rhenish ware was not shipped to the Firth of Forth(3) it may be that South Shields was the depot not only for the Hadrianic limes but also for the forts to the north.

Bruce gives the stamp OF ATICI which, if correctly read, should be that of the South Gaulish potter Atticus. This, however, is omitted from Hooppell's list, and I have been unable to trace it.

When the Rheinzabern potteries seem to have attained their maximum output.

Balmuildy, p. 73.

From the third century onwards coins and pottery bear out the successive occupational periods suggested by the structural remains, "Signal Station" and Crambeck sherds[1] contradicting Horsley's hypothesis that the site was abandoned before the Roman evacuation of the province. Coins of Arcadius and Honorius, indeed, show that settlement continued on the Lawe "after the withdrawal of troops from the Wall, under Magnus Maximus, until the final burning in the fifth century".[2]

In addition to coins, pottery, inscribed and sculptured stones, and an interesting series of lead seals, the excavations of 1875-7 produced a wealth of small objects which it is impossible to catalogue here. While the bulk of these, principally personal ornaments, are such as might be found on any Roman site, mention might be made of a number of fine Belgic enamels,[3] two penannular broaches of so-called "Welsh" type,[4] an inscribed enamelled bronze fragment,[5] an S-brooch,[6] a bronze lamp,[7] and a bone weaving-frame,[8] all of which have the added interest attached to rare objects. The occurrence of so many unusual and beautiful bronzes points to an active and thriving sea-port.

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(1) Plate XLVIII, nos. 18-21.

(2) Richmond. loc. cit., p. 101.

(3) AA., 4, xi, pp. 193-205.

(4) ibid.

(5) ibid., xii, pp. 325 f.

(6) PSL., xxii, 1907-9, p. 62.

(7) ibid., xxi, 1906-7, p. 135.

(8) PSAN., 3, viii, pp. 146-7.

While the excavations were in progress, trenching for building purposes discovered a Roman cemetery 200-300 yards south of the fort and several acres in extent, covering the ground between Roman Road and James Mather Street to the east and west, and Julian Street and Bath Street to the north and south. Four tombstones[1] came from this area from 1876 to 1885, those of Regina and Victor being remarkable for the artistic skill displayed in the treatment of the funeral relief. The two dateable memorials are third century, but earlier burials are suggested by the discovery of a grave-urn in Bath Street containing a coin of Domitian.[2] It is possible that we have here a clue to the course taken by the Wrekendike between the fort and the crossing of the Cut, for it was common, tho' not universal, practice in Roman times for the cemetery to flank the main highway.[3] We note also that at South Shields the altars are not concentrated in one area, as in the case of the tombstones, and lie much nearer to the ramparts of the station,[4] suggesting an observance of the regulation that the dead should be buried outside the boundary of the settlement.

Further discoveries on the Lawe, coins of Valens[5] and Constans,[6] a well within the principia,[7] and an urn of coarse ware,[8] invite little comment. Apart

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(1) EE., IV, 678 (90); ibid., 718a (92); ibid., VII, 1001a (96); ibid., 1002a (97).

(2) AA., 2, x, p. 277.

(3) As at the Saalburg, and at Carrawburgh and Chesterholm.

(4) Plate XXVII.

(5) PSAN., 4, vi, p. 352. (6) ibid., 3, i, p. 118.

(7) PSAN., 4, vi, p. 176.

(8) ibid., 4, vi, p. 200.

from two bronze skillets,[1] a votive bowl inscribed to Apollo Anextlomarus,[2] and a coin of Faustina,[3] the discoveries on Herd Sands which lie below the fort appear to be due largely to the dredgings from the Tyne in the vicinity of pons Aelius deposited after 1903,[4] and these will be more fittingly considered elsewhere.

A minor discovery was made in the early months of 1937 during repairs to the sea-wall opposite the Pilot Office, Green's Place. Some 25 feet below the modern street level, the workmen uncovered two drains formed of tiles 2 inches thick, which would seem to have emanated from the north angle of the fort and to have discharged into the river.[5]

SUMMARY.

Although the evidence is far less than could be desired, there seems reason to believe that the original Roman occupation of the Lawe took place in the first century. Of the nature of this occupation nothing can be asserted with confidence, but it is probable that in the Flavian period a military outpost was established on the promontory to maintain contact with east coast shipping.

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(1) AA., 4, xiii, p. 139.

(2) EE., VII, 1162 (108).

(3) PSAN., 2, iv, p. 11.

(4) NCH., xiii, p. 514.

(5) I owe this information to Mr. F. M. Willers.

Linked with the hinterland by a road to-day known as the Wrekendike, the fort at South Shields is the natural termination of the branch road leaving Dere Street three miles north of Binchester, while between these two first century sites we have the suggested Flavian castellum at Chester-le-Street.

With the definition of the frontier under Hadrian, South Shields attained considerable importance as the seaport for the eastern flank of the Limes. If the timbering reported from Herd Sands represented, as Bosanquet thought, the remains of Roman jetty-building,(1) we may picture vessels discharging their cargoes at the mouth of the Gut for transfer to river-craft in Jarrow Slake.(2) Whether the additional troops brought to Britain in Hadrian's reign were transported direct to the Tyne we are not in a position to say, but this is not unlikely in view of the discovery of a slab commemorating the arrival of a vexillation from Germany under Pius.(3) In the latter connection the wealth of East Gaulish pottery from the site shows that the advance into Scotland in the Antonine period did not diminish the trade between South Shields and the Continent.

The size and garrison of the second-century fort on the Lawe are alike unknown. In the early third century,

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(1) AA., 4, xiii, p. 140.

(2) For coins discovered hereabouts cf. Hodgson. op. cit., pp. 29-30.

(3) EE., IX, 1163.

however, the defences were laid out anew to accommodate the fifth ~~quingenary~~ cohort of Gauls and an unusual number of storehouses. The historical evidence connects these arrangements with Severus' Scottish campaign of 209-211 A.D., and epigraphy allows the suggestion that at the conclusion of this expedition Caracalla and Geta "embarked their army for Caul at or near South Shields".(1) When this activity was over the garrison provided a new water supply under Severus Alexander.(2)

With the final withdrawal from Scotland and the return to the Hadrianic frontier limit, the commercial importance of South Shields received a new impetus. The civil settlement, seemingly already in existence in the first century, extended in size and prosperity, becoming a metropolis of trade for the north-east coast whose wealth and cosmopolitan character may be judged from the tombstones of Regina and Victor.(3) Communication inland was maintained by the Wrekendike, and other roads reported to have been discovered on the Lawe(4) may be no more than the street-ways of an ordered town-plan. The supposed highway southwards to Hylton Ford and thence along the coast on the line of the Salters' Track, still awaits confirmation. To balance the undoubted import of pottery, coins and enamels, various exports - corn, cattle, wool, iron and

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(1) AA., 2, xx, p. 62. cf. CIL., 496 (84).

(2) EE., IX, 1140 (105). (3) EE., IV, 718a (92); VII, 1002a (97).

(4) Hodgson. op. cit., p. 29.

lead - have been suggested[1] but this is going rather beyond the limits imposed by the available evidence.

The fourth century is a turning-point in the history of the site. Prior to this, danger from sea-borne invasion was practically negligible, and the duties of the garrison would seem to have consisted principally of harbour supervision and the provision of convoys. In the Constantian age, however, east coast defences against Saxon raids were beginning to be required, and the rebuilding of the east-gate at South Shields has been tentatively connected with the general reorganisation of the frontier at this period.[2] Here, too, the medieval name of the site comes into prominence. While the element caer is commonly known to suggest a fortification of Romano-British date, Mr. Richmond has suggested to me that there is an etymological connection between Urfa and Arbeia, the latter a station in the Notitia list.[3] If this is so, the fourth century garrison at South Shields would be the numerus barcariorum Tigrisiensium, whose presence elsewhere in the north is epigraphically attested,[4] and in support of the identification it might be said that, with previous experience on the Lune, no corps could be better qualified for navigating the dangerous rocks and shoals of Tynemouth.

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(1) ibid., p. 30.

(2) AA., 4, xi, p. 100.

(3) OC.XL. 22.

(4) At Lancaster. CIL., 285.

Following the devastation of the north at the time of the Picts War, coins and pottery indicate re-occupation under Theodosius lasting until the final catastrophe in the fifth century. The nature of this occupation is obscure owing to the slender evidence provided by structural remains, but settlement on the Lawe must have been insecure, under the constant menace of piratical raids. With the decline in trade, activity in the harbour must have been practically limited to the naval manoeuvres of Count Theodosius' fleet, while in addition to protecting the river-entry, and access thereby to the forts in county Durham, the garrison ~~would be~~ may have been occupied in maintaining the signal-station system ~~which seems to have extended~~ along the Durham coast.(1) This basic change in purpose reflects the transformation of the entire northern frontier in its final phase from a policy of consolidation to a losing struggle for existence.

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(1) pp. 327-330.

DECORATED SAMIAN WARE FROM SOUTH SHIELDS

(Plate ~~XXXIX~~ XXXVII, nos. 7-10).

7. F. 37. South Gaul. Trifid tongue-terminal bent left between wavy lines. Foliage scroll (Knorr, Rottweil, Pl. VI, fig. 4) employing early polygonal leaf (cf. Brecon, S. 36). Running animals in concavities of scroll. Period: Domitian. cf. Archaeologia, LXIV, 1912-13, Pl. XXIV no. 37, and p. 305.

8. F. 37. South Gaul. Ovolo with trifid tongue-terminal. Decoration in panels bordered by wavy lines. Bird as used by L COSIVS VIRILIS (Knorr, 1919, Taf. 27, 6) and MASCVLVS (ibid., Taf. 53,9). Poor glaze and workmanship. Period: Domitian-Trajan.

9. F. 37. South Gaul. Ovolo with trifid tongue-terminal. Upper frieze: running lion over grass tufts, fan-shaped plant, tendril ending in pointed leaf and part of the oblique wavy line decoration. Lower frieze: festoons and tassel. Period: Domitian-Trajan. cf. Archaeologia, loc. cit., no. 38, and p. 305.

10. F. 37. South Gaul. Lower frieze showing running animal over grass tufts and fan-shaped plant. Period: Domitian-Trajan. cf. Archaeologia, loc. cit., no. 39, and p. 305.

POTTERS' STAMPS ON SAMIAN WARE FROM SOUTH SHIELDS.

1.	ADVOCIS M	F.33. ADVOCISVS of Lezoux and Lubié. Period: Hadrian-Antonine.
2.	AI[IST]VI	F.18/31. AESTIVVS of Lezoux. Period: Hadrian-Antonine.
3.b.	AMMI	F.18/31. AMIVS or AMMIVS of Lezoux. Period: Hadrian-Antonine.
4.	BANV[(retro)	F.37. BANVVS of Lezoux and Lubié. Period: Hadrian-Antonine.
5.	BELINICCI·M	F.33. BELLINICCVS of Lezoux. Period: Antonine.
6.	BELS[VS F]	F.18/31. BELSVS of Heiligenberg and Rheinzabern. Period: Hadrian-Antonine.
7.	[CAP]ITOLINVS	F.79. CAPITOLINVS of Rheinzabern. Period: Antonine.
8.	CARVS[SA·]	F.18/31. CARVSSA of Lezoux. Period: Domitian-Antonine.
9.	[C]ATVLLI M	F.33. CATVLLVS of Lezoux. Period: Hadrian-Antonine.
10.	CELSI·M	F.33. CELSVS of Lezoux. Oswald identifies the same stamp at York with the South Gaulish potter CELSVS, querying whether the latter worked at Lezoux. The fabric of this sherd suggests either that this hypothesis must be accepted, or that there were two CELSI at La Graufesenque and Lezoux respectively. Period: Hadrian.
11.	CINNAMI (retro)	F.37. CINNAMVS of Lezoux and Lubié. Period: Trajan-Antonine.
12.b.	CLEMENTI	F.18/31. CLEMENS of Rheinzabern and Westerndorf. Period: Hadrian-Antonine.
13.	COMVS (retro)	F.33. COMMIVS or COMVS of East Gaul. Period: Antonine.
14.	DAGOMAR F	F.18/31. DAGOMARVS of Lezoux. Usually dated Domitian-Trajan, but his stamp has been found on this form at Birdoswald (Birdoswald, fig.12, no.7).
15.	[D]IVIX[	F.37. DIVIXTVS of Lezoux. Period: Trajan-Antonine.
16.b.	D[O]VIICC[V]S	F.33. DOECCVS or DOVECCVS of Lezoux and Lubié. Period: Hadrian-Antonine (cf. PSAN., 3, i, p.118).

Note. Stamps pre-fixed by the letter b. are to be found in the Black Gate Museum, Newcastle. The remainder are in the Public Library and Museum, South Shields.
Oswald's dating has generally been accepted.

17. [D]IICCVS (retro) F.37. ibid.
18. EVRITVS F F.31. EVRITVS of Rheinzabern. Period: Antonine.
19. GEMEN·I·M F.33. GEMENVS of Lezoux. Period: Antonine.
20. GENITOR F F.18/31. GENITOR of Lezoux. Period: Domitian-Antonine.
21. GRACA F F.33. GRACA of ?Heddernheim. Period: Hadrian-Antonine.
22. IANVAR[IS·F] F.18/31. IANVARIS of Lezoux. Period: Domitian-Hadrian.
23. ILLIANI·M F.33. ILLIANVS of - .
24. IVLIANVS (retro) F.37. IVLIANVS of Rheinzabern and Westerndorf. Period: Late Antonine.
25. IVLIVS F.37. IVLIVS of Rheinzabern and Jebsheim. Period: Late Antonine-Early Third Century.
26. IVST[F.37. IVSTVS of Lezoux. Period: Hadrian-Antonine.
27.b. LVGIITVS F.33. LVGETVS of East Gaul. Period: Hadrian-Antonine.
28. MACR·IA·NI F F.18/31. MACRIANVS of Lezoux. Period: Trajan-Antonine.
29. MACRINI[·M] F.33. MACRINVS of Lezoux. Period: Hadrian-Antonine.
30. MACRINI F.18/31. ibia.
31. MAINACNI F.18/31. MAINACNVS of Lubié. Period: Antonine.
32.b. MAIORIS F.33. MAIOR of Lezoux. Period: Trajan-Antonine.
33. MARCELLINI F F.33. MARCELLINVS of Lezoux. Period: Hadrian-Commodus.
34.b. MARCI M (retro) F.38. MARCVS of Lezoux. Period: Hadrian-Antonine.
35.b. MARCI[F.33. ibia.
36.b. MARCI·M F.33. ibia.
37.b. MARTI·M F.33. MARTIVS or MARTIO of Lezoux. Period: Domitian-Antonine.
38.b. MARTII·O F.33. ibid.
39.b. [M]ARTIVS F.33. ibid.
40. MARTIO M F.79. ibid.
41. MARTI·M F.33. ibid.
42.b. MASCILLIO F.18/31. MASCELLIO of Lezoux. Period: Hadrian-Antonine.
43.b. MATINA F.31. MATINA or MATINVS of Rheinzabern. Period: Late Antonine. Not recorded from Britain in the Index.
44. MAXMIN F.33. MAXIMINVS of Lezoux. Period: Trajan-Hadrian.

45. NAMI[LIA]NI M F.18/31. NAMILIANVS of Lezoux. Period: Antonine.

46. PARENTINV[S] F.31. PARENTINVS of Trèves. Period: Late Antonine.

47. PATERCLINI F.33. PATERCLINVS of Lezoux. Period: Hadrian-Antonine.

48. PATERN[FE] (retro) F.37. PATERNVS of Lezoux. Period: Trajan-Antonine.

49. POTTACI F.33. POTTACVS of Lezoux. Period: Antonine.

50. POTTACI F.33. Lubié.

51. QVADRATI· F.79. QVADRATVS of Lezoux. Period: Trajan-?Hadrian.

52.b. QVINTI·M F.31. QVINTVS of Lezoux. Period: Hadrian-Antonine.

53. REGVLI·M F.31. REGVLVS of Lezoux. Period: Trajan-Hadrian.

54. SACRILLI F.33. SACRILLVS of Lezoux. Period: Antonine.

55.b. SCOPL[I·M] (1) F.18/31. SCOPLVS of Lezoux. Period: Hadrian-Antonine.

56.b. SECVNDINI F.33. SECVNDINVS of Lezoux. Period:?Antonine.

57. SENILA F.33. SENILA of Lezoux. Period: Antonine.

58. SEVIIRIANV[S F] F.31. SEVERIANVS of Rheinzabern. Period: Antonine.

59. TITTV F.27. TITTIVS of Lezoux. Period: Domitian-Antonine.

60. VENERAN[D] F.79. VENERANDVS of Toulon-sûr-Allier. Period: Antonine.

61. VICTOR F F.31. VICTOR of Blickweiler, Rheinzabern, and Trèves. Period: Hadrian-Late Antonine.

In addition, Bruce(AA., 2, x, pp.273-4) and Hoeppell (NHT., VII, pp.27-31) record the following stamps which I have not been able to trace:

62. OF ATICI ATTICVS of La Graufesenque. Period: Nero-Domitian.

63. ATTICI ATTICVS of Lezoux. Period: Antonine.

64. CARATILLI CARATILLVS of Lezoux. Period: Antonine.

65. CASVRI MA (?M) CASVRIVS of Lubié. Period: Hadrian-Antonine.

66. CELSIA M CELSIANVS of Lezoux. Period: Hadrian-Antonine.

67. CIRRVS F CIRRO or CIRRVS of Lezoux. Period: Trajan-Antonine.

68. LVPI M Probably LVPVS of Rheinzabern rather than(as Oswald) the potter of the same name working at La Graufesenque.

(1) cf. Macdonald. Roman Wall in Scotland, note p.459.

69. NONI M NONVS. Not recorded in Britain.
70. SABELLVS SABELLVS or SABELLIVS of La Madeleine. Period: Trajan-Hadrian.
71. TAVRIANI TAVRIANVS of Lezoux. Period: Hadrian-Antonine.

COARSE POTTERY FROM SOUTH SHIELDS (Plate XLVIII nos.11-21).

11. Mortarium, pipeclay fabric, sparse grit. Hatched stamp. The profile resembles Ilkley, Pl. XXIX, 19.
12. Mortarium, red fabric, cream slip, large sparse grit. Stamped VIATOR (Plate XLIX, no.16). The same stamp occurs at Templeborough (Templeborough, Pl. XXXVIII, nos.12 a-f), Corbridge (unpublished), Colchester (Museums, 1920, p.19, no.11 and p.53), and Wilderspool (Wilderspool, p.64).
13. Mortarium, buff fabric, sparse grit. Variant of Wroxeter, 1912, fig.19, 30. Second century.
14. Mortarium, red with cream slip. Stamped AMA (Plate XLIX, no.17).
15. Mortarium, brick-red fabric, buff slip. Stamped [AM]AN[VS]
16. Mortarium, dirty-white fabric, black grit. Stamped with double band of hatching. cf. Wroxeter, 1912, fig.19, no.46. Second century.
17. Hammer-head mortarium, hard pipeclay fabric, heavily charged with fine black grit. Diam. 11 in. cf. Lancaster, Plate XLV, no.18. Late third to fourth century.
18. Painted wallside mortarium. Orange-red chevron decoration. Crambeck Type 7.
19. Platter, yellowish-white ware, red-painted decoration on the rim. Diam. 10½ in. Crambeck Type 10. c. 370-395 A.D.
20. Hemispherical flanged bowl, white fabric, ornamented with hook-pattern in red paint. Diam. 8 in. Crambeck Type 5.b. c.370-395 A.D.
21. Platter, whitish fabric, red-painted chevron pattern. Diam. 6⅜ in. Crambeck Type 10. c.370-395 A.D.

MORTARIA STAMPS.

1.]MN[(AA., 2, x, pl. f. p.274, no.13).

2. [A]NAN[VS] (Plate XLVIII, no.15; AA., loc.cit., no.14).

3.]INTRM (AA., loc.cit., no.15).

4. ANANVS (Plate XLIX, no.15; AA., loc.cit., no.16). cf. Binchester, Plate XLII, no.9.

5. [A]NAN[VS] (AA., loc. cit., no.17). cf.no.2.

6. IV[
IVE2[(AA., loc.cit., no.18).

7. CVNO[
VICODV[(AA., loc.cit., no.19).

8. AMA (AA., loc.cit., no.20). cf.Plate XLVIII, no.14, and Plate XLIX, no.17.

9. ANANVS[] (AA., loc.cit., no.21). cf.no.4.

10. REGALIS (retro) (AA., loc.cit., no.22).

11. VIATOR (AA., loc.cit., no.23). cf.Plate XLVIII, no.12 and Plate XLIX, no.16.

12. FELICIO[(AA., loc.cit., no.24). cf. Benwell, 1926, fig.6.B; Ambleside, 1914, fig.26. The same stamp has also been found at Chesters and Corbridge.

13. [L]OCCI·PR (retro) (AA., loc.cit., no.25). cf. Binchester, Plate XLIX, no.1.

14. KAD cf. Newstead, fig.35, no.4; Chesters, PSAN., 2, vi, f. p.146. Many examples of the stamp have been found at Corbridge.

AMPHORAE STAMPS.

1. I·C (AA., loc.cit., no.26).

2. QPPHRYXI Plate XLIX, no.19. (AA., loc.cit., no.27). cf. Wilderspool, p.63.

3. CIIB (AA., loc.cit., no.28).

4. MMM Plate XLIX, no.20.

5. E IVNI M[ELISSI]
ET M[ELISSI] cf.Piercebridge, supra p.

GRAFFITI.

A. On Terra Sigillata.

1. XXII
2. REMVLI (EE., III, 203 c).
3. X
4. NEPV
5. LINDITI/AV (EE., III, 203 a).
6. V
7. LVC
8. L or V.
9. XXVV (EE., III, 203 b).
10. PNM
11. B
12. H
13. VIM
14. PIIM (EE., III, 203 f).
15. RVFI (AJ., xxxviii, p.280).

B. On Amphorae.

16. BELSIM (EE., III, 140 a).
17. ..M VLES (ibid., 140 b).

C. On Tiles.

18. VOO/OSYY (ibid., IV, 704 a).
19. CALI/S/BVS (ibid., 704 b).
20. CALVI/FILIA X (ibid., VII, 1144 a).
21. TEGLA (ibid., 1144 b).
22. VALERIANVS (ibid., 1144 c).

D. On Coarse Ware.

23. IVL...
24. ..ESTR (AJ., loc.cit.).

E. On Glass.

25. ..STV... (ibid.).
26. DIA... (ibid.).

A. MISCELLANEOUS EARTHWORKS AND SETTLEMENT SITES

Barnard Castle.

At Barnard Castle, on the north bank of the Tees, a Roman fort has been postulated.(1) A coin of Trajan was found in the churchyard in 1824,(2) and Bailey states that many other coins were found in Bridge-gate, but passed into private ownership and could not be traced. He adds a fragment of pottery discovered when the Roman road was excavated at the gas works in 1886, Roman broached stones in the walls of the Norman castle, and "several small images, apparently household gods, together with several sculptured stones bearing a boar, significant of the 20th Legion".(3)

Although some occupation of the bridge-head position is not unlikely, the available evidence is, as yet, insufficient to admit a permanent settlement at Barnard Castle. Isolated coins and pottery may represent no more than traffic along the road from Bowes to Binchester.

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(1) Bailey. "Barnard Castle: a Roman Station". Teesdale Mercury, 1911. A revision of his article in the same paper printed September, 1897.

(2) Lewis. Topographical Dictionary of England, 5th ed. 1845, s. v.

(3) loc. cit. Since the boar was the badge of Richard, duke of Gloucester, who did building at Barnard Castle, the attribution of these stones to the Roman period will not do (AA., 4, xiv, note p. 197).

Durham: Maiden Castle.

Notices of this earthwork are given by Stukeley,[1] Cade,[2] Hutchinson[3] and Surtees,[4] and in the Victoria County History.[5] Cade records the discovery of Roman coins "some of the lower empire" in and around the site, and adds that the "ground-plot and ramparts of the watch tower which served for signals to this station, are visible and almost entire at the entrance of Cilligate Moor".[6] Surtees notes that during the excavation of the rampart in the early nineteenth century "several squared stones were found, and one which could scarcely be taken for anything else than a rude and defaced Roman altar".[7]

Typologically, the plan of Maiden Castle suggests affinity with the earthworks at Eston Nab and Boltby Scar in Yorkshire, originally supposed to represent Roman workmanship, but dated by Elgee to the Bronze Age.[8] Excavation is urgently required on this promising site; meanwhile in spite of Cade and Surtees, there seems no reason to claim a Roman origin.

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(1) Iter Boreale (Itin. Curiosum), p. 70.

(2) Archaeologia, VII, pp. 77-8 and Pl. VI.

(3) Durham, II, pp. 308-310.

(4) Durham, IV, pp. 89-90.

(5) I, p. 348.

(6) An aureus of Nero is reported to have been found on this moor. Longstaffe, p. 67.

(7) op. cit., p. 90.

(8) Early Man in North-East Yorkshire, pp. 154-7.

Fulwell.

In 1759 the excavation of a "mound" 25 yards long and 1½ yards high (? a barrow) in a quarry at Fulwell, a mile north of Wearmouth, disclosed a skeleton interred in a cist formed of four large flat slabs.(1) Bronze Age burials are not uncommon in this area,(2) and the above discovery would hardly merit attention here but for the fact that two Roman coins are said to have been found on the south side of the skeleton, near the right hand. At Halsham in Holderness a "tumulus" opened in the early nineteenth century produced urns and a number of copper coins,(3) while at Wetwang, near Driffield, potsherds and a coin of Constantius, were recovered by Mortimer from the centre of a mound called Mill Hill.(4) There seems, therefore, to be a suggestion of the continuation of barrow interments into the Roman period, but the problem is not one which can be satisfactorily discussed within the limits of this chapter.

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(1) GM., Oct. 1763, p. 492.

(2) Surtees. Durham, Sunderland and District Section, 1908, p. 76.
The late Mr. G. Bennett Gibbs ~~sent~~ gave me information of the discovery of a stone cist containing a skeleton and two vessels, one an "encrusted" cinerary urn, during the construction of Atkinson Road in 1927. Full particulars of this discovery were sent to Mr. O. G. S. Crawford. The stone forming the grave-cover is said to have been inscribed, but as no reading was obtained, this must remain dubious.

(3) Clarke. Gazetteer of Roman Remains in East Yorks, s.v; cf. also Fimber, s. v.

(4) Mortimer. Forty Years' Researches in British and Saxon Burial Mounds of E. Yorks., pp. 205-6.

In 1820 "immediately above the excavation of the Limestone at Carley Hill Quarry, which is situated about a quarter of a mile West of Fulwell Hill ... and about 200 yards West of Hill House" a bronze figure was found in association with skeletal remains and limpet shells, and presented to the Newcastle Society of Antiquaries' Museum by Dr. Clanney.(1) The figure, $3\frac{1}{2}$ inches high, is that of a male, clad in a tunic which covers the left shoulder only, the right being bare, and reaches almost to the knees. The face is bearded, and the head covered by a peaked bonnet. The legs are bare, but the feet and ankles booted, while the hands have been pierced to carry implements now detached and lost. Petch says that "there does not seem to be much reason for attributing to this Fulwell figure a Roman origin",(2) but, on the contrary, the bronze can hardly be anything else than a representation of the Syrian god, Jupiter Dolichenus.(3) The cap, short tunic, and ankle-boots all distinguish the dress of this deity on a plaque of silvered bronze from Kömlöd in Hungary,(4) and if we add a double axe to the right hand, and a thunderbolt to the left hand of the Fulwell figure, the parallel is practically complete. Dedications to Dolichenus, whose cult seems to be restricted to the military districts of

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(1) AA., 1, i, Donations to the Society, p. 13.

(2) Petch, p. 28.

(3) As labelled in the Museum.

(4) cf. Macdonald's valuable paper in PSAS., xlvi, pp. 268-276.

Britain, cease altogether before 300 A.D.,[1] but from the nature of the find it is not possible to apply this evidence for dating occupation at Fulwell.

In 1891 six antoniniani, five of Victorinus, and one of Claudius Gothicus were found at Fulwell.[2] The exact provenance is not recorded.

Further discoveries have been made within recent years during the working of the limestone quarries west of ~~Fulwell.~~ the village. In 1927 a number of sherds were brought to light in the Southwick quarry at a depth of 1 foot below the surface, and near a V-shaped pit containing miscellaneous refuse including limpet-shells.[3] By courtesy of Mr. H. Sewell, I have been able to handle these sherds, now kept in the Manor Office, Bridge Street, Sunderland, and to make drawings of the significant pieces (Plate XLVIII, nos. 5, 6, 7, 9 and 10).

5. Cooking-pot, calcite-gritted ware with wheel-made rim and internal groove of Huntcliff type. Diam. 13½ in. cf. Huntcliff, fig. 40, nos. 19-21. Late fourth century.

6. Cooking-pot, similar fabric. cf. Huntcliff, fig. 40, no. 16. Late fourth century.

7. Base of cooking-pot, diam. 3 3/10 in. Hard grey ware, light core.

9. Flanged bowl, hard pipeclay fabric, original slip burnt away. Diam. 9 in.

10. Cooking-pot, calcite-gritted ware. Huntcliff type, lacking internal groove. Diam. 10 in. Huntcliff, fig. 40, no. 22.

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(1) Caerleon Catalogue, p. 18.

(2) PSAN., 2, v, p. 76.

(3) JRS., xvii, p. 189.

In addition, two querns and an amphora-handle stamped MAT were found. For the latter, illustrated on Plate XLIX, no. 18, I have to acknowledge a note supplied by Miss M. V. Taylor to Mr. G. Bennett Gibbs.

"The stamp has been found at Monte Testaccio ... and is described in the Corpus Inscr. Lat. xv, 2, No. 2668, b, and it seems to be the same stamp as T A M (CIL., xv, 2, No. 2653, b) also from Monte Testaccio, in one example of which the year 160 A.D. and "Cordubae" is painted, showing that the amphora was made in Cordova about that date".

The interpretation of the inscription is uncertain. It is either (M. A ( ). T ( ), or Matt ( ) - in any case a name".

In July 1933 a few more fragmentary sherds including the rim of a flanged bowl is hard grey ware (Plate XLVIII, no. 8), and a spindle-whorl, were found in the Southwick quarry. This later discovery does not seem to have been previously recorded.

Gateshead.

Although Camden[1], and later antiquaries, ~~have~~ postulated the existence of a Roman station on the south bank of the Tyne opposite Pons Aelii, the only recorded discovery of the period, apart from "Roman stones" and "hand-mills" referred to by Stukeley,[2] is a coin hoard found in Church Street in 1790;[3] as Petch has said, this "may just as well be

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(1) Britannia, p. 606.

(2) Iter Boreale, (Itin. Curiosum), pp. 69-70.

(3) Longstaffe, p. 63. The exact content of this hoard is unknown, but several of the coins are said to have been of Hadrian.
Mr. G. H. Askew informs me that the 12 Roman coins presented to the Black Gate Museum by Mr. H. F. Orwin of Gateshead in 1924 (PSAN., 4, i, p. 306) are not local.

evidence of a purely civil settlement at the bridgehead".(1)

Regarding the date of the Tyne crossing, Haverfield writes: "it is doubtful if there was any permanent bridge here before Hadrian;" while "coins from the river-bed at Newcastle point to traffic near the site of the bridge at least as early as Trajan's time, ... they may be evidence merely of the passage of boats to and fro; a ferry, or a pontoon bridge such as Roman engineers were accustomed to build, would meet temporary needs."(2) The coins under consideration come from the Tyne in, or near, the remains of the Roman bridge, and from dredgings deposited off Herd Sands and Trow Rocks from 1903 onwards. Analysis of the latter(3) gives the following figures:

1 Republican den; ? Augustus: 1 Æ; Nero: 2 den; Vitellius: 1 den; Vespasian: 3 den., 2 Æ; Domitian: 4 den., 1 Æ; Nerva: 1 den; Trajan: 1 aur., 5 den., 3 Æ; Hadrian: 4 den., 5 Æ; Antoninus Pius: 2 den., 5 Æ; Faustina I: 1 den; M. Aurelius: 4 den., 3 Æ; Faustina II: 2 den., 4 Æ; Cordian: 1 ant; Valerian: 1 den; Victorinus: 3 ant; Tetricus (sic): 1 ant.

Haverfield's list, which omits denominations, gives a false impression as far as the proportion of coins deposited in the first century is concerned, for the early denarii are just as likely to represent second century votive offerings

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(1) Petch, p. 21.

(2) NCH., xiii, p. 507.

(3) Cf. PSAN., 3, i, pp. 94, 102, 118, 273-4; ii, p. 189; iii, p. 193; iv, pp. 11, 83, 124, 228, 288; v, pp. 3, 161, 188; vii, pp. 6, 83, 213

Æ
Æe of Vespasian and Domitian, however, certainly suggest the existence of a crossing before the time of Hadrian.

Gateshead Fell.

An earthwork, from which fragments of querns were recovered, is recorded on Gateshead Fell. "The place was situated in a parcel of ground allotted to Mr. Henderson, at the time of the enclosure of Gateshead Fell. The west side of the entrenched ground measured 220 yards, the north end 66 yards, and the breadth of the area from east to west at the south end, and from the N. E. to the S. E. corner 33 yards. An oblong entrenched area, 30 yards long and 14 broad, was also formed on the east side of it; at its south end there was a circular enclosure, 14 feet in diameter, formed with stones, each 3 feet long, and set on edge; and at 21 yards from the west side an entrenched line led to a spring opposite the north-west corner."(1) Nothing further is known about this earthwork, but the description suggests a native settlement of the well-known Ewe Close type; the latter occupied in the Roman period.

Horden.

A mile to the north of Castle Eden Dene mouth, and immediately south of the beck called the Blackhills Gill, Dr. Trechmann excavated a neolithic chipping site in 1913.

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(1) AA., 1, i, Donations to the Society p. 4.

"Several objects traceable to Roman and later times were found on the bare ground, some fragments of Roman mortaria ... The rest of the pottery, all in small fragments, are part of the rims of ordinary black ware, and fragments of a very rough hand-made pottery in which the clay has been mixed with quartz before burning."(1)

Jarrow.

At Jarrow "an oblong square of about 3 acres" writes Hodgson, (2) "overlooking the estuary of Jarrow Slake and Tinmouth harbour, and fronting on the south the bank of the navigable stream called the Don, is on good grounds, supposed to have been the site of a station or fortified town of the Romans". The "good grounds" consist of a denarius of Vitellius, found in the core of a wall in 1812, and various foundations and pavements catagorically assigned to the Roman period. Surtees, while noting that the two inscribed fragments once built into the Saxon church at Jarrow(3) might have found their way from South Shields, accepted the existence of the fort,(4) as did the Ordnance Surveyors.(5)

In 1935 the Durham University Excavation Committee conducted a local excavation near the Parish church of

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(1) NHT., IV, Pt., 1, 1914, p. 79.

(2) Hist. of Northumb., III, pt. II, p. 230.

(3) CIL., 498 a-b (106).

(4) Durham, II, p. 68.

(5) O. S. Map of Roman Britain.

SS. Peter and Paul, on the site of Hodgson's supposed station. Trenches were cut to the south of the church outside the boundary wall of the school playground, but no occupation earlier than the 13th century was revealed.(1)

Doubt must be cast, therefore, on the existence of a fortification at Jarrow. Hodgson's ramparts cannot now be detected, and it is not unlikely that Saxon foundations have been mistakenly attributed to the Roman period. A coin of Nero found near the site of Bede's Monastery in 1924,(2) and an oil-lamp from the ballast of a railway embankment at East Jarrow,(3) need suggest no more than casual visitation of the site, or the activities of Roman shipping in the Slake.

Legs Cross.

Slight entrenchments were detected by Maclauchlan on the elevated ground at Legs Cross 4 miles north of Piercebridge.(4) Their nature and date has not been established. Wooler believed that the stone at the base of the cross, which stands on the west side of Dere Street, bore Roman tool-marking,(5) but corroborative evidence is lacking.

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(1) JRS., March 1936, p. 343.

(2) PSAN., 4, i, p. 286.

(3) ibid., iv, p. 47; JRS., xix, p. 186.

(4) Memoir, p. 2.

(5) PSAN., 3, iii, p. 71.

Marsden.

In 1883 the Rev. Thomas Stephens reported the discovery of Roman pottery, etc., in a cutting on the road from Marsden to Harton, then under construction.(1) From the statement that the road east of the cutting intersected an old quarry, the site would appear to have lain in the neighbourhood of Marsden Hall, from whence a commanding view of the coast from Souter Point to Tynemouth can be obtained. Occupation was attested, for, in addition to "pieces of the red lustrous, or what is commonly termed Samian ware", animal bones, shells, and part of a bronze nail were unearthed.

Rowley.

The three conspicuous earthworks at Rowley, near Esh, are described in detail by Maclauchlan, and the suggestion is put forward that they represent a Roman signal post(2) communicating with Dere Street, whose course on the opposite side of the Hedleyhope burn is visible for some distance from this point. One of the earthworks encloses the ruins of a small chapel and the appearance of all three suggests a mediaeval date. No doubt Rowley was originally part of the Manor of Esh.(3)

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(1) ibid., 2, i, pp. 93-4.

(2) Memoir, pp. 10-12. Cf. also Hutchinson. Durham, II, p. 445; Surtees. Durham, II, p. 342; VCH., I, pp. 351-2.

(3) Maclauchlan. Memoir, p. 11.

Rye hope.

Roman coins are reported to have been found near Rye hope Bridge in 1927.(1)

Two years later three sherds were found at a depth of 6 feet in a sand quarry about a quarter of a mile south of Rye hope. By kind permission of the late owner of the quarry, Mr. H. Nelson, I have been able to examine and draw these vessels (Plate XLVIII, nos. 2-4).

2. Mortar-shaped bowl, buff colour (the painted slip has been burnt off), with twin grooves on the rim. Diam. 8 in. Cf. Huntcliff, fig. 40, nos. 1-5. Late fourth century.

3. Similar, diam. 7¾ in.

4. Base of cooking-pot in calcite-gritted ware. Huntcliff type. Late fourth century.

All three sherds are to be attributed to the "Signal-Station" period. Nos. 2 and 3 are complete, confirming the evidence of associated animal bones for an occupation site in the vicinity. No structures were found with these remains.

Sadberge.

Taylor's supposed Roman camp at Sadberge(2) is not born out by any visible remains and I can find no record of Roman finds in the vicinity of the place. Moreover, archaeological evidence of the conjectured Roman road through Sadberge is still to seek(3).

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(1) JRS., xvii, p. 189. The coins are in the possession of Mr. H. Bell, but I have not been able to obtain leave to examine them.

(2) Taylor. History of Sadberge, p. 13 ff.

(3) Cf. R. II.

Seaham.

Pottery, including fragments of Samian ware, is said to have been found at Seaham in the mid-nineteenth century,[1] but the exact locality of the discovery is not recorded. A coin of Severus and one of Constantine were found during excavation for houses in 1907,[2] but it is doubtful whether the quern and ancient road revealed in the course of extensions to the Seaham Harbour cemetery in 1900[3] are of the Roman period.

It has long been realised, however, that the Saxon Church of S. Mary at Seaham contains Roman worked stones.[4] Mr. Richmond, who had previously examined the masonry with the Rev. T. Romans, has pointed out to me that two Saxon periods of building are to be distinguished in the north and south walls of the nave. This distinction is clearly marked by a herring-bone course on the outer face of the north wall (Fig. 29). The first period walling, below the herring-bone course, is composed of small, roughly-dressed blocks typical of Signal-Station masonry.[5] Many of the stones have been burnt, and the irregular distribution of these on the inner face of the north wall

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(1) PSAN., 2, x, p. 19.

(2) Newcastle Chronicle, 6 : 3 : 07.

(3) PSAN., 2, x, p. 19.

(4) ibid., viii, p. 56. Cf. Aird's observations on the masonry revealed when the plaster was removed from the inner north wall of the nave, 1909-1914 (Proc. Sund. Antiqu. Soc., XV, pp. 7-19).

(5) e.g. Huntcliff, fig. 37; Goldsborough. AJ., LXXXIX, Pl.

suggests that this burning was prior to the re-use of the masonry in the Saxon structure.

Above the herring-bone course the character of the masonry changes, large magnesian limestone blocks being frequently employed. On several of these - noticeably in the case of the splays of the west windows in the walls of the nave - Roman broaching can be detected, and Mr. Richmond has suggested that the fort on South Shields Lawe has formed the quarry for the Saxon builders in the second period. The fact that the Lawe was then Ecclesiastical property, and the convenient facilities for sea-transport, enhance the attractiveness of this hypothesis.

To-day the church stands within a quarter of a mile of the sea, elevated 100 feet above sea-level. To the west the ground rises gradually and, as there is a wide area from which a commanding view of the coast can be obtained, it is doubtful whether the site of the signal-station can be determined except by chance discovery.(1) The existence of such a site in the locality, however, can hardly be questioned.

Seaton Carew.

Near Carr House, mid-way between Seaton Carew

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(1) The signal station at Goldsborough lies half-a-mile inland.

and Hartlepool, evidence of Roman occupation led Haverfield to suggest the existence of a signal station.(1) Excavations conducted by R. M. Middleton in 1883, following a series of casual discoveries below the loose sand on the littoral between Carr House and Cliff House,(2) revealed an occupation deposit extending some 80 yards north and south.(3) No structural remains were encountered, the deposit being apparently a refuse-dump from a habitation site not located by the excavators. The by-products of the excavation were considerable, and have been listed by Middleton.(4) Pottery, bone ornaments and utensils, burnt animal bones, a fibula, a shale spindle-whorl, and a small crucible, place a local settlement beyond question.

The date of this settlement depends on the evidence of the pottery, and on a list of coins found in the vicinity, appended to Middleton's paper. Unfortunately, only one significant sherd, the base of a samian platter F. 31 stamped IVLIVS F, appears to be preserved at the present time, and nothing can be made of the vague description of other pieces.

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(1) JRS., ii, p. 206.

(2) i. Samian ware, tile and animal bones in 1816 (AA., 1, ii; p. 110).
ii. Pottery, iron spear head, brass coin of Domitian, and fibula in 1822 (Surtees. Durham, III, p. 402).
iii. Bones, pottery and trumpet fibula with acanthus moulding (now in the Black Gate Museum) in 1881 (AA., 2, x, pp. 104-5).

(3) AA., 2, x, pp. 103-114.

(4) A number of the finds are preserved in the Black Gate Museum, Newcastle.

The distribution of the coins,[1] 42 or 43 in number, is as follows: first century 5; second century 1; third century 10; fourth century 26. Late fourth century coins prove occupation in the Signal Station period but as far as the existence of a fort is concerned one can only quote Haverfield: "it is difficult to believe that anyone, except a soldier, cared to live on the coast of Durham in the latter half of the fourth century; but if there was a fort here, it must have been placed on low ground, or else have stood some little way from these remains".[2]

On the other hand, if the identification of the earlier coins is correct, the place would seem to have been inhabited from Flavian times onwards. Probably native fisher-folk dwelling like their ancestors on the limestone bluffs of the coast, acheived partial Romanization, but otherwise pursued their hereditary livelihood under the aegis of the conqueror. If the labourers of East Yorkshire did not forsake their farms in the latter part of the fourth century there seems to be no reason why their neighbours on the Durham coast should yield to threat of invasion. The Seaton Carew signal station is not proven.

Shackerton Hill, near Redworth.

Maclauchlan suggested that the earthwork on Shackerton Hill[3] was a Roman signal-post, from "its proximity to Dere Street.[4]

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endix II. J. (2) JRS., ii, p. 206. (4) Memoir, p. 3.
kenzie and Ross. Durham, II, p. 169; VCH., I, p. 349.

No evidence has appeared to support this view, the only recorded discovery being a flint "stone" found in the vicinity of the earthwork in 1908.(1)

Snows Green: Shotley Bridge.

At Snows Green farm, two miles south of Ebchester, an inscribed stone was claimed to have been discovered in 1841.(2) "On the same farm", writes Hooppell, "not far from where the stone was so long in use as a gate-post, there is a manifest Roman camp".(3) The dimensions of this camp, "rectangular with rounded angles", are given as 142 by 122 yards, and Hooppell adds not only that traces of buildings are to be observed within the rampart, but also that the field in which the site lies was formerly called the "Chesters".

Snows Green farm stands on a narrow plateau, elevated 400 feet above the bed of the Derwent, and overlooked by the heights of Black Hill to the east. The supposed south rampart of the station adjoins the stack-yard, and the area of the "camp" is now enclosed within two fields, marked on a nineteenth century estate map as "Chester" and "Little Chesters" respectively.(4) No obvious ramparts are visible but the southern halves of the fields mentioned enclose a rectangular area curiously elevated above the surrounding ground and roughly of the size and shape indicated by Hooppell.

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(1) PSAN., 3, iii, p. 318.

(2) EE., IX, p. 572 (116).

(3) Neasham, pp. 131-2; PSAN., 2, iii, p. 55. Cf. Plate XIX.

ndebted to Major J. H. Priestman for permission to consult this map.

Permission to conduct a trial excavation was readily granted by the owner of the land, Major J. H. Priestman, and in June 1937 a section was cut through the suggested north rampart. No ditch or artificial mound was encountered, the difference of two feet in ground level at this point, inside and outside the "camp", representing merely a difference in depth of humus.(1) The reason for this is not clear; the explanation that in the course of ploughing soil has accumulated against an old field boundary is not satisfactory in view of the general accumulation over the whole site compared with adjacent fields. The existence of an earthwork, however, can be discounted. Although it was not possible to search for the foundations recorded by Hooppell as that part of the site was in meadow, a trial pit in the centre of the area produced no trace of occupation; the inscribed stone has been rejected by Haverfield; and no artefacts of prehistoric or Roman period have, as far as I am aware, been discovered hereabouts.

Stanley.

Hunter recorded the discovery of Roman coins within a "square fortification" at Stanley, and concluded that the continuation of Wrekendike westwards from High Eighton terminated at that point.(2) Surtees(3) and Bruce(4) repeat

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(1) While there was only a few inches of humus over the natural sandstone outside the "camp", the humus within the "camp" was 29 inches in depth.

(2) Letter to Gale, 1735. Surtees Soc. Publications, LXXVI, p.140

(3) Durham, Gateshead Section 1909, p. 117. (4) Wall (2), p. 298.

Hunter, but there is no evidence that either of them saw the earthwork. The site is not marked on the Ordnance Survey maps and enquiries in Stanley have failed to locate it.

The elevated situation of Stanley and the possibility of a Roman road in the vicinity might suggest a signal-post (? now destroyed by coal workings).

Wardley.

The earthwork at Wardley, attributed by Hodgson to the Roman period,(1) seems to be mediaeval.(2)

Wearmouth.

A group of small finds of Roman date round the mouth of the Wear, Ptolemy's Vedra, is as follows:

(i) found at the south end of Villiers Street, Sunderland, in 1820, coins of the emperor Constantine I;(3)

(ii) found near Sunderland, a broken silver spoon inscribed (BE)NE VIVAS;(4)

(iii) in a brickyard near Sunderland in 1861, an Æ 1 of Nero;(5)

(iv) on the north side of the river a coin "of the Constantian period" (Constantinopolis Issue) found during the restoration of the church of S. Peter, Monkwearmouth;(6)

(v) a denarius of M. Aurelius found in Ring Road in 1927;(7)

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(1) AA., 1, i, p. 112. (2) Bruce. Wall (2), p. 296; VCH., I, pp. 358-9.
(3) GM., xci, p. 367. (4) EE., VII, 1159 (115).
(5) AA., 2, vii, p. 89. (6) PSAN., 2, viii, p. 110.
(7) Information from the Rev. T. Romans.

(vi) a group of samian fragments in the British Museum ~~is~~ labelled from "near Southwick, (? Durham)"[1]

(vii) built into the church of S. Peter at Monkwearmouth — ~~are~~ several stones bearing the broached markings characteristic of Roman tooking.[2]

The Rev. T. Romans believes these stones to have come from the Lawe fort at South Shields, but the possibility of a more local provenance cannot be overlooked.

Although Summers suggested the existence of a fort guarding the mouth of the Wear, lack of evidence forced him to the conclusion that the remains had been washed away by sea-encroachment.[3] The finds, indeed, scattered on either bank of the river, indicate no more than shipping activity in the harbour. Communication inland seems to be suggested by the milestone discovered at Hylton Ford set up in the reign of Gordian.(4)

Whitburn.

In the mid-seventeenth century "about a peckful" of Roman coins (Æ) in mint condition, is said to have been found in a sand-hill on the coast at Whitburn.[5] Æ of the Constantine family, Maxentius, Licinius and Maximianus are recorded from the same place,[6] and in

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(1) Information from Mr. J. D. Cowen.

(2) The supposed Roman stone in Bishopwearmouth Tithe Barn (PSAN., 3, i, p. 98) is modern. cf. EE., IX, 1364 (118).

(3) History of Sunderland, p. 9. (4) Cf. R. VII.

(5) Diary of Abraham de la Prynne. (Surtees Soc. Trans., LIV, p.11 n's Camden, 1695, col. 784. Petch equates this with the previous, o.cit., p. 29), but as the latter coin were "about the bigness of ½ we incline to believe that two discoveries are referred to.

1889 two Æ of Trajan and Hadrian were recovered from gravel taken from the harbour quarry[1].

These finds are interpreted by the Ordnance surveyors as an indication of permanent settlement in the vicinity,[2] and there seems no reason to question this conclusion. Absence of structural remains, however, obscures the nature of this settlement, while the coin-list does not necessarily point to occupation later than the Constantian period.

Whitton.

Surtees refers to "evident remains of entrenchments in a field betwixt Thorpe and Whitton, about half a mile to the South-west of Thorpe" and adds that a coin of Severus Alexander was found "some years ago ... on the right bank of the brook".[3] Nothing further is known of this supposed earthwork.

Yoden.

The earthworks at Yoden, between Eden and Horden, which Middleton suggested might be of the Roman period,[4] are mediaeval.[5]

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(1) PSAN., 2, iv, p. 114.

(2) O. S. Map of Roman Britain.

(3) Durham, III, p. 84, note.

(4) AA., 2, x, p. 113.

(5) ibid., pp. 186-7.

B. COIN HOARDS NOT ASSOCIATED WITH FORT SITES.

Darlington.

(i) In 1790 Cade wrote to Gough: "a most valuable collection of Roman silver coins has, this year, been taken up out of the bed of the river Tees, near Darlington".(1) Coins of Trajan, Hadrian, Antoninus Pius, Severus and Carausius are said to have been included in this collection (? hoard).

(ii) Longstaffe records the discovery of a "vast quantity" of Æ, all of the Constantian family including Helena, Fausta, Constantine I, Constantine II, and Crispus, in the Cockerbeck, between Mowden bridge and Darlington, *and in Baydalebeck, near the same bridge.*(2)

High Force.

A hoard of 12 fourth century Æ, found in 1844.(3)

Seaton: Seaham parish.

A hoard of antoniniani, chiefly of Claudius Gothicus, Tetricus, and Victorinus, found in the early nineteenth century.(4)

Westgate-in-Weardale.

A hoard of denarii, 81-161 A.D., found in 1870.(5)

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(1) Longstaffe. History of Darlington, p. 187.

(2) ibid.

(3) JRS., xix, p. 186.

(4) Surtees. Durham, III, note p. 402.

(5) PSAN., 3, iv, p. 283.

Whickham.

Mr. McKenna, a member of the staff of the Public Library and Museum, South Shields, informs me that in 1927 a friend showed him 10 radiate coins said to have been dug up near the Seven Sisters, Whickham. I have not been able to trace these coins.

C. ISOLATED FINDS NOT ASSOCIATED WITH SETTLEMENT SITES

Barnard Castle.

Two gold penannular rings (diams. 1 6/10 in. and 1 7/10 in.) probably Roman, found near Barnard Castle, and now in the British Museum.(1)

Brierton, near West Hartlepool.

No confirmatory evidence is forthcoming for the supposed Roman paving found here in 1925.(2)

Brockley Whins.

A deer-horn knife handle, said to possess " a very Roman look".(3) Petch rightly casts doubt on this object.(4)

Cassop.

A bronze brooch of Backworth type, now in the British Museum.(5)

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(1) Information from Mr. J. D. Cowen.

(2) JRS., ~~xiv~~ xvi, p. 219.

(3) PSAN., 2, viii, p. 18.

(4) op. cit., p. 33.

(5) Information from Mr. J. D. Cowen.

Coniscliffe.

An Æ 3 of Constantine I, probably from the neighbouring fort at Piercebridge.(1)

Cornforth.

A "Roman coin".(2)

Darlington.

(i) An Æ 3 of Quintillus, found in Cobden Street in 1908.(3)

(ii) Sestertius of Faustina I, found in a field south of the Cleveland Bridge Co.'s works in 1922.(4)

Eastgate-in-Weardale.

Roman altar.(5)

Eldon.

A "Roman coin".(6)

Escombe.

Sestertius of M. Aurelius found in 1929.(7) Probably from the neighbouring fort at Binchester.

Great Stainton.

An Æ of Constantine II found in 1901.(8)

Hebburn-on-Tyne.

Half-centionalis of Gratian found c. 1929.(9)

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(1) PSAN., 3, iv, p. 30.
(2) Longstaffe, Pl. f. p. 41.
(3) PSAN., 3, iii, p. 238.
(4) ibid., x, p. 348.
(5) CIL., 450 (111).
(6) Longstaffe, p. 65.
(7) JRS., xix, p. 186.
(8) PSAN., 2, x, p. 111.
(9) ibid., 4, iii, p. 10.

Houghton-le-Spring.

A "Roman coin" from the "hill above Houghton".(1)

Hurworth.

An Æ 3 of Constantine I found in 1909.(2)

Middleton St. George.

Two Roman lamps, of third or fourth century date, stamped ANNISER. Found in 1924 during excavation for the cellars of a house called the "Friary" situated in Pountey's Lane.(3)

Newton Ketton.

A coin of Severus. "Roman coins have been found here and elsewhere on the line of Catkill Lonning".(4) Wooler claimed to possess a coin of Augustus found in the Lonning in 1903.(5)

Ryton.

An Æ 2 of Constans.(6)

Sacriston.

An Æ 2 of Galerius found in 1922.(7)

Shotton.

(i) Roman altar (from Carvoran).(8)

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(1) Longstaffe, p. 61.
(2) PSAN., 3, iv, p. 18.
(3) ibid., 4, i, pp. 198-9.
(4) AA., 2, vii, p. 90.
(5) PSAN., 3, i, p. 90.
(6) PSAN., 2, iii, p. 186.
(7) ibid., 3, x, p. 111.
(8) CIL., 764·(121).

(ii) A gold armlet, said by Franks to be of Roman workmanship.[1]

Stanhope.

(i) Roman altar.[2]

(ii) Three denarii, two of Trajan, one of Domitian.[3]

Stockton.

A coin of Nero found in the late eighteenth century near the junction of the Castle wall and the river.[4] Another Roman coin is said to have been found in Finkle street.[5]

Streatlam.

A sestertius of Titus, A.D. 80-81, found in the vicinity of Streatlam.[6]

Weardale.

A bronze amphora-shaped vessel "apparently of Roman date", found in the neighbourhood of Stanhope in 1918.[7]

In 1913 two bronze skillets inscribed with the maker's name and a bronze ladle were found in a peat-bog in Upper Weardale.[8]

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(1) AA., 2, x, pp. 189-190.

(2) CIL., 451 (112).

(3) Lapidarium Septentrionale, p. 358.

(4) Brewster. History of Stockton, pp. 5 and 150.

(5) Surtees. Durham, III, p. 402.

(6) Bowes Museum, Barnard Castle, no. 230.

(7) PSAN., 3, viii, pp. 167-8.

(8) ibid., vii, pp. 9-11; cf. Appendix I, nos. 113 a-b.

THE ROMAN OCCUPATION OF COUNTY DURHAM

In the preceding chapters the evidence for the Roman occupation of County Durham has been treated objectively, and only in the case of individual sites have historical inferences been suggested. It remains, now, to glance back over the mass of materials at our disposal, and to see how far the fragments can be pierced together to form a coherent story.

At the outset it must be freely admitted that the archaeological data is, as yet, insufficient to permit any but tentative conclusions. Until 1934 only two of the half-a-dozen forts in County Durham, Binchester and South Shields, had received any serious attention from the archaeologist, and in neither case could excavation be said to be satisfactory from a modern standpoint. Within the last few years Mr. Richmond's reconsideration of the structural remains at South Shields has clarified the historical occupation of that site, and small scale excavation has been undertaken at Binchester, Ebchester, Lanchester, and Piercebridge, but, valuable as the results of these excavations may be, it would be idle to claim that they represent more than an introduction to the study of Durham in the Roman period. Further investigation, most needed at Chester-le-Street, cannot fail to extend the horizon of our present knowledge.

We must note also that whereas, in post-War years,

evidence has been steadily accumulating from the Wall, neglect of sites in the hinterland of the frontier is not exclusive to Durham. The majority of the forts west of the Pennines in Westmorland, Lancashire, and Cumberland south of the Wall, are only known to us from casual discovery; none of the important chain of stations on Stainmore has ever been scientifically examined; while the unexplored fort of Catterick in Yorkshire no doubt holds solutions to many of the outstanding problems of the Roman occupation of the north-east area. Realising the many difficulties facing active research work one cannot be impatient at this neglect; equally one cannot fail to acknowledge the restrictions which it imposes.

The present chapter is divided into two main sections: (a) the Military Occupation (b) the Civil Occupation, including both that of the Vicus and the Romanized native settlement. In conclusion a brief note is appended on the evidence for Roman mining in Weardale.

(a) THE MILITARY OCCUPATION.

It has generally been assumed that County Durham was included within the territory of the Brigantes.(1) Ptolemy, the most helpful authority on this matter, tells that the tribe reached "from sea to sea",(2) and since we must allow the Parisi to have occupied the greater part of the Yorkshire coast-line, the statement can only

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(1) Thus Haverfield, VCH. Derbyshire, I, p. 200.

(2) Geogr., Bk. II, c. III.

be literally exact if we grant the Brigantes an eastern sea-frontier in County Durham. The fact that the same writer enumerates Vinnovium (Binchester) amongst the list of Brigantian oppida[1] seems to establish the point beyond cavil.

Archaeology, however, has certain qualifications to make. The review of the prehistoric materials has shown that the type of culture existing in the county at the time of the Roman conquest had affinity not with the developed Iron Age civilization of West Yorkshire, the heart of Brigantia proper, but rather with the backward cultures of the north-west, in which Neolithic elements survived to a large extent. Such a region would be incapable of spontaneously fostering town-life, and the position of the Brigantian oppidum at Binchester interpreted as a pre-Roman city is, therefore anomalous. It is necessary to seek some other interpretation.

First we may note that Ptolemy, despite the work which bears his name, was not primarily a geographer but an astronomer, and that the immediate purpose of the Geographia was to provide an index of fixed points from which astronomic calculations could be made. Accordingly, there is no reason to suppose that more than a selection of Brigantian oppida, far enough apart to fulfil the object of the work, has been included. Secondly the character of these oppida seems to vary strangely. For Rigodunum, Camulodunum, and Epiacum, a native origin, on etymological grounds, is

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(1) ibid.

reasonably certain. Catterick (Caturactonium) on the other hand has produced evidence of both native and Roman settlement, while York, Aldborough, and Binchester, on present knowledge, would appear not to have been occupied before the Roman period. Admittedly, excavation in each case is defective, but if, as Mr. Richmond has suggested to me, Ptolemy was using two sources, a list of native sites, and an early itinerary of Roman settlements established in the first century,[1] our chief difficulty is removed. Vinnovium would then be no more than an oppidum in Brigantian territory, selected by Ptolemy not for any historical peculiarity distinguishing it from Roman sites in the same neighbourhood, but rather on account of its apposite position for an astronomic guide.

To sum up, while there is good authority to believe that the Brigantian confines included County Durham, the tie which bound the folk between the Tyne and the Tees with the dominant peoples in West Yorkshire was political only; racially and culturally they were divided by a broad gulf. Whether the Brigantian overlordship was real or nominal we cannot say, but it is certain that once the power of the aristocratic nucleus had been broken the subordinate tribes would be incapable of offering any

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(1) Occupation at Aldborough in the first century is attested by ceramic evidence, but no Flavian fort has been discovered. Settlement outside the ramparts at Binchester in the first century is proved by the pottery from the pits.

real resistance to the Roman armies. The significance of this is apparent when we turn to consider the early stages of the Roman penetration of the north-east area.

In a celebrated passage Tacitus tells us that the conquest of Brigantia was initiated by Petilius Cerealis.(1) No details of these campaigns are given but the result is patent: "magnam ... Brigantum partem aut victoria amplexus est aut bello". For obvious reasons this cannot be an understatement of the case. In a work devoted to the glorification of Agricola, the achievements of his predecessors are not likely to be over-emphasised and, as Haverfield observed, the remarkable progress of Agricola's conquests can only be explained on the assumption that the ground had already been prepared by Cerialis and Frontinus.(2)

Some archaeological evidence of Cerealis' operations in Brigantia has come to light in recent years. Excavation at York has made it seem probable that the original military occupation of that site took place circa 71 A.D.,(3) while Mr. Corder's researches at Malton led him to believe that "an early permanent camp, possibly legionary" was established there at the same period.(4) Elsewhere, the presence of Cerialis at Carlisle has been deduced from the pottery evidence,(5) but this conclusion has not won universal

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(1) Agricola, 17, 2.

(2) ibid., p. liv.

(3) JRS., xv, p. 184.

(4) Malton, p. 64.

(5) Bushe-Fox. Archaeologia, LXIV, pp. 299-301.

acceptance.[1] Until the doubts recently cast on the value of samian ware for dating purposes[2] have been effectively dispelled, the problem is best left sub judice. The possibility, however, that Cerialis may have reached Carlisle demands a discussion of the evidence from County Durham. From the base at York at least three possible routes across the Pennines would be available: westwards by the valley of the Wharfe, northwards by the pass of Stainmore or by the Tyne Gap. Localisation of Brigantian strongholds in West Yorkshire suggests that Cerialis must have operated in that area and that, on strategical grounds, the former route of penetration is the most likely, but the evidence from Ilkley and Elslack adds no authority to this supposition. Topographically the second route, via Dere Street and Stainmore, would be the most direct, but our lack of knowledge of the history of the Stainmore forts makes conjecture unprofitable. For the sites along the third route we have fortunately more evidence, and Mr. Birley's tentative claim for pre-Agricolan occupation at Corbridge[3] and Chesterholm, implies that the original penetration of County Durham was accomplished by Cerialis. All that can be said is that, as yet, the available materials from the first century forts at Binchester, Ebchester, Chester-le-Street, and South Shields give little support to such a conclusion.

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(1) Cf. CW., 2, xvii, pp. 236-250.

(2) JRS., xxv, pp. 187 ff.

(3) AA., 4, xv (in press).

Ebchester, it is true, has produced part of a decorated samian bowl which Dr. Davies Pryce believes to be earlier than anything found in Scotland (Plate XXXIX, no. 1), but the bulk of the comparable material is not sufficient to allow the rejection of the possibility of "survival".

From this storm of uncertainties we emerge into more navigable waters with the governorship of Agricola, A.D. 77-85. The fort at Binchester appears from the pottery and coin evidence recovered in 1937 to have been built in this period, possibly in the course of Agricola's third campaign (A.D. 79). To the same age, no doubt, belong the clay ramparts of the fort at Ebchester, while the branch road from Dere Street north of Binchester to the mouth of the Tyne, establishing a vital contact with east coast shipping, can hardly be much later in date. Under the Flavian emperors, therefore, the military organisation of the north-east region was already becoming crystallised.(1)

Attention might be drawn at this point to the close correspondence in size and lay-out between the forts at Binchester and Malton. The purpose of these unusually large Agricolan castella is obscure. On the one hand, they may have housed regiments above the strength of the single ala and milliary cohort standards. On the other, we might suggest that with garrisons of normal strength each site

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(1) While it is reasonably certain that Lanchester was not occupied in the first century, the discovery of a Flavian fort at Piercebridge is not beyond the bounds of probability.

accommodated also a group of buildings for specific purpose after the fashion of the internal arrangements at South Shields fort in the third century. It can hardly be a coincidence that both Malton and Binchester are nodal points for their respective regions and admirably placed for administrative work, but until excavation has ventured within the ramparts and recovered the lay-out of the Agricolan buildings we can do no more than suggest the alternatives.

The withdrawal of the Roman Troops from Scotland c. 100 A.D. was followed by the organisation of the Stanegate frontier, but it is not yet certain how far this affected the garrisons in the north-east area. Elsewhere many auxiliary forts, Brecon, Caernarvon, and Caerhun for instance, and the legionary fortresses at Caerleon and York, were undergoing radical revision, stone replacing earth and timber in the construction of defences and internal buildings. No structural alterations of the kind, however, have been dated to Trajan's reign on sites in County Durham. South Shields, although it may well have been the port and base for supplies at the eastern end of the Trajanic limes, has so far produced no evidence of reconstruction before the time of Hadrian, while, as far as the evidence of recent excavations goes, the stone defences at Binchester and Ebchester do not appear to have been erected before the third century. This might suggest that already under Trajan the garrisons of these forts were being moved to new quarters. While coarse pottery of Trajanic type, however, has been found at Ebchester, lack of sufficient archaeological data does not allow the statement of a case.

In contrast, the effect of the re-establishment of the frontier by Hadrian on the military organisation of the north-east hinterland is reasonably sure. On South Shields Lawe a new fort was built[1] to supervise the increased shipping activity in the river mouth. Similarly the construction of a permanent bridge over the Tyne at Newcastle must have given a new impetus to traffic passing through Chester-le-Street whose stone defences may date to this period. On the other hand, as Haverfield observed,[2] the policy of entrenchment would seem to have diminished the importance of Dere Street in its relation to the frontier organisation as a whole, and the archaeological evidence lends countenance to this assumption. As far back as 1912 the possibility of the abandonment of Corstopitum in the early second century was under discussion,[3] and subsequent excavations have failed to discover any trace of military occupation of the site in the Hadrianic period. At Ebchester the evidence is incomplete, but the amount of Hadrianic pottery of both samian and coarse types recovered in 1936 was negligible in comparison with pottery of the first and third centuries.[4] Similarly, at Binchester, the rampart sections of 1937 revealed no trace of any modification of the defences between the Agricolan ~~earth~~ foundation and the third century stone wall. While the evidence is by no means complete we have, at any rate, a

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(1) Or an existing fort replaced. Cf. Chapter X.

(2) NCH., x. p. 460.

(3) AA., 2, viii, p. 258.

(4) JRS., xxvii, p. 229.

presumption that at three forts on Dere Street, between the Tees and Portgate, garrisons were withdrawn or materially reduced. This is not an isolated phenomenon. Further south, the excavators at Slack favoured the view that the fort had been abandoned about 125 A.D.,(1) and Haverfield inclined to accept this date as the upper limit for the evacuation of Castleshaw.(2) In Wales, moreover, there is a weight of evidence to show that the general withdrawal under Pius was only the logical outcome of the systematic reduction of garrisons instituted by Hadrian or his predecessor.(3) The reason is not far to seek. The heavy demands of the northern frontier could only be met by strict economy in personnel south of the limes, for the exacting Continental campaigns of the period denied Britain accessions of troops necessary to equip the frontier, and to maintain the status quo to the south. It seems probable, moreover, that the sacrifice of troops in the hinterland of the Wall was far greater on the east than on the west side of the Pennines. The discovery that a chain of fortifications extended down the Cumberland coast from Bowness possibly as far south as St. Bees Head,(4) is ample proof that the danger of an outflanking movement initiated by the Tribes across the Solway was fully appreciated, and it is difficult to believe that the threat thus constituted would allow material reduction of the garrisons posted in Cumberland and

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(1) YAJ., xxvi, p. 85.

(2) ibid., xxiii, p. 396.

(3) Cf. Segontium, pp. 42-46; Brecon, p. 75.

(4) CW., 2, xxix, pp. 138-165.

Westmorland. In contrast, the even line of the east coast and the scanty harbourage afforded by the limestone cliffs of Durham would, in themselves, deter sea-borne invasion. At all events no system of fortification south of the Lawe seems to have been required until the fourth century.

The suggested absence of garrisons at Corbridge, Ebchester, and Binchester, in the Hadrianic period receives confirmation from another quarter. The excavations at Lanchester in 1937 demonstrated that there an elaborate stone fort, 5¾ acres in extent, was constructed under Hadrian on a site which has so far yielded no trace of earlier occupation. If Ebchester and Binchester were still held it is difficult to see what purpose could have been secured by the establishment of an intermediate station, for the scattered and nomadic folk in Weardale can hardly have constituted a menace to law and order. On the other hand we may imagine the evacuation of both these sites could be safely undertaken by the transference of the duties of patrolling Dere Street in this region to a single miliary garrison housed at Lanchester.

With the advance into Scotland under Pius, Binchester and Ebchester, presumably, remained abandoned, or held only on a "care and maintenance" basis, while there is some evidence that the first cohort of Vardulli, or a detachment of that regiment, was drafted from Lanchester for service in Scotland.(1) South Shields appears to have retained its importance both as a trading port, and as a point of debarcation for troops transported from the Continent to

(1) CIL., 1096.

serve in the new campaigns, but elsewhere in Durham inscriptions and stratified pottery of the period await discovery.

The succeeding phase in the history of the northern frontier, opening with the dispatch of Virius Lupus to Britain in 197/8 A.D. to repair the damage wrought by the Maeatae in the absence of Albinus, has abundant testimony in the structural and epigraphic evidence from Durham sites. South Shields would appear to have been re-occupied almost immediately, for the fort was laid out on a new and unusual plan to accommodate storehouses for Severus' expedition into Scotland of 209-11, while fifty per cent of the lead seals discovered on the site can be dated to the years 198-209 A.D.(1) By 217 A.D. the fourth cohort of Breuci was in occupation at Ebchester,(2) while a year earlier the garrison at Chester-le-Street had sufficiently advanced the repair of the defences and buildings of the station to be able to attend to amenities.(3) That this work of restoration was part of a general scheme, based on a return to the frontier policy of Hadrian, is attested by numerous inscriptions, but new forces prevented an exact reversal to the Hadrianic status quo. The partial re-inforcement of the Welsh frontier had to be undertaken, and, in Durham, while Ebchester was seemingly provided with stone defences for the first time, Lanchester was not included within the range of Lupus' activities. The latter site, indeed, presents something of a problem. Inscriptions leave no

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(1) AA., 4, xi, p. 99.

(2) CIL., 458 (54).

(3) EE., VII, 986 (80).

doubt that the restoration of the fort in the third century was delayed until the reign of Gordian,[1] while, as far as the records go, it is an isolated instance of re-occupation under that emperor. We have suggested that the decisive factor in this re-occupation may have been economic rather than political, based on the necessity of supervising an industry of growing importance in Weardale, but the explanation cannot be advanced at the present state of knowledge, with complete confidence. Finally we turn to Binchester. Epigraphy supplies the name of the third century garrison, the ala Vettonum, and since a prefect of this ala is known to have supervised work at the neighbouring fort at Bowes under Virius Lupus,[2] re-occupation of the site would seem to have followed swiftly on the recovery of the province. It must be noted, however, that the stepping of the internal stone rampart, a feature of the Gordianic re-building at Lanchester is repeated in the third century fort wall at Binchester and not elsewhere in the north as far as our knowledge goes. The possibility, therefore, that the Vettones were not established at Binchester before Gordian, slight though it may be, deserves consideration

The next age of reconstruction in northern Britain is that of Constantius I, whose work has been detected at York, Chesterholm, High Rochester, Birdoswald, and Malton. To this period we must ascribe the conversion of the third

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(1) CIL., 445 (39), 446 (38).

(2) CIL., 273.

century storehouses at South Shields into dwellings, and the re-building of the east gateway in style similar to contemporary work at Chesterholm and at the Saxon Shore forts.(1) Within the ramparts at Ebchester and Lanchester (whose fourth century garrison would seem to have been the numerus Longovicanorum),(2) pottery of Constantian type has been recovered, while the broad ditch at Binchester appears to have been re-cut at this period. But until the structural remains inside the defences have been thoroughly examined, the nature and extent of the Constantian restoration on these sites cannot be estimated. Evidence from Piercebridge, however, confirms Mr. Richmond's thesis that the emperor was not satisfied with a mere patchwork. Here, recent excavations have shown that the impressive 10 acre fort, whose stout rampart may still be inspected at the north-east angle, dates to the period of Constantian activity. Further researches will no doubt explain the purpose of this massive fortification; speculation at this stage of the work would be idle.

In the following years events crowd upon one-another with dramatic suddenness foreshadowing the tragedy of the epoch. Literature and archaeology together, produce a vivid story of increasing pressure on all frontiers and a corresponding weakening of the Constantian defences. The main outlines of the story are clear; here we may concern ourselves only with small chapter about which the archaeology

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(1) AA., 4, xi, p. 100.

(2) Notitia Dignitatum, Oc. XL, 30.

of the north-east region might be expected to have something to say - the coastal signal-station system.

The menace of Teutonic attacks on the eastern and southern coasts first became troublesome at the end of the third century. Here, along the so-called Saxon Shore, a series of forts, remains of ten of which are known, were built either under Diocletian or one of his immediate successors, to cope with the invaders. For a short time this was sufficient, but there is evidence that about 350 A.D. piratical raids were no longer limited to the Continental coast but were extending at least as far north as Teesmouth. Hence there arose in the last thirty or forty years of the century a chain of signal stations, on the Yorkshire cliffs, of a type familiar to us from the excavations carried out at Huntcliff, Goldsborough, Filey, and Scarborough. The problem is to decide whether, as Haverfield believed likely,[1] this system was prolonged north of the Tees. The archaeological evidence may be briefly summarised:[2]

(a). Traces of occupation of the Roman period have been found between Marsden and Harton. The site of the discovery is unrecorded but it apparently lay near an "old quarry" some three-quarters of a mile inland. While a commanding view of the coast from Tynemouth to Souter Point is to be obtained hereabouts, the settlement, from the samian evidence, would seem to have existed before the fourth century,

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(1) JRS., ii, p. 206.

(2) For details cf. Chapter XI.

possibly in connection with quarrying operations.

(b). A number of coins have been found at Whitburn from time to time, the latest of Licinius. Absence of structural and ceramic evidence does not allow us to estimate the nature of the settlement implied.

(c). Occupation of the high ground west of Fulwell is attested by pottery and other "kitchen" debris. The site is one and a half miles from the coast, but commands a clear view of Wearmouth, while the bulk of the pottery so far recorded is of late fourth century date.

(d). On the coast at Ryhope late fourth century pottery has appeared in association with other evidence of occupation. No structural remains have been recorded, but a mile and a half to the south the Saxon church of S. Mary at Seaham embodies masonry characteristic of that used in the signal stations on the Yorkshire coast.

(e). At Horden, on the cliffs east of Easington, Roman pottery, possibly including Huntcliff-type ware, has been found.

(f). Excavation on the littoral near Seaton Carew in 1883 revealed a kitchen-midden of the Roman period. Haverfield inclined to believe that late fourth century coins indicated the existence of a signal-station hereabouts, but the original settlement must be earlier in date.

The evidence is conclusive neither way. Although the masonry in Seaham church strongly suggests that a fort may well be found in the locality, the case is not complete

until the structural remains come to light. Elsewhere, it is impossible to build foundations on Huntcliff and Crambeck sherds, and the contention that no-one but a soldier would care to inhabit the Durham coast in the late fourth century, is unhistorical. At any rate, the possibility that coastal erosion has destroyed a chain of forts from the Tees to Tynemouth is unlikely. From the records of the Tyne Commissioners and the reports of coastguards, it appears that little erosion has taken place within the present era, but more authoritative for our purpose are the Tardenoisian flint sites stretching, in unbroken line, from South Shields to the Hartlepools.

(b) NON-MILITARY SETTLEMENTS OF THE ROMAN PERIOD.

These may be divided into two classes: (i) Romanised civil settlements growing up around military sites, and (ii) native settlements. A discussion of the development and organisation of the former group in the north of England has been presented elsewhere,(1) and the slight evidence from Durham, structurally or epigraphically, adds little to our knowledge. The vicus at Binchester was certainly in existence as early as the Flavian period and subsequent ribbon-development along the main highway approaching the fort from the south-east was characterised by neat and well-planned stone buildings, rectangular in shape, and set back only a few feet from the roadway. The historical evidence of the pottery from the pits and of successive structural restorations noted by Hooppell suggests that the vicus, in contrast to the fort, may have been occupied practically without interruption throughout the Roman period.

(1) AA, 4, xii, pp. 204–226.

Such a discovery, easily checked by excavation, would be welcome as supporting the evidence already obtained from Carlisle and Corbridge, that civil life in the frontier region could be economically self-sufficient. The vici at Lanchester and Ebchester are unknown quantities, but at South Shields, Chester-le-Street, and Piercebridge settlement without the ramparts seems to cover a wider area than can be accounted for by ribbon-development, and the possibility of "town-planning" must be considered. A clue to the economic life of the vicus is provided by the discovery of a little bronze figure of a ploughman at the latter site, referred to elsewhere,(1) though different opportunities provided by local markets and trade routes would introduce variations in standards of living from one place to another. Attention has already been drawn to the connection between the wealth and cosmopolitanism of the settlement on the Lawe, and the economic importance of the site.

From the localised civil settlements we turn to the regions where Romanisation can only have progressed by infiltration. On the coast-line there are several scattered sites, Whitburn, Horden, Harton, and Seaton Carew, where the discovery of Roman sherds and coins suggests contact between the native and the conqueror. The number of sites is neither more nor less than we should expect from the prehistoric survey, and there is no reason to believe that the Roman occupation made any material difference to the lives and fortunes of people who inhabited them.

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(1) p. 85.

In the west the situation is rather different. Apart from two coin hoards, not a single Roman object has been found in the Durham Pennines west of Dere Street which could not be interpreted merely as the mark of a hunting expedition from one or other of the garrisons stationed in the county. No enclosed villages of the Crosby Ravensworth type,[1] or hut groups have been observed, and it is difficult to imagine how, if they exist, they could have escaped detection. This negative evidence, moreover, is completely in accord with the apparent scantiness of occupation in the Durham Pennines in the prehistoric period and, as far as that county is concerned, the awesome picture of the Roman garrisons at Ebchester, Lanchester, and Binchester grappling with "a thousand miles of difficult hill-country ... inhabited by tribes of doubtful loyalty"[2] must be re-drawn. The Roman frontier may have been under constant threat of risings north of the Tyne or south of the Tees but while communications had to be guarded by forts posted between these two rivers the danger from more local insurrection must have been negligible.

(c) MINING IN WEARDALE.

A note may be appended on the question of mining in Weardale in Roman times, not because any solution of the problem can be offered at this stage, but rather for historical completeness. Hodgson first drew attention to the heaps of iron scoriae which abound in the Lanchester district, and concluded that the Weardale ores had been worked from the fort at Lanchester.where the discovery of

(1) CW., 2, xxxiii, pp. 201 ff. (2) PSAN., 4, iii, p. 100

"hearths, cinders, and slaking trough" in the eighteenth century persuaded local people that the Romans had been a "tribe of smiths".(1) The possibility is not unlikely, for iron smelting is known to have been carried out on several military sites in the north, notably at Housesteads,(2) Corbridge,(3) and Hardknot,(4) but it is doubtful whether the industry would be more than a local one. Pliny tells us that iron ore was recognised to be widely distributed throughout the empire, and nearer and better supplies would hardly make iron-mining in Britain a commercial proposition.

Another suggestion that the evidence from Lanchester may indicate the working not of the iron but of the lead veins in Weardale(5) lacks the necessary confirmation from lead pigs or from dateable finds associated with ancient workings. No evidence of official Roman mining has been found north of Swaledale in Yorkshire.(6)

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(1) AA., 1, i, pp. 120-1.

(2) ibid., 3, xxv, p. 241.

(3) ibid., viii, pp. 207 ff.

(4) CW., 2, xxviii, p. 327.

(5) YAJ., xxviii, pp. 93-100.

(6) Newcomen Transactions, xii, p. 83.

APPENDIX I.

INSCRIPTIONS.

Piercebridge.

1. Lost. (CIL., 419; LS., 727). Fragment 9in. high, 5 in. wide, good lettering.

M·D·O·/ M·P·C·C·

Cade. Archaeologia, IX, 1789, p.289; Scarth. JAA., XLIII, 1887, p.131.

The reading is quite uncertain.

2. Lost. (CIL., 420; LS., 725). Altar.

D(eo) M(arti)/ CONDATI/ ATTONIVS/ QVINTIANVS/ MEN(sor) EX CC(ducenario) IMP(eratoris) / EX IVSSO L(ibens) L(aetus) M(erito)

" Dedicated to Mars Condatis by Attonius Quintianus, surveyor ....."

Gibson's Camden's Britannia, 1695, col.782; Gale. Antonini Iter Britanniarum, p.50; Horsley, p.296.

The inscription is said to have been found at Coniscliffe but it must be remembered that the Coniscliffe parish boundary extends as far westwards as the Toft's field.

Dedications to Mars Condatis have elsewhere only been found at Chester-le-Street (EE.,VII, 984), and at Bowes in Yorkshire (JRS., xxvii, p.246), so that, at present, the incidence of the cult is bounded by the

basins of the rivers Tyne and Tees. The etymology of the epithet condatis, signifying 'watersmeet', has been fully discussed by Richmond (YAJ., xxxiii, 1937, p.226), who draws attention to the apparent analogy between the cult of Mars Condatis and that of Belatucadrus.

The mensor in an auxiliary cohort occupied the post of surveyor (cf. CIL., xiii, 6538), and the ingenious suggestion has been made that the present dedication may commemorate an official decision of Quintianus, affecting the boundary of the local shrine (Richmond, loc.cit.).

Apart from the initial three letters, line 5 would seem to be corrupt, for it is impossible to make sense of the accepted reading mensor ex ducenario imperatoris

Collingwood suggests a third century date for the inscription. (YAJ., loc.cit.).

3. At Cliffe Hall on the south bank of the Tees opposite Piercebridge. (CIL., 421; LS., p.377; EE., IX, 1132). Tombstone, the left hand side is broken off and the existing portion is 3 ft. 4 in. high, and 2 ft. 11 in. wide; double mouldings, good lettering.

[D(is)] M(anibus) / [AV̄R(elio) ACILIO / [ORD̄]INATO
[GER]MAN(iae) SVPER(ioris) / [?STIP(endiis)] XXII
AV̄RELIA [?FAD]ILLA CON/[IVG]I FACIEND/VM CVRAVIT

" Set up by Aurelia Fadilla in memory of her husband Aurelius Acilio, centurion from Upper Germany who served for twenty-two years."

The stone was discovered in 1844 on the line of Dere Street south of the Tees, at the point where a modern road branches off to Cliffe Hall (GM., xxii, 1844, p.24).

More of the lettering survives than Haverfield allowed, notably the O at the end of line 2, and the IA at the end of line 5. The only uncertainty in the reading, apart from the lady's name, lies in line 5 where annorum has been preferred to stipendi~~a~~i (CIL). The former would be more reasonable if we could postulate at least one other X before the years given, but the spacing will not allow this. It is best, therefore, to adopt Haverfield's reading and to assume that the numerals refer rather to the length of service than to the age of the deceased.

Ordinatus is a well-attested third century term for the centurion of a cohort (Domaszewski. Rangordnung, p.57), but the use of the term appears in the second century at Birrens (CIL.,1078 with EE., IX, p.615).

The inscription is important as indicating the presence of a vicus at Piercebridge.

4. Dean and Chapter Library, Durham. (CIL., 422; LS., 728; EE., IX, 1131; DC Cat., 1). Altar cut into a semi-circular capital to fit the Early English pier of the chancel arch of the church at Gainford, where it was discovered during restoration in 1864. On the right hand side is an eagle. Height 2 ft. 8 in.

[I(ovi)] O(ptimo) M(aximo)/ DOLYCHE[NO]/ [IVL(ius)
VALENTI[NVS]/ ORD(inatus) GER(mania) SV[P](eriori)/
EX IVSSV IPSIVS/ [P]OSVIT PRO SE ET/ SVIS L(ibens)
L(aetus) [M(erito)]/ [PR]AESENTE ET EXTRIC[A]TO [II
CO(n)S(ulibus)]

" Dedicated on behalf of himself and his family to Jupiter Dolichenus by Iulius Valentinus, centurion from Upper Germany, in the consulship of Praesens and Extricatus."

Bruce's woodcut is faulty in several respects, the ligatured ET being missed at the end of line 6, while much more of the last line is legible than would appear from that illustration.

The inscription is dated to A.D. 217, and is noteworthy as mentioning yet another centurion from Upper Germany - though the significance of this is not clear.

A useful note on the cult of Dolichenus is given by Nash-Williams (Caerleon Cat., pp.17-18). As at Chesters, Benwell, Greatchesters, and Carvoran we may infer the presence of a Dolichenum at Piercebridge.

5. Dean and Chapter Library, Durham. (CIL., 1344a; LS., 729; DC Cat., 2). Building stone, 1 ft. 2 in. by 9 in.

LEG(io)·VI·V(ictrix)·

" The sixth legion built this."

Found in 1864 during restoration of the church at Gainford (PSAN.,3, ii, p.344).

6. The Black Gate Museum, Newcastle. (CIL., 430; LS., 726; EE., IX, p.569; BG Cat., 151). Rectangular stone 2 ft. 6 in. by 7 in.

BELLINVS

Hardly a reference to the worship of Baal (AA., 2, pp. 37-8); rather " idly cut " by a person of that name (BG Cat., p. 94).

Note. A small altar, 1 ft. 3 in. by 9 in., was found during the excavations of 1934 (TDNS., VII, p.255), and is now in the Piercebridge Museum. On the left side is the thunderbolt, on the right the patera. The inscription, possibly four lines in length, has been almost obliterated but I fancied that I could read V S L M for the last line.

Binchester.

7. Dean and Chapter Library, Durham. (CIL., 423; LS., 715; DC Cat., 4). Altar 30 in. high, 18 in. wide; left side praefericulum, right patera.

[F]ORTVNAE/ SANCTAE/ M·VAL(erius)/ FVLVIANV[S]/
PRAEF(ectus) EQ(uitum)/ V(otum)·S(olvit)·L(ibens)·
L(aetus)·M(erito)

" M. Valerius Fulvianus, commander of the cavalry regiment (at Binchester), pays his vow to Fortune."

In the eighteenth century this altar was one of a group of inscribed and sculptured stones preserved at Binchester Hall. When the collection was broken up c. 1833 it was rescued by Canon Raine and presented by him to the Dean and Chapter Library (Raine. History of Auckland Castle, p.4, note 1).

An ala was normally commanded by a praefectus (Cheesman. Auxilia, p.36). For other epigraphic evidence of a cavalry garrison at Binchester cf. nos. 13 and 16. The style of lettering, and the abbreviation of the nomen suggest a date in the third century.

8. Lost. (CIL., 424; LS., 716). Altar.

DEAB(us)/ MATRIB(us)/ OL[]OTO[]IS CL(audius) QVINTIANVS B(ene)F(iciarius) CO(n)S(ularis)/ V(otum) S(olvit) L(ibens) M(erito)

" Claudius Quintianus, consular beneficiary, pays a vow to the Ollototian Mother-goddesses."

Camden. Britannia, 1600, p.665; Gale. op.cit., p.11; Horsley, p.295 and p.192, N.58, xxviii.

The difficulty of reading the ligatured letters at the end of the second, and beginning of the third lines was solved, as Hooppell first pointed out, by the discovery of EE., IX, 1133(18).

Haverfield and Hübner concurred in the attribution of the dedication to the Ollotoian Mothers (AJ., XLIX, p.197; PSAN., 2,v,p.131; ibid., p.143; JAA., XLVII, p.271).

For the cult, cf. no. 18. A useful note on the duties of the beneficiarius consularis is given by Birley (AA., 4, xii, p.222).

9. Lost. (CIL., 425; LS., 718; EE., IX, p.570). Altar.

[MA]TRIB(us) OL[LOTO]T[IS]/...../...../...../.....

" To the Ollototian Mother-goddesses....."

Seen and transcribed by Camden (Britannia, 1607, p.603); lost in Horsley's day (Horsley, p.296).

The Corpus gives readings by Sibbald, Camden, and Cotton, but Haverfield has pointed out that the reading Hübner assigns to Sibbald is really that of Camden; that ascribed to Camden being no more than a guess (EE., loc.cit). In view of the confusion, and Camden's admission that the stone was hardly legible, it would be unwise to accept any line other than the first.

10. Lost. (CIL., 426; LS., 717). Altar.

MAT(ribus)·/ SAC(rum)·/ GEMELLVS / V(otum) S(olvit) L(ibens) M(erito)

" Gemellus pays a vow to the Mother-goddesses."

Horsley, p.192, N.58, xxix, and p.296.

The cognomen Gemellus is relatively common in the western provinces of the Empire (the recipient of the diploma for 122 A.D. was so named. cf. JRS.,xx).

The fact that here the cognomen alone is given, together with the absence of regiment, might suggest that the dedicator was a civilian.

11. Lost. (CIL., 427; LS., 720). Altar 15 in. high, 9½ in. wide.

..... [A]MANDV[S]/ EX C(uneo) FRIS(iorum)/ VINCVIE(nsium)/ V(otum) S(olvit) L(ibens) M(erito)

" Dedicated to ..... by Amandus, soldier in the regiment of Frisii stationed at Binchester."

Lysons. Reliquiae Romano-Britannicae, I,p.4, tab.3, fig.5.

The inscription is of great importance for it not only confirms the evidence of the Antonine Itinerary for the name of the fort, but gives us the name of another garrison.

The term cuneus, signifying a cavalry regiment raised on a tribal basis, and corresponding with the infantry numerus, apparently originated in the third century (P-W, cols.1756-7). In Britain, local recruiting at this period would seem to have been supplemented principally by German troops; thus we find a cuneus of Frisii at Papcastle in the third century (EE., III, 85), while at Housesteads the cives Tuihanti cunei Frisiorum set up an altar to Mars and the Alaisiagae under Severus Alexander (EE., VII, 1041).

The cuneus Frisiorum may, therefore, have been in garrison at Binchester with the Vettones, in the same way that we find two regiments, the cohors I Lingonum and the vexillatio Sueborum, occupying the fort at Lanchester under Gordian. We cannot, however, exclude the possibility

of a cuneus at Binchester in the fourth century.

12. Lost. (CIL., 428). Altar, illegible but for the last line.

.....//...../...../ V(otum) S(olvit) L(ibens)

M(erito)

Horsley, p.192, N.58, xxx, and p.269.

13. Lost. (CIL., 429; LS., 722). Tombstone, 4 ft. long, 19 in. high. Inscription in an ansate panel.

D(iis) M(anibus) S(acrum)/ NEM(onius) MONTANVS

DEC(urio)·/ VIXIT ANN(is)·XL·NEM(onius)/ SANCTVS

FR(ater)·ET·COHERR(edes)/ EX TESTAMENTO FECER(un)T

" To the memory of Nemonius Montanus, decurion, forty years of age, this stone was erected according to his will by Nemonius Sanctus, his brother, and the fellow-heirs."

Observed in 1819, forming part of a raised footway adjoining a bridge over the Bell Burn. (AA., 1, i,p.142).

A quingenary ala was subdivided into sixteen units called turmae, each turma being under the command of a decurio.

The fact that the deceased possessed a nomen, and the right to make a will, proves that he had received Roman citizenship, while the abbreviation of the nomen is suggestive of third century date. Montanus' regiment is,therefore, likely to have been the ala Vettonum.(cf. no. 16).

14. Durham University Museum; Binchester in situ. (CIL., 1234 a-b; LS., 721). Tiles.

NOC̄H

" Numerus Con....."

Discovered " on the bricks of the square hypocaust

beneath the praetorium, and .....on bricks etc., in other parts of the station." (Vinovia, p.34).

Hübner gives two distinct stamps:

(a) N COND

(b) N CON

but (a) is an incorrect reading of a drawing by MacLauchlan (Memoir, p.7), while (b) is placed upside down, as by Bruce (Wall, 2,p.320).

Actually only the one stamp $\overline{N}$ CON (retro) exists, but in two different sizes. The lettering of the larger stamp measures 4½ in. across; that of the smaller 3 in. across, while, as Mr.J.McIntyre has pointed out to me, both wooden and metal stamps appear to have been employed.

The exact reading has not yet been determined. Although no parallel can be quoted for the bar over the the letter, the initial N would seem to be the abbreviation for numerus[1], and CON should accordingly represent either the first part of the name of the tribe from which the regiment was drafted, or of the site at which it was stationed.[2] Many suggestions have been made, but none

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(1) cf. CIL., 1030, 1037.

(2) e.g. Hooppell. AA., 2, ix, p.199; Ihm (P-W., iv, col. 859) reads N(umerus) COND(rusorum), but the D does not exist.

convincing. Remembering, however, that it is by no means necessary to suppose that the tiles were made at Binchester, or that the regiment specified on the stamp was in garrison at that fort,[1] one might supply a further reading - n(umerus) Con(cangi easium). In this connection the flourishing brick and tile industry in the neighbourhood of Chester-le-Street at the present day is not without significance.

15. Lost. (CIL., 1344 b; LS., 719). Altar.

SVLP VIC/ VETT/ CANN/ V(otum) S(olvit) L(ibens) M(erito)

Recorded in correspondence between a Mr. Farrar (master at Witton-le-Wear c. 1760) and the Rev. J.Randall of Whitworth. The text would seem to be corrupt but the second and third lines suggest that the dedicator was a member of a German tribe, the Cannenefati, serving in the ala Vettonum.

16. Durham University Museum. (EE., VII, 979). Altar of soft gritstone, 23 in. high, 16 in. wide. Part of the left hand side has been broken off. On the right is the figure of Aesculapius, a robe covering his left shoulder, while the right shoulder and breast are bare. His left hand rests on a tree-stump round which a serpent coils;

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(1) Tiles stamped by the cohors I Flavia Canathenorum, for example, have been found at Eining, Kösching, Pföring, Regensburg, and Straubing (Stein. Die Kaiserlichen Beamten und Truppenkörper, etc., pp. 180-1).

whilst with the right he seems to clasp the hand of Salus, whose head and left shoulder have alone survived. (Vinovia, f.p.28).

[AESC]VLAPIO/ [ET] SALVTI/ [PRO SAL]TE ALAE·VĒT/[TONVM·]
C(ivium)·R(omanorum)·M·AVRE/[LIVS ABR]OCOMAS·ME/[DICVS·
V(otum)·S(olvit)]·L(ibens)·M(erito)

" Dedicated to Aesculapius and Salus, on behalf of the ala Vettonum, by M. Aurelius Abrocomas, regimental doctor."

Found at Binchester in 1879 in the vicinity of the praetorium (Vinovia, pp.28-31; AA., 2, viii, pp.247-255; AJ., xxxvii, pp.129 & 140 ff).

The cult of Aesculapius, Greek god of healing, is represented only by a handful of inscriptions in Britain, for the number of Greek, or Greek-speaking peoples in the province was comparatively small. Chester has produced an altar to Aesculapius and Salus (CIL., 164), while dedications to the god alone have been found at Lanchester (bi-lingual, no. 24), Maryport (Greek, LS., 878), and South Shields (no. 93).

The strength of the cult appears to have lain with the medical profession, many of whose members were Greeks (cf. CIL., p.48; Dessau, 2602 - a close parallel to the Binchester stone).

The presence in Britain of the ala Vettonum Hispanorum civium Romanorum, is attested by the diplomas of A.D. 103 and 122. Other records of the ala have been found at Brecon (EE., IV, 670), Bath (CIL., 52), and

Bowes (CIL., 273), and since at the latter site we find its prefect in charge of rebuilding by the cohors I Thracum, under Virius Lupus - Severus' first governor of Britain - we may suppose that the ala Vettonum was in garrison at Binchester in the third century (cf. Birley. AC., xci, pp.60-1).

17. Durham University Museum. (EE., VII, 980). Altar, 15 in. high, 9 in. wide. The right hand side has broken away; on the left is the patera.

MAI..../ R...../ E...../.....

Found within the fort in 1879 (Vinovia, p.33; AA., 2, ix, p.172)

The dedication would seem to have been to the Matres, but Hooppell's restoration of the following lines is imaginative.

18. Black Gate Museum, Newcastle. (EE., IX, 1133; BG Cat., 29). Altar of gritty freestone, 51 in. high, 14 in. wide. On the right side are the patera and praefericulum, on the left the cultur and securis.

I(ovi) O(ptimo) M(aximo)/ ET MATRIB/VS OLLOTO/TIS SIVE TRA/NSMARINIS/ POMPONIVS/ DONATVS/ B(ene)F(iciarius) CO(n)S(ularis) PRO/ SALVTE SVA/ ET SVORVM/ V(otum) S(olvit) L(ibens) A(nimo)

" Dedicated on behalf of himself and his family to Jupiter, Best and Greatest, and to the Ollototian or Overseas Mother-goddesses, by Pomponius Donatus, consular beneficiary."

Discovered in 1891, 80 yards south-east of the fort (Vinovia, p.59; AJ., XLIX, pp. 226-8; AA., 2, xv, p.225; PSAN., 2, v, pp. 36-40 and 127-131).

The inscription is important for the light which it throws on the interpretation of nos. 8 and 9. For the Matres, Haverfield's admirable paper in Archaeologia Aeliana (2, xv, pp. 314-339) should be consulted. The name Ollototae, of Celtic derivation, points to a distinction between the naturalised British Mother-goddesses and those overseas, and until 1931 it seemed that the cult of the Matres Ollototae was local to Binchester. In that year, however, a parallel dedication was found at Heronbridge, near Chester (JRS., xxii, p.224).

19. Durham University Museum. (EE., VII, 1135). Flue-tile.

M P P

Found in the rectangular hypocaust, 1879. (Vinovia, p.37 and Pl.5).

The reading is uncertain.

20. Built into the outer north wall of the chancel of the Saxon church at Escombe. (AJ., XXXVII, p.134).

Building stone 21 in. long, 9 in. high.

LEG(io) $\overline{VI}$

" The sixth legion built this."

AA., 2, vii, p.54; ibid., viii, p.253; Surtees. History of the Village and Church of Escombe, p.20.

21. Escombe Church, north wall of the nave. (AJ., XXXVIII, p.288). Fragments.

(a) ...../ VIM

(b) / LIMI

22. Escombe Church, north wall of the nave. (Vinovia, p.38). Fragment.

L

23. Dean and Chapter Library, Durham. (JRS., xxv, p.225). Centurial stone 2 ft. long by 4 in. wide; an inch or two lost by breakage on the right.

IVLIVS VICTORINVS PV..

Found in a field-wall near the fort.

Lancnester.

24. Dean and Chapter Library, Durham. (CIL., 431; LS., 687; DC Cat., 5). Altar, the top is broken off and the surviving portion measures 20 in. by 11 in. A Latin inscription on one face is repeated in Greek on the opposite face.

[AESCVLA]/PIO/ T(itus)·FL(avius)·TITIANVS·/ TRIB(unus)/·V(otum)·S(olvit)·L(ibens)·L(aetus)· M(erito)

[ΑCΚΛΗΠ]ΙΩΙ/ [ΤΙΤΟC] ΦΛΑΟΥ/[Ι]ΟC ΤΙΤΙΑΝΟ/[C] Χ[Ε]ΙΛΙΑΡ[Χ]/ΟC·

" T. Flavius Titianus, tribune, erected this altar to Aesculapius."

Horsley, pref., p.xi, p.293, and p.192, N.57, xxv. Titianus was tribune of the first conort of Vardulli in the governorship of Adventus. cf. no.33.

For the worship of Aesculapius, cf. no.16, where explanation will be found for the Greek text; one recalls the bi-lingual Monumentum Ancyranum at Angora recounting the "res gestae divi Augusti".

Greek inscriptions alone have been found at York (CIL., p.62), Maryport (ibid., p.85), Aldborough (ibid., p.231), Corbridge (ibid., p.97), Brough-under-Stainmore (EE., VII, 952), and elsewhere, but they are not common.

25. Dean and Chapter Library, Durham. (CIL., 432; LS., 686; DC Cat., no.6). Oblong stone, 10 in. by 7 in., recessed, possibly for a statuette.

GENIO PRAETORI/ CL(audius) EPAPHRODITVS/ CLAVDIANVS/ TRIBV.NVS C(o)HO(rtis)/ I LING(onum) V(otum) L(aetus) P(osuit) M(erito)

"Claudius Epaphroditus Claudianus, tribune of the first cohort of Lingones, pays his vow to the Genius of the Praetorium."

Hunter. Philos. Trans., 22, 1700, p.657; Horsley, p.290, and p.192, N.56, xv.

On internal evidence - the missing praenomen, and the abbreviated nomen - one would be inclined to place this inscription in the third century; actually the Lingones were in garrison under Gordian (nos.38 & 39).

As the regiment was a quingenary one, it is irregular to find it commanded by a tribune, rather than by a prefect. The only explanation occurring to the writer is that, at sometime after the reign of Gordian,

the commands of the two regiments known to have been in garrison together at Lanchester in the third century - the first cohort of Lingones, and a vexillation of Suebi (cf. no.47) - may have been amalgamated. In this case it would not be surprising to find the single command ranking as highly as that of a milliary cohort.

The genius praetori was the presiding deity of the commandant's house.

26. Dean and Chapter Library, Durham. (CIL., 433; LS., 684; DC Cat., no.7). Altar, 40 in. high, 12 in. wide. The sides are plain, though scored by the plough. Leaf stops.

FORTVNAE/ AVG(ustae)·SACR(um)/ P(ublius)·AEL(ius)·
ATTI/CVS PRAEF(ectus)/ V(otum) S(olvit) L(ibens)
L(aetus) M(erito)

" Publius Aelius Atticus, prefect, pays his vow to Fortune"

Hunter. Philos. Trans., 22, 1700, p.657; Horsley, p.290, and p.192, N.56, xiv.

Found " at the east end of the square room within the station " (Horsley), not, as Haverfield says, outside the fort. Probably it was set up in the private suite of baths in the praetorium, for Fortune was the presiding deity of the bath (AA., 4, viii, p.271), though not necessarily the patroness of the regimental gambling club (as Burn. The Romans in Britain, p.145).

The nomen of the dedicator forbids a pre-Hadrianic date for the inscription, and it is likely that Atticus was praefectus of the cohort of Lingones.

The last line of Bruce's woodcut is quite unreliable, and an additional L may be detected (cf. rubbing)

27. Dean and Chapter Library, Durham. (CIL., 434; LS., 689; DC Cat., no.8). Small altar, 10 in. by 6 in. On the left side is a boar; the right is broken. The inscription is not illegible but, apart from the first three letters, quite unintelligible.

DEO IN/ VOTVM/ VIRIOVI

" To the god....."

Horsley, p.292, and p.192, N.57, xxi.

28. Dean and Chapter Library, Durham. (CIL., 435; LS., 690; DC Cat., no.9). Broken altar, 40 in. by 13 in; plain sides.

[I(ovi)] O(ptimo) M(aximo)/ [? ORDI]ATI COH(ortis)/ [I F(idae)] VARDV[L]LOR(um)/ C(ivium) R(omanorum) EQ(uitatae) ∞ (milliariae)/ V(otum) S(olverunt) L(aeti) L(ibenti)es M(erito)

" The ? centurions of the first cohort of Faithful Vardulli, Roman citizens, 1000 strong, and with a cavalry detachment, erect this altar to Jupiter in payment of a vow."

Horsley, p.294, and p.192, N.57, xxvi.

The only uncertainty in the reading lies in the first word of the second line. Haverfield suggested that the letter before ATI was possibly L but the breakage of the stone forbids more than a conjectural restoration.

On the requirements of spacing ORDINATI (cf. no.3) has been preferred.

The first milliary cohort of Vardulli occurs on all the British diplomas except that for 103 A.D., and the Walcot fragment. Another inscription from Lancaster (no.33), shows it to have been in garrison there c. 175 A.D., while elsewhere it has left records at Castlecary (CIL., vii, 1096), at a site near Jedburgh (JRS., xi, p.238, and (a detachment only) at milecastle 19 (AA., 4, ix, p.205). In the third century it was stationed at High Rochester (CIL., 1030 etc.).

Since both Castlecary and High Rochester are too small to contain a milliary garrison, it may be that, at the time of the advance into Scotland, and subsequently in the third century also, detachments of the regiment were to be found on different sites, as, in the second century, we find a working-party sent out from Lancaster for service on the Wall.

29. Dean and Chapter Library, Durham. (CIL., 436; LS., 676; DC Cat., no.10). Thin gold plate 2¼ in. by 1⅛ in; ansate ends., Three holes at the top for attachment. Punched letters.

MARTI/ AVG(usto)/ AVFFIDI/VS AVFI/DIANVS

D(ono) D(at)

" Given to Mars by Auffidius Auffidianus."

Discovered in 1716 (Horsley, p.291).

Hunter conjectured that it had been fastened to an

altar, but it seems more likely that the gift referred to was connected with a statue of the divinity standing in a shrine within the fort. A similar 'ex voto' plate was found attached to a loose armilla on the wrist of a fragment of a silver statue of Victory at Tunshill in 1793 (JRS., xvi, pp.9-10).

In the third century, Mars seems to have taken the place of Jupiter as patron of the army. For the popularity of the former cult at Lanchester cf. nos.30-32.

30. Dean and Chapter Library, Durham. (CIL., 437; LS., 678; DC Cat., no.11). Small altar, 13 in. by 6½ in., sides plain. Only the first eight letters are certain.

DEO M/ARTI...../...../.....

" To the god Mars....."

First recorded by Horsley (op.cit., p.293), this stone seems to be the same as the one noted by Surtees at Greencroft (Durham, II, p.306). Neither Horsley, Bruce, nor Hübner, could produce a satisfactory reading of the last two lines.

31. Dean and Chapter Library, Durham. (CIL., 438; LS., 677; DC Cat., no. 12). Altar, 12 in. by 6 in; simpulum on the right, patera on the left.

DEO/ MAR(ti) CAV/.....

Hunter. Philos.Trans., 22,1700,p.657; Horsley, p.292, and p.192, N.56, xviii.

The rest of the inscription was illegible even in 1700.

32. Dean and Chapter Library, Durham. (CIL., 439; LS., 679; DC Cat., no.13). Small altar, 11 in. by 7 in; simpulum right, patera left.

MAR/TI

" To the god Mars."

Hunter, Philos. Trans., 22, 1700, p.657; Horsley, p.292, and p. 192, N.56, xvii.

33. The Chesters Museum, Chollerford. (CIL., 440; LS., 685). Altar, 2 ft. 3 in. by 1 ft. + in., broken at the base. The lettering is well executed, and both plain and leaf-stops are employed.

NVM(ini)·AVG(usti)·ET/ GEN(io)·COH(ortis)·I·F(idae)· VARDVLLORVM/ C(ivium)·R(omanorum)·Eq(uitatae)· ∞ (milliariae) SVB AN/TISTIO ADVEN/TO·LEG(ato)·AVG(usti)· PR(o)·P(raetore)/ F(lavius) TITIANVS TRIB(unus)/ [D(e)] S(uo) [D(at)]

" Erected, at his own expense, to the divinity of the Emperor, and the genius of the first milliary cohort of Vardulli, by Flavius Titianus, commander of the cohort in the governorship of Antistius Adventus."

Found within the fort in 1735.(Hutchinson. Durham, II, p.364).

For the Vardulli, and another dedication by Titianus cf. nos. 24 and 28.

Adventus was governor of Britain c. 175 A.D. (Ritterling. Fasti des r. Deutschland, p.74).

34. The Black Gate Museum, Newcastle. (CIL., ++1; LS., 681; BG Cat., 48). Pedestal, 22 in. by 10 in. Leaf stops.

DEO/ SILVANO/ MARC(us)·DIDIVS/ PROVINCIALIS/
B(ene)F(iciarius)·CO(n)S(ularis)·/ V(otum)·S(olvit)·
L(ibens)·L(aetus)·M(erito)

" Marcus Didius Provincialis, consular beneficiary, pays his vow to the god Silvanus."

Hodgson. Poems, p.105.

35. Dean and Chapter Library, Durham. (CIL., 442; LS., 688; DC Cat., no.14). Small altar, 12 in. by 9 in., sides plain.

DEO/ VIT(iri)

" To Vitiris."

Hunter. Philos. Trans., 22, 1700, p.657; Horsley, p.292, and p. 192, N.56, xix.

For the cult of Vitiris cf. Haverfield in AA., 3, xv, p.22 ff., and Collingwood. Roman Britain etc., pp. 268-9.

36. The British Museum. (CIL., 443; LS., 692). Small altar, 16½ in. by 8 in. The last two lines are uncertain.

D(eae)/ VICTORIE/ VOT(um)/...../.....

" To the goddess Victory....."

Hodgson. Poems, p.105.

Hubner's restoration of lines 4 and 5 :

SVL(picius) ? M(erito) S(olvit) L(ibens)

is suspect.

37. The Black Gate Museum, Newcastle. (CIL., 444; LS., 691; EE., IX, 1134; BG Cat., 58). Small altar, 16½ in. by 7½ in. A flake has removed the ends of all the lines.

Lines 1 and 2 are well cut; lines 3 and 4 are too poorly cut to be legible.

DEO/ VITIR[I]/ ..THAV../..POI..

" To the god Vitiris....."

Collingwood's reading, given above, is to be preferred to previous readings, although it is no more intelligible than they after the first two lines.

38. Dean and Chapter Library, Durham. (CIL., 446; LS., 700; DC Cat., no. 10). Ansate gritstone slab, 34 in. by 23 in. The lettering is slightly smaller than that of no.39, but better preserved. Plain and leaf-stops.

IMP(erator)·CAESAR·M(arcus)·ANTONIVS/ GORDIANVS·
P(ius)·F(elix)·AVG(ustus)·/ PRINCIPIA·ET ARMAMEN/
TARIA CONLAPSA RESTITV/IT·PER MAECILIVM·FVSCVM·
LEG(atum)·/ AVG(usti)·PR(o)·PR(aetore) CVRANTE·
M(arco)·AVR(elio)·/ QVIRINO·PR(aefecto)·COH(ortis)·
I·L(ingonum)·GOR(dianae)·

" The Emperor Gordian restored the head-quarters and armouries (of the fort) by the agency of Maecilius Fuscus, governor of the province; the work was supervised by M. Aurelius Quirinus, commander of the first cohort of Lingones, Gordian's Own."

Found within the fort in 1715.(Hunter. Philos. Trans., 30, 1717, p. 701; Gordon. Itin. Sept., 1732, Additions pp.12-27; Horsley, p.290, and p. 192, N.55, xii)

Like no.39, this inscription records rebuilding at Lanchester in the reign of Gordian. Moreover, the fact that the chief buildings of the fort, the principia and

balneum are specified as having been under repair at this period, suggests that there had been no previous re-occupation of the site in the third century.

The first cohort of Lingones appears on the diplomas for 105 and 122 A.D., and in the second century it was in garrison at High Rochester (CIL., 1041). Being of quingenary type, its presence in a fort previously held by a milliary cohort(no.23) would be difficult to account for, unless we were to assume a reduction in the size of the fort, or to infer that the Lingones were only a unit of the garrison. The latter inference seems to be correct (cf. no.47).

There is no other record of Fuscus, the governor, but Quirinus' name occurs on two other inscriptions (nos. 39 and 111).

No doubt this slab stood in the principia itself (compare the building stone from Rough Castle, EE., IX, 1241; Macdonald. Roman Wall in Scotland, p.412).

The armamentaria were probably the rooms flanking the court-yard of the head-quarters building.

39. Dean and Chapter Library, Durham. (CIL., 445; LS., 699; DC Cat., no. 15). Ansate gritstone slab, 31 in. by 19 in.

IMP(erator)·CAES(ar)·M(arcus)·ANT(onius)·GORDIA/NVS·
P(ius)·F(elix)·AVG(ustus)·BALNEVM·CVM/ BASILICA A
[SO]LO INSTRVXIT/ PER EGN(atium) LVCIL[I]ANVM·LEG(atum)
AVG(usti)/PR(o)·PR(aetore)·CVR[A]TE M(arco) AVR(elio)/
QVIRINO PR(a)EF(ecto) COH(ortis)·I L(ingonum) GOR(diianae)

" The Emperor Gordian erected a bath-house and basilica, through the agency of Egnatius Lucilianus, governor of the province; the work was supervised by M. Aurelius Quirinus, commander of the first cohort of Lingones, Gordians' Own."

Found about 100 yards from the fort, on the east side. (Hunter. Philos.Trans., 22, 1700, p.657; Horsley, p.289, and p.192, N.55, xi).

This stone provides a significant clue to the site of the bath-house, as yet unexcavated. The basilica appears to have been the entrance-hall in the same building.

Lucilianus, the legate, is mentioned on a third century inscription from High Rochester (CIL., 1030), but the chronology of nos.38 and 39 is in doubt. It is to be expected, however, that the reconstruction of the principia would precede building outside the fort.

The cohort has the suffix Gordiana in accordance with third century practice (cf. Cheesman. Auxilia, p.47).

40. Dean and Chapter Library, Durham. (CIL., 447; LS., 703; DC Cat., no.17). Large ornamental slab, 54 in. by 34 in., broken in the centre. A central wreath of oak leaves, containing the inscription, and a boar (the badge of the twentieth legion), is supported by two winged Victories, each with one foot on a globe, and holding the palm. The

design is good, and the execution vigorous. Leaf-stops.

LEG(io)/ XX·V(aleria)·V(ictrix)·/ FEC(it)

" Erected by the twentieth legion, called Valeria Victrix."

Hunter. Philos.Trans., 22, 1700, p.657; Horsley, p.291, and p. 192, N.56, xvi.

The tablet probably stood over a gateway, or in one of the principal buildings of the fort, and the style of the lettering is suggestive of second century date. For a similar representation of winged Victories, inferior in execution, compare a distance slab from the Scottish Wall (Macdonald. op.cit., plate lxvi, no.2).

41. Dean and Chapter Library, Durham. (CIL., 448; LS., 703; DC Cat., no. 18). Centurial stone, 19 in. by 7 in. The inscription is complete.

COH(ors) I

" The first cohort built this."

Hunter. Philos.Trans., 22, 1700, p.657; Horsley, p.290, and p.192, N.56, xiii.

42. Lost. (CIL., 449; LS., 704). Centurial stone.

[COH VIII/ C OPPI PROCVLI

" The century of Oppius Proculus of the eighth cohort built this."

Hübner's reading : [COH VIIII does not agree with the woodcut in the Lapidarium.

43. Lost. (CIL., 1183; LS., 701). Milestone.

D(omino) N(ostro) / IMP(eratori) M(arco) ANT(onio)/ GORDIANO/ PIO FELICI/ AVG(usto)

" Erected by our lord the Emperor M. Antonius Gordianus, the Good, the Fortunate."

Seen first by Hutchinson in 1783 on the road-side near the fort (Durham, II, p.368).

cf. a similar milestone from Ford, near Sunderland (no.114). Others set up in Gordian's reign have been found at Bitterne (EE., IX, p.633), Port Talbot (EE., IX, p.634), and Scalesceugh (CW., 2, xvi, p.282).

44. Lost. (LS., 690; EE., IV, 676). Fragment of an altar.

DEO ...

" To the god....."

45. Lost. (EE., IX, 1137). Centurial stone.

Ↄ N.....

" The century of N....."

Found in 1897. (PSAN., 3, viii, p.18).

46. The Black Gate Museum, Newcastle. (EE., IX, 1136; BG Cat., 198). Fragment 10 ins. square.

S...../ I.LC..../CDI. ..../ CANI.

Haverfield's reading is rejected by Collingwood who declares the lettering to be unintelligible.

47. Lanchester Church. (EE., IX, 1135). Altar, 53½ in. high, 24 in. wide, with socketed base 19 in. deep. Not only one of the most important, but one of the most splendid inscribed stones found in the county. The lettering is large (2¾-3 in.) and well preserved, and besides the customary sacrificial vessels on either side, there is a profusion of geometrical ornament

(Figs. 34 and 35) in many respects similar to that on the Risingham altar (LS., 606), and on the Bywell fragment (PSAN., 2, x, p.158)

DEAE GAR/MANGABI/ ET N(umini) GO[RDI]/ANI AVG(usti) N(ostri) PR[I]/ SAL(ute)·VEX(illationis)·SVEBO/RVM· LON(govicianorum)·GOR(dianorum)·VO/TVM·SOLVERVNT· M(erito)

" Dedicated, in payment of a vow, to the goddess Garmangabis and the divinity of the Emperor Gordian, by a vexillation of Suebi, Gordian's Own, stationed at Lanchester."

Discovered in 1893, about 400 yards north of the fort. The altar and base were found together, so that we may presume they stood here in Roman times.(cf. AA., 2, xvi, pp.313-327; AJ., L, p.293).

There has been a half-hearted attempt to erase the name of the emperor and, as only one other instance of the erasure of Gordian's name is attested (CIL., iii, 4644), Haverfield suggested that this may have been done in error. One notes that no attempt has been made to erase the ~~title~~ suffix of the regiment.

The Suebi, a German tribe, were possibly recruited shortly before the reign of Gordian (Zangemeister. Neue Heidelberger Jahrbücher, iii, 1893, pp.1-16). From the third century onwards the term vexillatio has a new significance. Instead of representing a purely temporary detachment from one or more regiments, it may

now describe a permanent cavalry regiment levied, drilled, and armed on a tribal basis, and corresponding to the infantry numerus.

In spite of Haverfield's indecision, it is difficult not to expand Lon to Longovicianorum , and to assume that we have here corroborative evidence for equating Lanchester with the Longovicium of the Notitia Dignitatum.

48. The Black Gate Museum, Newcastle. (CIL., 1344 c; LS., 675). Small altar, 12 in. by 7 in.

DEO M/.C.RSE

This is Collingwood's reading, improving upon those of the Corpus, and the Lapidarium. The meaning is obscure.

49. Lost. (Hodgson. Poems, p.118). Fragment of a tombstone.

...O.....VL....N.../....ADRC....R.../....IX...X

...IVI..

Found in 1805. The reading cannot be restored.

50. Two building stones, each 12 in. by 6 in., pointed out to me in May, 1937, by Mr. H. Sparks built up into a field wall on the north side of Cadger Bank just below the fort.

(a) X (b) W

51. Sunderland Museum. (JRS., xxvii, p.249). Antefix of terra-cotta, 6 in. long, 5 in. wide. It bears a head in relief, and the inscription:

SEVERI

cf. Fig. 33, and PSAN., 4, vii, pp.255-6. No reference to the emperor of that name is implied.

52. In 1891 an altar was found on Dyke Nook Fell, some three miles west of Lanchester, near the catchment of the northern aqueduct. I am indebted to Mr. O.G.S.Crawford, F.S.A., for the following note on the discovery from the Ordnance Survey Records of 1895:

" The altar is about three feet high, and eighteen inches by twelve inches: the inscription, which is on the front, being partly obliterated. E.W.E.Balleney, Esq., who is a member of the Archaeological Society of Durham and Northumberland, says that the President (the Revd. Dr. Greenwell, of South Bailey, Durham) and other members have inspected the Altar and acknowledge it to be of undoubted antiquity..... it is now standing on the private grounds near the residence of the above (E.W.E. Balleney), 'Little Greencroft! "

The altar is now lost, but Mr.G.Haughan, the present owner of Little Greencroft, believes that it is built into one of the garden walls and hidden by ivy. Search is, however, to be made this summer.

Note.

In addition to the inscribed stones recorded above, a number of sculptures and uninscribed altars have been found at Lanchester from time to time. Many of these were presented to the Black Gate Museum, Newcastle, by Canon Wm. Greenwell in 1909 (AA., 3, vi, p.xviii), and have been described in the most recent catalogue of that collection (AA., 4, ii, pp.104-120).

Ebchester.

53. The Rectory Garden, Ebchester. (CIL., 457; LS., 664).

Altar, 1 ft. by 9 in.

DEO M/ARTE ET N(umini)/ AVG(usti) N(ostri)·

" To Mars and the divinity of our Emperor."

Misread by Hutchinson, who first records the inscription (Durham, II, p.433). Corrected by Bruce (Lap. Sep.) who rightly disregarded the final E (? leaf stop) shown on the woodcut.

MARTE is rustic. The dedication is most likely third century (cf. no.29).

54. Dean and Chapter Library, Durham. (CIL., 458; LS., 665; EE., IX, p.572; DC Cat., no.24). The lower left-hand corner of a dedication slab, 12 in. by 22 in.

[DEAE]/ S[ANCTAE MINER]VAE·IVL(ius) GR[AECI]/NVS·
ACTARIVS/ COH(ortis)· IIII·BR[EVCORVM]/ ANTONINIA[NORVM
V(otum) S(olvit)] L(ibens)·L(aetus)·M(erito)

" Dedicated to the holy goddess Minerva by Julius Graecinus, quarter-master of the fourth cohort of Breuci, called Antoniniana."

Removed from a barn wall at Ebchester in the early eighteenth century. Horsley mistakenly ascribes it to Carvoran (Horsley, p.233).

An important inscription attesting the presence of the fourth cohort of Breuci at Ebchester between the years 214-217 A.D. The limits for the use of the title Antoniniana applied to British regiments under Caracalla have been suggested by Birley (AA., 4, xi, p.131), modifying Miller (Archaeologia, LXXVIII, p.160). Had the inscription been set up under Elagabalus we should

have expected to find the honorary title erased.

The fourth quingenary cohort of Breuci is included in the diploma for 122 A.D. Numerous tiles stamped by this regiment have been found at Slack, in Yorkshire (EE., VII, 1127 with CIL., 1231), where the excavators concluded that the site was abandoned " probably early in Hadrian's reign, possibly as late as 140 A.D." (Slack, p.85). Light is thrown on this by an inscription from Bowes (CIL., 275) set up in the reign of Hadrian by a fourth cohort whose name has not survived beyond the initial letter. This letter is given as F, but as no cohors IIII F.... is recorded in Britain it is probable that the Breuci are referred to. For a further notice of the cohort at Ebchester cf. no.66.

The other principal features of the inscription, notably the rank of the donor, and the dedication to Minerva, are paralleled on an altar from Carnarvon, and have been so exhaustively discussed by Dr. Wheeler [illegible] (Segontium, pp.125-7) that no further comment is deemed necessary.

55. Dean and Chapter Library, Durham. (CIL., 459; LS., 666; DC Cat., no.25). Small altar, 16 in. by 7 in. On the sides are a bird (left), and a boar (right).

DEO/ VITIRI/ MAXIMV/S V(otum) S(olvit)

" Dedicated by Maximus to the god Vitiris."

First recorded, inexactly, in Gibson's Camdens Britannia, 1722, col. 955. Horsley correctly read and interpreted the stone (Horsley, p.288).

The rudeness of the inscription, and the single name of the dedicator are typical features of the cult of Vitiris, whose ~~avotaries~~ votaries were mainly civilians (cf. Birley. AA., 4, xii, pp.212-213).

56. Lost. (CIL., 460). Centurial stone.

COH(ors) V

" The fifth cohort built this."

Horsley, p.289, and p.192, N.55, viii.

Possibly, as Horsley suggested, a cohort of the sixth legion whose presence at Ebchester is attested by no.71.

57. (CIL., 461). Centurial stone.

(a) COH(ortis) V/ V..... I .. I...V.....IV

(b) COH(ortis) V/ MRITAI

(a) Hutchinson is the authority for this stone which he saw " in the wall of another house " in Ebchester (Durham, II, p.433). Hübner says that Hutchinson proposed the reading COH V/ LEG.VI.VIC , but this is not the case.

(b) Bruce (LS., 671) notes this inscription " over the door of a beer-house ", and renders it Conors V Centuria ?Martialis

Very probably the same stone is referred to. I have traced it to a cottage a little to the west of the Rectory, at present occupied by Miss Millie, but as it is overgrown by creeper I have been unable to check the reading.

58. The church porch, Ebchester. (CIL., 462-3; LS., 674). Centurial stone, I ft. by 8 in.

Ↄ VAR(ʔsidius)

" The century of ?Varsidius built this."

First recorded by Hutchinson who gives the correct reading (Durham, II, p.433). Bruce reads Ↄ VAL (Wall,2, p.317), so that Hübner wondered whether there were not two stones, but there is no doubt that the existing inscription is the one seen by Bruce (cf. no.59).

59. Built into the wall of the lych-gate at Ebchester Church. (CIL., 464; LS., 673). Centurial stone, 17 in. by 5 in.

Ↄ VARSIDI IVSTI

" The century of Varsidius Justus built this."

Formerly built up in an out-house near the Rectory (Bruce. Wall, 2, p.317). It was removed with others (including no.58) by the Revd. H. Linthwaite in 1876, and placed in its present position.

60. Lost. (CIL., 465). Centurial stone (?).

ISVO/ ONOↃ

Horsley, p.289, and p. 192, N.55, ix.

Unintelligible.

61. Built up into the wall of the lych-gate. (CIL., 466). Fragment 8 in. by 3 in.

I

Hutchinson. Durham, II, p.432.

62. With no. 68. (CIL., 467). Fragment 8 in. by 4½ in.

IIII I

Horsley, p. 289, and p. 192, N.55, x.

63. Churchyard wall, Ebchester. (CIL., 468). Building stone.

X

Horsley, p.289, and p. 192, N.55, x.

64. Lost. (CIL., 469). Inscribed fragment.

VVNB/ OCEM/ VIT

Horsley, p.288, and p.192, N.55, vii.

Horsley's diffident reading num(inibus) Oce(ani ob) vit(am servatam) cannot be accepted.

65. Dean and Chapter Library, Durham. (CIL., 470; LS., 669; DC Cat., no.26). Small stone, perhaps a finial. 16 in high; on one side

HAVE

" Farewell."

Hunter. Philos.Trans., 23, 1702, p.1129. Gibson mistakenly attributes it to Lanchester (Britannia, 1722, col. 954).

66. Lost. (CIL., 1229; LS., 670). Tile.

[COH(ors)]III BR(eucorum)

" The fourth cohort of Breuci made this."

Hubner, following Bruce, gives the stamp [COH I BR, but the restoration by Cichorius is to be preferred on the evidence of no.54.

67. The church porch, Ebchester. (EE., IV, 677; LS., 668)
Altar, 19 in. by 9 in.

DEO / VETERI / OSC

" To the god Vitiris .... "

Found in 1873 during additions to the churchyard.

Haverfield read DEO VITIRI, but the rubbing clearly shows the same confusion with the adjective vetus noted elsewhere in connection with this cult (Collingwood and Myers, p.268).

68. With no. 67. (EE., VII, 981). Altar, 36 in. high; eagle and secutor on the left side, patera on the right. Only the first and last lines are legible.

I(ovi) O(ptimo) M(aximo)/...../...../...../

...../ V(otum) S(olvit) L(ibens) M(erito)

" To Jupiter, Best and Greatest....."

Discovered during restoration of the church in 1876 (PSAN., 2, iii, p.55).

69. With no. 67. (EE., VII, 982). Fragment of the last line of a dedication.

...../[V(otum) S(olvit)] L(ibens) M(erito)

70. With no. 67. (EE., VII, 983). Fragment. The reading given in the Ephemeris Epigraphica is unintelligible, and the inscription seems to be practically illegible.

71. Chesters Museum, Chollerford. (EE., VII, 1122 a).
Tile, 15 in. by 6 in.

LEG(io) VI V(ictrix)

" The sixth legion made this."

72. In the possession of Mr.Lauder, Ebchester. (JRS., xvii, pp.214-15). Fragment.

.... ETIS.C ...

Note on LS., 667.

Two altars, now at Minsteracres, near Shotley Bridge, are included amongst the Ebchester stones in the Lapidarium Septentrionale. Hooppell likewise lists them in his account of Roman Ebchester (Neasham, pp.126-7), but Haverfield has demonstrated that both altars come from Housesteads, and that the Ebchester tradition is merely that of the nearest Roman site (AJ., xviii, pp.144-8; PSAN., 3, v, p.240).

Chester-le-Street.

73. The Black Gate Museum, Newcastle. (CIL., 452; LS., 541; BG Cat., 4). Upper part of a small altar, 9 in. by 8 in.

DEO APOLL(i)/NI LENIG.../.....

" To Apollo....."

Found north of the fort with nos.74 and 75 (AA., 1, i, p.292).

" The reading of line 2 is doubtful and its meaning quite uncertain: LEG II A(ug) has been read, but seems unjustified," (Collingwood. BG Cat.).

74. The Black Gate Museum, Newcastle. (CIL., 453; LS., 543; BG Cat., 67). Small altar, 10 in. by 6 in.

DEO DI/G .....GN/ BANNOAI/.....

" To the god Dig....."

Found with no.73.

Collingwood's reading differs in the second and third lines from previous readings, and is to be preferred. No satisfaction can be obtained from lines 2, 3, or 4.

75. The Black Gate Museum, Newcastle. (CIL., 454; LS., 542; BG Cat., 63). Small altar, 14 in. by 7 in.

DEAB(a)S/ VIT(iri)BVS/ VIAS/ VADRI

" To the Deae Vitires....."

Found with no. 73.

The inscription is remarkable as making the deities feminine. Line 4 has been thought to contain a reference to the Wear, but no satisfactory reading of the last two lines has been put forward.

76. Lost. (CIL., 455; LS., 544). Building stone, 1 ft. by 6½ in.

LEG II AV[G]

" The second legion, called Augusta, built this."

Found in 1856 on the site of the ? bath-house outside the south rampart of the fort (PSAN., 1, i, p.122).

77. The Parish Church, Chester-le-Street. (CIL., 456; LS., 545). Altar, 45 in. high, 12 in. wide; the inscription was re-dressed before it could be read.

·D(is) M(anibus)/ SIMM/ VIXIT/ ANNIS/· XXV/

DIGNISS/[i]MVS

" In memory of..... who lived to the age of 25."

Found in a field 300 yards south of the church (AA., 1, iv, p.291).

78. The Black Gate Museum, Newcastle. (EE., VII, 984; BG Cat., 35). Altar, 21 in. by 11 in.

DEO/ MARTI/ CONDATI V(alerius)/ (p)ROB(i)NVS H[]O/

SE ET SVIS V(otum) S(olvit) L(ibens) M(erito)

" Dedicated to Mars Condatis by Valerius Probinus on behalf of himself and his family."

Found near the Cong Burn in 1886 " about 50 or 60 yards to the west of the street which passes the Roman Station there, and about 300 yards to the north of it " (AA., 2, xii, p.284). Collingwood (BG Cat.) has confused this with no. 79.

The name of the dedicator is not quite certain, for the existing letters are clear and the spacing does not allow us to presume that any have vanished.

For Mars Condatis cf. no.2.

79. The Black Gate Museum, Newcastle. (EE., 985; BG Cat., 60). Altar, 23 in. high, 7in. wide.

DEO/ VITI/RI D/VIN/NO V(otum) S(olvit)

" Duinno dedicates this to Vitiris."

Found in 1886 in a well " outside of the Roman station, and near its north-west angle " (AJ., xliv, p.121).

The single non-Roman name of the dedicator, indicative of low birth, agrees well with our knowledge of the cult of Vitiris which seems to have made its appeal to the humble folk in the vici rather than to the personnel of the army.

80. The Parish Church, Chester-le-Street. (EE., VII, 986). Right-hand side of a building inscription, 2 ft. high and 18 in. wide; the lettering, except in line 7, is

? in. high, set within a moulded border flanked by the pelta ornament.

[.....]EQQ/[....////]//////[.....]ERRIT(orium)Q(ue)/
[....AQVAM]NDVXIT/[.....]OLO·IN·/[.....]DIANI·
LEG(ati)·/[AVG(usti)·PR(o)·PR(aetore)·SABIN(o)·II·ET·
A]VLLIN(o)·C(on)S(ulibus)

Found near the church in 1879 (AJ., xxxvii, p.153; AA., 2, ix, pp.173-9).

So much of the text appears to have been lost (cf. line 7) that it is impossible to undertake a complete reading. The inscription, however, evidently commemorates the construction of an aqueduct by a cavalry garrison, (numerus equitum on the analogy of EE., III, 86). occupying Chester-le-Street in the year 216 A.D. The name of the regiment has been lost, but it apparently bore the title Antoniniana which was subsequently erased from the stone, possibly owing to the unpopularity of Elagabalus, in whose reign the title was retained.

As Haverfield pointed out, there seems to be a reference to the territorium of the garrison. This term, not infrequently used as defining the limits of pasturage of a legion, seems to be replaced by the synonym prata in the case of an auxiliary unit (cf. AE., 1935, p.9, no.13), but there is no reason why the terms should not be interchangeable.

The legate's name is unknown.

81. The Black Gate Museum, Newcastle. (BG Cat., 62).
Small altar, 9½ in. by 7½ in.

DAEAB[M]/S VITIR/IBVS/ VITALIS/[V(otum) S(olvit)
L(ibens)] M(erito)

" To the Deae Vitires, Vitalis pays a vow."

82. The Black Gate Museum, Newcastle. (BG Cat., 148).
Stone resembling the centurial kind; 18½ in. by 8 in. In an ansate panel are the first four letters of an incomplete inscription.

NEMI

83. Sunderland Museum. Tile stamp.

ABOACI

Found near the Secondary School in 1931. The reading is uncertain.

South Shields.

84. Ashmolean Museum, Oxford. (CIL., 456; LS., 537).
Altar of buff freestone, 50 in. by 25 in. Patera and praefericulum on the right side, cultur and securis on the left; on the back is a vase of crater shape.

CONSERVATO/RIB(us)·PRO SALV(te)/ IMP(eratoris)·
C(aesaris) M(arci) AVRĒL(ii)/ ANTONINI/ AVG(usti)
BRIT(annici) MAX(imi)/[ET IMP(eratoris) C(aesaris)
P(ublii) SE/[(ptimii) GETAE AVG(usti)]/.....
..RĒNS/ OB REDITV(m)/ V(otum) S(olvit)

" Dedicated to the Preservers, for the safety of the Emperor Marcus Aurelius Antoninus, Britannicus Maximus, and of the Emperor Publius Septimius Geta, by .....rens, for their safe return, in fulfillment of a vow."

Lister. Philos.Trans., 1672, xiii, p.70, pl. i.

The above reading, improving upon those of the Corpus and Lapidarium, is given by Collingwood in a paper devoted to this inscription(AA., 3, xx, pp.55-62).

It is pointed out that the altar is a dedication for the welfare of Caracalla and Geta on their return voyage from Britain to Gaul; that it must, therefore, have been set up between 211 and 212 A.D.; and that the name of Geta has been erased after his death. The probablity is, moreover, that the two emperors embarked from South Shields: " a new point.... in the history of Tyneside shipping."

85. Lost. (CIL., 497). Fragment of a tombstone.

[D(is)] M(anibus)

" In memory of. ....."

Horsley, p.287, and p.192, N.54, iii.

86. South Shields Museum. (EE., III, 97). Sandstone slab, 14 in. by 8 in.

]OCVLVS PP

Found in 1876. There seems to be no foundation for the subsequent line V S L M, shown on the woodcut accompanying Bruce's paper (AA., 2, x, p.248).

87. South Shields Museum. (EE., III, 98). Centurial stone, 14 in. by 7 in.

ↄ V.....

" The century of V..... built this."

Found in 1876 (AA., 2, x, p.247).

88. South Shields Museum. (EE., III, 122 a; ibid., IV, p.207). Tiles.

COH(ors) V̄ G(allorum)

" The fifth cohort of Gauls made this."

cf. no.105.

89. South Shields Museum. (EE., III, 122 b.). Fragment, 5 in. by 6 in.

....]A/[.....]C

AA., 2, x, p.247.

90. South Shields Museum. (EE., IV, 678). Upper part of a tombstone, 29 in. by 19 in.

D(is) M(anibus)/ IVLI[

" In memory of Julius....."

Found in 1876 near the end of Bath Street with "several tombs" (EE., loc.cit.). cf. Hooppell. Nat. Hist. Trans.N.and D., vii, p.38.

91. South Shields Museum. (EE., IV, 679). On a fragment of sandstone:

SENILIS

AA., 2, x, p.248.

92. South Shields Museum. (EE., IV, 718 a.). Tombstone, 4 ft. by 2 ft. 6 in. The deceased is represented, sitting on a wicker-work chair in a recess bordered on either side by square pillars, and surmounted by an arch and pediment founded on secondary capitals. At

her feet are a casket with lock and crescent ornament, and a work-box (Fig. 30). The inscription is contained in a rectangular panel at the base of the stone.

D(is) M(anibus)·REGINA·LIBERTA·ET·CONIVGI /
BARATES·PALMYRENVS·NATIONE·/ CATVALLAVNA·
AN(nis)·XXX·

Below, in Hebrew: " Regina wife of Barates, alas! "

" In memory of Regina of the Catuallaunian tribe, a freed-woman, and the wife of Barates a Palmyrene. She lived thirty years."

Found in 1878 a little to the south of Bath Street, and west of Baring Street (AA., 2, x, p.239; AJ., xxxvi, pp.157-9).

The artistic merits of the work have been discussed by Haverfield (JRS., ii, pp.144-7).

Barates is described as a vexillarius on his tombstone found at Corbridge in 1911 (AA., 3, viii, p. 188), and Haverfield interpreted this as 'standard bearer', inferring that Barates had been in active service at South Shields and subsequently retired to Corbridge. It is now pointed out that the term is not a military one, but describes rather a 'dealer in ensigns' (AA., 4, xii, p.220).

The tombstones of both Barates and Regina are to be ascribed to the third century.

93. South Shields Museum. (EE., VII, 998). Altar, 27 in. by 14 in. Elementary rolls and mouldings are suggested by light grooving in the stonework; the lettering is

is uneven though the spacing good.

D(eo)·ESCVLAP(io)·/ P(ublius)·VIBOLEIVS / SECVNDVS / ARAM / D(ono)·D(edit)

" Publius Vibcleius Secundus set up this altar to Aesculapius."

Found within the fort in 1885 (PSAN., 2,ii, p.112).

For the worship of Aesculapius cf. no.16.

The omission of the initial A is rustic, and not uncommon. Haverfield and Hübner concurred in assigning the inscription to the second century.

94. The Black Gate Museum, Newcastle. (EE., VII, 999; BG Cat. 34). Altar, 30 in. by 12 in. On the left side are the patera and praefericulum; the right is defaced.

MART(i) ALA(tori/)/ C(aius) VINICIVS/ CELSV[S/
PRO SE ET [SVI]/ V(otum) S(olvit) L(ibens) M(erito)

" To Mars Alator, Gaius Vinicius Celsus pays a vow for himself and his family."

Found in Cockburn Street, a short distance west of the fort in 1887 (PSAN., 2, iii, p.41).

For the dedication cf. CIL., 85.

95. The Black Gate Museum, Newcastle. (EE., 1000 a; BG Cat., 70). Part of a base or frieze, 29 in. by 14 in.

[ ]SANCTE ET NVMIN[ ]/[ ]DOMITIVS
EPICTET[VS]/[ ]COMMILITONIBVS TEMPLVM[ ]

" To the holy goddess..... and the deities of the Emperors, Domitius Epictetus..... with his fellow-

soldiers, built this temple."

Found within the fort in 1880 (AA., 2, x, pp.244-5).

Collingwood suggests that the emperors referred to may be Marcus Aurelius and Commodus " as the lettering seems to belong to the late second century." (BG Cat.).

96. South Shields Museum. (EE., VII, 1001 a). Sepulchral slab, 1 ft. 10 in. square.

D(is)·M(anibus)·S(acrum)/ AV[····]DVS/ VIX[IT A]NNO[S]
VI[III]MENSES VIIII/ L.ARRVNTIVS·SAL/VIANVS·FILIO/
B·PIISIMO·

" Lucius Arruntius Salvianus erected this stone in memory of his dutiful son Au....ius, aged nine years nine months."

Found in the Roman cemetery, 200-300 yards south-west of the fort in 1881 (AA., 2, x, p.244).

In the last line PIISIMO is clearly preceded by the letter B and a leaf stop. Bruce, rightly perhaps, restored b(ene) m(erenti) piisimo, but the M must, in this case, have been omitted in error.

The spacing demands a longer name for the deceased than Augendus, suggested by Hübner.

97. South Shields Museum. (EE., VII, 1002 a). Tombstone, 3 ft. 4 in. high, 1 ft. 11 in. wide. The deceased is shown reclining on a couch , beneath which are a diminutive attendant and a two-handled vessel. This central panel-employing the well-known funeral banquet scene-is flanked by square-shaped fluted columns rising to a triangular pediment, in the centre of which is a lion's head with

ringed mouth. Small medallion busts, popular in Roman art, occupy the upper corners, and the conventional floral device behind the reclining figure should also be noted (Fig.32). The inscription is set within a rectangular panel at the base of the stone.

D(is) M(anibus) VICTORIS·MAVRONE MAVRVM/ [A]NNORVM·
XX·LIBERTVS·NVMERIANI/ [ala](a)E PRIS ALA(e)·I·ASTVRVM·
QVI·PIANTISSIME·PR[OSE]QVTVS·EST

" In memory of Victor, aged twenty, a Moor and freedman of Numerianus, trooper in the first Asturian ala, who affectionately followed him to the grave-side."

The pediment was found in 1882 in Cleveland Street, which traverses the site of the Roman cemetary; the rest of the stone at the east end of the same street in 1885 (AA., 2, x, pp.311-318).

The text of the inscription, like that of no.92, embodies several grammatical errors, but the reading is straightforward. The ala I Asturum was stationed at Benwell in the third century (Birley. JRS., xxii, p.56). Prosequtus est is uncommon, but one may compare a similar use of the phrase on an epitaph from Urbisaglia, in Central Italy (CIL., i, 1428).

98. South Shields Museum. (EE., VII, 1003). Fragment; letters 4 in. high.

C[H] V GAL[

Found within the fort in 1880 (AA., 2,x, p.246).

cf. no.105.

99. South Shields Museum. (EE., VII, 1004). Building stone.

EMILIV

Found within the fort in 1880 (AJ., xxxviii, p.280)

The reading is uncertain; Watkin suggested (a)emiliu(s).

100. South Shields Museum. (EE., VII, 1005). Building stone 2 ft. square by 7 in. deep. On one edge, within an ansate panel, is the inscription:

LEG(io) VI

" The sixth legion built this."

Found within the camp in 1883 (AA., 2, x, p.248).

101. South Shields Museum. (EE., VII, 1006). Fragment of a centurial stone.

Ↄ A

" The century of A..... built this."

102. South Shields Museum. (EE., VII, 1122 b). Tile.

LE(gio)·VI·V(ictrix)

" The sixth legion made this."

Found within the fort in 1883 (AJ., xli, p.176).

103. South Shields Museum. (EE., IX, 1138). Altar, 32 in. by 16 in.

DEAE·BRI/GANTIAE·/ SACRVM·/ CONGENNO/CVS·

V(otum)· S(olvit)·L(ibens)·M(erito)

"Dedicated to the goddess Brigantia by Congennocus, in payment of a vow".

Found in 1895 about 100 yards south of the south-west angle of the fort (PSAN., 2, vii, pp.44-6).

Elsewhere dedications to Brigantia have been found at Greetland (CIL., 200), Longwood (EE., VII, 920), Woodnook, near Castleford (EE., IX, 1120), and Adel, near Leeds (CIL., 203), all in the heart of the Brigantian country, and at Corbridge (EE., IX, 1138), Castlesteads (CIL., 875), and Birrens (CIL., 1062). The South Shields altar belongs to the latter group, all of which occur on or near the Hadrianic frontier; it has been suggested that these represent the adoption of the native cult by the army in the late second or early third century, but the dedication in this instance would seem to have been made by a civilian.

There is, however, no reason to suppose that any connection exists between the distribution of this class of inscription and the limits of Brigantian territory (AA., 4, vii, p.172).

104. South Shields Museum. (EE., IX, 1139). Upper portion of an altar, 23 in. by 15 in.

IVLIVS VERAX ↄ LEG(ionis) VI

" Julius Verax centurion of the sixth legion..."

Found in Vespasian Avenue (south of the fort) in 1897 (AA., 2, xix, p.273).

Haverfield suggested that the stone was a dedication, the dedicator's name preceding that of the deity in the manner of CIL., 36 and 398.

105. South Shields Museum. (EE., IX, 1140). Building inscription, 4 ft. 8 in. by 3 ft. 2 in.

IMP(erator) CAES(ar) DIVI SEVERI/ NEPOS DIVI MAGNI ANTONINI FIL(io)/ M(arcus) AVREL(ius) SEVERVS [ALEXANDER]/ PIVS FELIX AVG(ustus) PONTIF(ex) MAX(imus)/ TRIB(unicia) POT(estate) P(ater) P(atriae) CO(n)S(ul) AQVAM/ VSIBVS MIL(itum) COH(ortis) V GALLO(rum) IN/DVXIT CVRANTE MARIO VALERIANO/ LEG(ato) EIVS PR(o) PR(aetore)

" The Emperor Marcus Aurelius Severus Alexander, the Good, the Fortunate, Son of the Divine Caracalla, Grandson of the Divine Severus, Pontifex Maximus, holder of the Tribunician Power, Father of his Country and Consul, erected an aqueduct for the use of the fifth cohort of Gauls, through the agency of his legate Marius Valerianus."

Found within the fort in 1893.

Haverfield has devoted a paper to this inscription (AA., 2, xvi, pp.157-161), and it is only necessary to emphasise the following points: (1) the tablet is dated to 222 A.D. by the titulature, as well as by the name of the governor who is known to have been in Britain from 221-222 A.D. (CIL., 585 and 965); (2) the erasure of Alexander is paralleled elsewhere (Dessau, 479, 480, 484 etc.); (3) the fifth cohort of Gauls was in existence as early as Vespasian's reign, but does not seem to have come to Britain until the time of Hadrian. It is mentioned in the diplomas for 122 and 135 A.D., and appears from an inscription to have been stationed at Cramond, near Edinburgh, probably under Pius (CIL., 1083). For other

records of the regiment at South Shields cf. nos. 88, 98, and 107; (4) the omission of the name of any prefect or inferior may imply the immediate supervision of the governor.

106. (CIL., 498 a-b; LS., 366-9). Two fragments, probably parts of a single slab: (a) 1 ft. 1½ in by 1 ft. 9 in., is in the possession of the Society of Antiquaries of London; (b) 1 ft. 11 in. square, is in the Black Gate Museum, Newcastle.

(a) DIFFVSI[ ]/ PROVINC[ ]/ BRITANNIA·
AD·[ ]/ VIRVMQVE[ ]/ EXERCITVS[ ]/

(b) OMNIVM·FID[EM]/ HADR[IANVS]/ A·
NECESSITATE[ ]/ VATIS[ ]/ [two more lines]

Both fragments were found in 1782, built into the Saxon Church at Jarrow (Brand. Newcastle, II, pp.63, 590).

The text, in narrative form, can only be restored in general outline (BG Cat., p.77). It seems to have recorded an address by Hadrian to the troops on the occasion of his visit to Britain in 122 A.D., praising their loyalty, and referring to the frontier barrier, constructed a necessitate rather than through want of valour. As Richmond has suggested, the natural site for this tablet would be on the Lawe at South Shields (AA., 4, xi, p.99).

107. South Shields Museum, and the Black Gate Museum, Newcastle. (EE., III, 202; IV, 706). Lead seals.

A list of these seals, thirty in number, has been compiled by Richmond (AA., 4, xi, pp.101-2). Half of them bear the heads of Severus, Caracalla, and Geta, and the superscription AVGG, while the majority of the rest have the legend CV̄G or CVG, the abbreviation for the cohors quinta Gallorum. For the historical importance of these seals cf. Chapter X.

108. The Black Gate Museum, Newcastle. (EE., VII, 1102; BG Cat., 251). Bronze patera, 6 in. in diameter, with inscription engraved round the central boss.

APOLLINI ANEXTLOMARO M A SAB

" Marcus Aurelius Sabinus (or some such name) dedicates this to Apollo Anextiomarus."

Found on Herd Sands (AA., 2, xv, pp.104-5; PSAN., 2, iii, p.174; ibid., iv, pp.272-3; ibid., v, pp.186-7).

The second name of the god occurs on an inscription from Poitiers (PSAN., v, pp.186-7).

109. The Black Gate Museum, Newcastle. (EE., VII, 1169; BG Cat., 250). Two enamelled bronze fragments of uncertain use. Each is inscribed:

VTERE FELIX

" Good luck to the user."

Found within the fort in 1880 (AA., 2, x, pp.260-1).

For the use of the phrase elsewhere cf. AJ., xxxviii, p.280. The chief interest of these fragments is that

the lettering has been enamelled, a feature paralleled only on the Rudge Cup (AA., 4, xii, pp.325-333).

110. South Shields Museum. (EE., VII, 1176). Jet ring.

C P S

Watkin. AJ., xxxvi, p.157.

Weardale.

111. At Horsley Hall, near Stanhope. (CIL., 450; LS., 682). Altar of gritstone, 4 ft. 2 in. high, 1 ft. 9 in. wide. On the front of the capital, between the rolls, are two dolphins. The sides are plain; the lettering beautifully cut and well-spaced. Leaf stops.

DEO/ SILVANO/ AVRELIVS/ QVIRINVS/ PR(aefectus)·F(ecit)·

" To the god Silvanus, Aurelius Quirinus, prefect, erected this altar."

Found in 1869 near Eastgate-in-Weardale, three miles west of Stanhope (LS., p.358).

Quirinus was prefect of the first cohort of Lingones stationed at Lanchester under Gordian (nos. 38 and 39).

Set up, most probably, on a hunting expedition; the dedication is fittingly made to Silvanus (cf. no. 112). The quality of the lettering is exceptionally good for the third century.

112. The Rectory, Stanhope. (CIL., 451; LS., 683). Altar, 3 ft. high and 1 ft. 3 in. wide.

SILVANO INVICTO SAC(rum)/ C TETIVS VETVRIVS
MICIA/NVS PRAE(fectus) ALAE SEBOSIA/NAE OB APRVM
EXIMIAE/ FORMAE CAPTVM QVEM/MVLTI ANTECESSO/RES
EIVS PRAEDARI/ NON POTVERVNT V(oto) S(oluto)
L(ibens) P(osuit)

" Dedicated to the Unconquered Silvanus, by Gaius Tetius Veturius Micianus, prefect of the ala Sebosiana, in payment of a vow for the capture of a boar of tremendous size which many of his predecessors had hunted without success."

Found in 1747 near Stanhope (Birch. Philos. Trans. +86, xlv, 1748, p.173; GM., xix, 1749, p.449).

Apart from the intrinsic interest attached to this ' Kadir Cup ' inscription, several points are worthy of attention. In the first place it should be noted that the altar has been re-used and that the present inscription is a palimpsest. A few letters of the original text, such as the VM at the top right-hand corner of the stone (probably the termination of SACRVM), and the N at the end of line 3, are still to be observed (cf. LS., woodcut and rubbing).

The ala Sebosiana is mentioned in the diplomas for 103 and 122 A.D. The name of the regiment is abbreviated on lead seals from Bowes (EE., III, p.144), and possibly on similar seals from South Shields (ibid., IV, 706), while under Postumus it appears to have been in garrison at Lancaster (CIL., 287). The present altar

cannot be dated on internal evidence, but there is no need to suppose that the dedicator made the journey from Lancaster to Weardale. Chester-le-Street, a cavalry fort near at hand, so far lacks a garrison for the second century.

113. Two bronze paterae in the possession of Mr.W.M.Eggleston. Each bears the stamp of the maker on the handle.

(a) P.CIPI POLI

(b) POIYBI

On the bottom of the latter vessel, in punched lettering is the word LICINIANI ("the property of Licinianus").

Found, together with an uninscribed ladle, in 1913 in a peat bog in Upper Weardale (PSAN., 3, vii, pp. 9-11). The collection probably represents the kitchen-outfit of a hunting expedition.

Paterae stamped by Publius Cipius Polybius have also been found at Castle Howard, Yorkshire (Archaeologia Ag., xli, p.325 f.), and at Dowalton Loch in Wigtonshire (CIL., 1293 c).

Sunderland.

114. Lost. (CIL., 1184). Milestone.

[D(omino)] N(ostro) IMP(eratori)/ M(arco) ANT(onio)/ GORDIANO/ PIO FELICI/ AVG(usto)

" Erected by our lord the Emperor Marcus Antonius Gordianus, the Good, the Blessed."

Found on the south bank of the Wear at Ford, in the

parish of Bishopwearmouth.

Compare a similar milestone from Lanchester (no.43).

115. Lost. (EE., VII, 1159). Fragment of a silver spoon with the inscription:

[BE]NE VIVAS

" Good luck."

Found near Sunderland (AJ., xxvi, p.76).

In spite of Watkin's indecision (loc.cit), the restoration of the inscription on the analogy of the well-known motto-beakers is certain.

Forgeries.

116. Lost. (EE., IX, p.572). Inscribed stone.

COH V / VARDVL

Said to have been found in 1848 at Snow's Green, two miles south of Ebchester. Hooppell (Neasham, p.130) and Haverfield agreed that it was most probably a forgery.

117. Usnaw College, near Durham. (LS., 663). Altar, 2 ft. 6 in. by 1 ft. 1 in.

DEO/VERNO/STONO/COCID/& VIRILI/CERVSIO

The first notice of this inscription, said to have been found on the banks of the Derwent at Ebchester in 1784, is given by Mr. H. Swinburne, writing under the nom-de-plume of Porcustus in the Gentleman's Magazine (liv, 1784, p.574). In the middle of the nineteenth century it re-appeared in the Browney burn, near Lanchester (PSAN., 1, i, p.29), and Petch marks it thus on his map of Roman Durham (AA., 4, i, frontipiece).

Haverfield doubted whether it was genuine, while Hodgson knew the man who claimed to have faked the lettering under Swinburne's direction (History of Northumberland, Part 2, iii, p.178 n.).

118. Bishopwearmouth Tithe-barn. (EE., IX, 1364).

]VS / V S L M

cf. PSAN., 3, i, p.98.

119. Perished. (EE., VII, 967). Circular leaden disc.

IM D AVG / SC

Said to have been dredged from the bed of the Wear at Hylton in 1865 (AJ., xl, p.141).

Haverfield merely said that the reading was doubtful, but the fact that the disc was conveniently recalled to mind by the supporters of the Roman bridge at Hylton when the inscription itself had perished, makes one wonder whether it was not spurious.

Importations

120. The Black Gate Museum, Newcastle. (EE., IX, p.573).

Fragment of a Greek tombstone in marble, found in a stone-mason's yard at South Shields (PSAN., 2,vi, p.204). Probably brought from the Mediterranean in modern times (BG Cat., 188).

121. The Black Gate Museum, Newcastle. (CIL., 704; LS., 315; BG Cat., 59). Small altar, 9 in. by 6 in.

DEO/ VITIRI/ M(a)ENI(us)/ DADA/ V(otum) S(olvit)

L(ibens) M(erito)

Found at Carvoran, this stone was seen by Horsley in the Dean and Chapter Library at Durham (Horsley, p.233). The circumstances of its disappearance from this collection are unknown, but in 1883 it was re-discovered at Shotton, near Castle Eden (PSAN., 2, i, p.45).

INDEX TO INSCRIPTIONS

I. NOMINA

Imperatores.

Nomina Privatorum.

Cognomina.

II. NOTABILIA

Aedificia.

Dii Deae.

Honores Publici.

APPENDIX II

COINS.

A. Piercebridge.

1.	Julia Augusta:	-	
2.	Nero:	-	
3.	Otho:	den.	
*4.	Titus:	den.	a.d.75-9.
5.	Domitian:	-	
6.	Trajan:	aur.	
7-8.	do.	den.	
9.	Hadrian:	-	
10.	Antoninus Pius:	Æ.	
*11.	do.	den.	MS.154.
12.	M.Aurelius:	-	
*13.	Faustina II:	sest.	
*14.	Severus:	den.(platea).	a.d. 194-8.
*15.	do.	den.	
16.	do.	-	
*17.	Caracalla:	den.	C.424.
18-19.	Geta:	den.	
20.	do.	-	
21.	Elagabalus:	-	
22.	Julia Soaemias:	-	
*23.	Julia Mammaea:	den.	
24.	Gordian III:	ant.	
25.	Hostilian:	ant.	
26.	Valerian:	-	
27.	Gallienus:	-	
*28.	do.	ant.	c. a.d.265.
29.	Postumus:	-	
*30.	Saloninus Caesar:	ant.	MS.11.

Note. Coins whose identification is certain are marked with an asterisk. Of the rest, only the emperor and denomination (if known) are given, for obverse and reverse readings are either awanting or imperfectly recorded.

The following sources have been used: Piercebridge, pp.185-7; PSAN., 3, i, pp.124-5; Gough's Camden's Britannia III, p.359; TDNS., VII, pp.265-6, and p.277; AJ., xiv, p.78 Piercebridge Museum (nos. 11 and 30).

*31-33.	Victorinus:	ant.	
34-35.	Tetricus Snr:	-	
*36.	do.	ant.	
*37.	Claudius II:	ant.	a.d.270.
38.	do.	-	
39.	Quintillus:	-	
40.	Aurelian:	-	
41.	Carus:	-	
*42.	Diocletian:	follis.	c. a.d.300.
43.	do.	-	
*44.	Maximianus I:	follis.	
45.	Allectus:	-	
46.	Maxentius:	-	
47.	Constantinus I:	-	
48-9.	Crispus:	-	
*50.	?Late fourth century.	Æ 3.	

In addition, a hoard of circa 250 coins ranging from 254-379 a.d. was ploughed up near Piercebridge in 1921 (JRS., xi, p.202).

B. Binchester. The Hooppell Collection.

1.	Claudius:	as.	MS.66.
2-4.	Vespasian:	as.	
5.	do. (or Titus):	as.	
6.	do.	dup.	MS.475.
7.	Domitian:	as.	
8.	do.	as.	MS.333.
9.	do.	dup.	
10.	Nerva:	dup.	
11.	do.	dup.	C.62, 64, 69, or 74.
12.	Trajan:	den.	MS.147.
13.	do.	den.	MS.315.
14-15.	do.	den.	
16.	do.	as.	
17-18.	do.	sest.	
19.	? do.	as.	
20.	? do.	sest.	
21.	Hadrian:	den.	
22.	do.	as.	MS.669.
23.	do.	sest.	MS.710.
24.	do.	sest.	MS.760.
25.	do.	sest.	MS.824.
26.	do.	sest.	MS.899.
27-31.	do.	sest.	
32-34.	Antoninus Pius:	den.	
35.	do.	sest.	MS.549.
36-38.	do.	sest.	
39.	Faustina I:	as.	
40.	do.	dup.	
41.	M.Aurelius:	sest.	
42.	do.	dup.	
43.	? do.	as.	
44.	Faustina II:	dup.	
45.	Commodus:	sest.	MS.350.
46-48.	Severus:	den.	
49.	Julia Domna:	den.	
50.	Caracalla:	sest.	
51.	Severus Alexander:	den.	
52.	Julia Mammaea:	den. or ant.	
53.	Philippus II:	ant.	
54.	do.	sest.	

Note. The above list, prepared by Mr.W.Percy Hedley, F.S.A. supersedes that drawn up by Hooppell. Some 150 coins from the Hooppell collection are not recorded here as in most cases the obverses are unaecipherable. Mr. Hedley tells me that they are mostly Constans and Constantius II.

55. Valerian: ant. C.32 var.
56. do. ant.
57-58. Gallienus: ant. MS.192 a & 267.
59. Salonina: ant.
60. Victorinus: ant. C.57.
61. do. ant.
62. Tetricus Snr: ant. C.158.
63-65. do. ant.
66. Tetricus Jnr: ant.
67. Claudius II: ant. MS.34.
68. do. ant.
69. Maximianus Herculius: follis. C.180.
70. Licinius I: follis. C.163.
71. do. follis.
72. Licinius Jnr: Æ 3. C.5.
73-86. Constantinus I: Æ 3. C.24, 53.b, 254 (3), 487 (2), 521, 631, 634, 639, 640.(2), 690.
87. do. Æ 4.
88. Helena: Æ 4.
89-93. Theodora: Æ 4. C.3.
94. Crispus: Æ 3. C.22.
95-104. Constantinus II: Æ 3. C.11, 17, 38, 114, 122 (5), 123.
105. do. Æ 4. C.122.
106-9. Constans: Æ 3. C.54, 65, 176, 183.
110-18. Constantius II: Æ 3. C.57 (2), 93 (3), 96, 100, 168, 293.
119-20. do. Æ 4. C.104.
121. Magnentius: Æ 3.
122. Valens: Æ 3.
123-8. Late Fourth Century: Æ 3.
129. Constantinopolis Issue: Æ 4. C.22.
130. do. Æ 3. C.21.
131-5. Urbs Roma Issue: Æ 4. C.17.
136. do. Æ 3. C.2.
137. Barbarous. Local mint.

C. Binchester 1880-1937.

1.	Vespasian:	dup.	MS.475.	a.d.71.
2.	?Flavian:	aup.		
3.(P.1).	?Trajan:	sest.		
4.	Hadrian:	as.		
5.	Trajan or Hadrian:	sest.		
6.(P.1).	as. indeterminate.			
7.	Aelius Caesar:	den.	C.14.	a.d.137.
8.	Antoninus Pius:	den.		
9.	do.	den.	MS.232.	a.d.153-4.
10.	do.	as.	MS.686.	a.d.140-144.
11.	do.	as.	MS.934.	a.d.154-5.
12.	do.	as.		
13.(P.1).	do.	sest.	MS.546.	a.d.139.
14.(P.1).	Faustina II:	den.	MS.676.	
15.	do.	den.	MS.697.	
16.(P.1).	do.	as.		
17.	Julia Domna:	aen.		
18.	Tetricus Snr:	ant.		
19.	Carus:	gilded coin (PSAN., 4, vii, p.26).		
20.	Constantine I:	centionalis.	C.525.	a.d.317-20.
21-25.	do.	Æ 3.	C.17, 19 var., 454, 487, 530.	
26.	do.	Æ 3.		
27.	? do.	-		
28.	Theodora:	Æ 4.	c. a.d.324-6.	
29.	Constantinus II:	Æ 3.	C.122.	
30-31.	Constantine family:	Æ 3.		
32.	? do.	Æ 3.		
33-4.	Constans:	Æ 4.	C.179.	
35-6.	do.	Æ 4.		
37.	do.	Æ 3.	Barbarous mint.	
38.	do.	pecunia maiorina.	C.13.	
39.	? do.	-		
40.	Constantius II:	Æ 3.	C.104.	
41.	do.	Æ 3.		
42.	? do.	Æ 4.		
43.	Constantinopolis Issue:	Æ 3.	C.21.	
44.	Urbs Roma Issue:	Æ 3.	C.17.	
45.	Barbarous. Æ 3, after Valentinian family. Local mint.			
46.	Coin moulds (AA., 4, x, p.35).			

Note. P.1. = Pit 1. The remainder, all unstratified, have been found principally outside the fort.

Nos. 7, 17-19, 23-26, and 42, are in the possession of Mr.H.Thompson of Binchester Hall. The rest are in Mr.James McIntyre's collection.

All the coins have been identified by Mr.W.Percy Healey, F.S.A.

D. Bincnester. From the 1937 Excavations. (1)

1. Vespasian: sest. MS.394 or 443. a.d.70-71.

Obv. IMP.CAES.VESPASIAN.AVG.P.M.TR.P.P.P. [COS II or III] Laureate head right.
Rev. [ROMA] S.C. Roma standing left, holding Victory on globe and spear. (Mint: Rome).

2. Vespasian: aup. MS.740. a.d.72-73.

Obv. IMP.CAESAR.VESPASIAN.AVG.COS [IIII] Radiate head right.
Rev. [PAY] AVG S.C. Pax standing left sacrificing on altar and holding caduceus. (Mint: Lugdunum).

3. Constantinus I: Æ 3. Gloria Exercitus type. (Mint: Treves). a.d. 330-333.

4. Constans: Æ 3. C.54.

5. Constantius II: Æ 3. Gloria Exercitus type. (Mint: Lyons). a.d.330-333.

6. Constantinopolis Issue: minim. Mid- or late fourth century.

7. Illegible fragment, probably late third century.

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(1) Kinaly identified by Mr.W.Percy Hedley, F.S.A.

E. Lancnester.(1)

1.	Augustus:	as.	c. b.c.10-3. In the possession of Mr.J.Wilson of Quebec, county Durnam, who assures me tnat it was found at Lancnester fort in 1908. Mr.W.Percy Hedley refuses to allow tnis, in view of the date and practically mint condition of tne coin (but cf. nos.2-5).
2.S.	do.	Æ	2.
3.S.	do.	Æ	2.
4.S.	Tiberius:	Æ	2. (2)
5.S.	Gaius:	Æ	2.

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(1) The sources are:

E. 1937 Excavations. Identified by Mr.W.Percy Hedley, F.S.A.
F. Fawcett. PSAN., 4, ii, pp.178-9.
H. Hodgson. Poems, pp.106-9 (incorporating 6 coins recorded in tne Newcastle Chronicle, 29/xii/1787 and 19/iv/1788.
K. PSAN., 4, vii, p.123.
S. Surtees. Durnam, II, p.305 note r

(2) Imperial coins earlier than Claudius are rare in Britain, and seem to be practically confined to pre-Flavian sites. Where tney do occur on later sites tney form a very small proportion of the whole. Thus at Coventina's Well, at Carrawburgh, there are only 8 such coins out of a total of about 15,000, and Mr.G.H.Askew, formerly Hon. Keeper of Coins to tne Society of Antiquaries of Newcastle, can only supply three others from the Wall, or sites adjacent thereto (Corbridge, AA., 3, v, p.257; ibid., vi, p.263; Herd Sands, PSAN., 3, iv, p.222).

If, therefore, the Lancnester coins are to be accepted, tney form over a third of the imperial pre-Claudian coins discovered in the Wall area, and it must be remembered tnat the Lancnester coin list totals no more than 65. No attempt has been made to argue historically from this doubtful evidence; at this stage it is sufficient to record.

6.S.	Vespasian:	den.		
7.S.	do.	Æ 2.		
8.E.	do.	den.	Obv. and rev. illegible.	
9.S.	Titus:	Æ 2.		
10.F.	Trajan:	as or dup.		
11.H.	do.	-		
12.E.	do.	as.	Obv. and rev. illegible.	
13.S.	Hadrian:	sest.		
14.F.	do.	den.		
15.F.	do.	den.		
16.F.	Antoninus Pius:	den.		
17.S.	Faustina I:	sest.		
18.S.	Faustina (sic):	Æ 2.		
19.F.	M.Aurelius:	den.		
20.S.	do.	sest.		
21.S.	Pertinax:	den.		
22.F.	Severus:	den.		
23.E.	do.	den.(platea).	MS.87, 105, or 116. a.d.197.	
24.H.S.	Caracalla:	den.		
25.H.	do.	den.		
26.H.	Geta:	-		
27.F.	do.	den.		
28.H.	Elagabalus:	den.		
29.H.	do.	-		
30.H.	do.	den.		
31.S.	do.	den.		
32.F.	do.	den.		
33.E.	do.	den.	C.246.	c.220 a.d.
34.H.	Severus Alexander:	den.		
35.F.	do.	den.		
36.F.	do.	den.		
37.F.	do.	den.		
38.S.	Julia Domna:	sest.		
39.H.	Julia Maesa:	den.		
40.H.	Sallustia Orbiana:	den.		
41.S.	Gordian:	den.		
42.F.	do.	ant.		
43.F.	Valerian:	ant.		
44.S.	Gallienus:	ant.		
45.K.	do.	ant.	C.563.	
46.H.	Postumus:	ant.		
47.H.	do.	ant.		
48.H.	Victorinus:	ant.		
49.F.	do.	ant.		
50.K.	do.	ant.	C.100.	
51.K.	Quintillus:	ant.	C.17.	
52.F.	do.	ant.		
53.F.	do.	ant.		
54.F.	Diocletian:	follis.		

55.S. Maximianus: Æ 3.
56.H. Constantinus ? I: Æ.
57.E. Constantinus I: Æ 3. 330-333 a.d.
58.F. Constantinus ? I: Æ.
59.F. ao Æ.
60.F. Constans: Æ.
61.E. ao. Æ 3. c.337-340 a.d.
62.S. Constantius ? I: Æ 3.
63.H. Magnentius: Æ.
64.F. ao. Æ.
65.S. Julian: Æ 2.

F. Ebchester.

1.H.	Scribonia Family:	aen.	
2.B.	Hadrian:	sest.	MS.583.
3.H.	Antoninus Pius:	Æ.	
4.H.	do.	Æ.	
5.E.	do.	sest.	140-144 a.d.
6.E.	Faustina I:	aen.	MS.676.
7.E.	Severus:	aen.(plated).	Illegible.
8.A.	Gordian III:	aup.	
9.H.	Carausius:	ant.	MS.101.

Sources:

A. Found in a garden at Ebchester and shown to me by Mr.G.Bellam 27/x/37.
B. Found in the garden of the Chelmsford Hotel in 1934. Now in the possession of Mr. R. Bewley.
E. From the Excavations of 1936. Identified by Mr.W.Percy Headley.
H. Hooppell (Newsham, p.134).

G. Chester-le-Sreet.

1.J.	Marx Antony:	den.
2.A.	Galba:	aur.
3.K.	Otho:	den.
4.C.	Vespasian:	aur.
5-6.J.	do.	den.
7.J.	do.	Æ 2.
8.J.	Titus:	den.
9.J.	do.	Æ.
10.E.	Domitian:	as.
11.J.	do.	Æ 3?
12.E.	Trajan:	as.
13.J.	do.	den.
14-18.J.	do.	Æ.
19.B.	?Hadrian:	den.
20-22.B.	Hadrian:	sest.
23.E.	do.	aug.
24.E.	do.	as.
25.J.	do.	den.
26-31.J.	do.	Æ.
32.B.	Sabina:	den.
33.B.	do.	sest.
34.J.	do.	sest.
35.B.	Antoninus Pius:	sest.
36.B.	do.	Æ 2.
37.E.	do.	as.
38.F.	do.	sest.

Sources:

A. Surtees. Durham, II, p.136.
B. AA., 1, V, p.292. 1. iv. 292.
C. PSAN., 3, v, p.223.
D. ibid., ix, p.30.
E. ibid., pp.273-4.
F. ibid., x, p.41.
G. ibid., p.112.
H. ibid., 4, i, p.11.
I. ibid., iv, p.352.
J. Canon F.H.Jackson's collection.
K. The late Canon Blunt.

39-48.J.	Antoninus Pius:	Æ.
49.E.	Faustina I:	dup.
50-56.J.	do.	Æ.
57.J.	M.Aurelius:	sest.
58.J.	do.	den.
59.E.	Faustina II:	dup.
60.F.	? do.	Æ 1.
61.J.	Faustina II:	Æ 2.
62.J.	Verus:	Æ.
63.E.	Commodus:	den.
64-67.J.	do.	Æ.
68.J.	Caracalla:	den.
69.F.	? do.	den.
70.E.	Geta:	dup.
71-2.J.	do.	den.
73-4.E.	Elagabalus:	den.
75.J.	do.	den.
76.J.	Julia Paula:	den.
77.J.	Julia Soaemias:	den.
78.J.	Julia Maesa:	den.
79.E.	do.	sest.
80.E.	Severus Alexander:	den.
81-2.J.	do.	den.
83.J.	do.	sest.
84.B.	Julia Mammaea:	den.
85.E.	Maximin:	den.
86.B.	Gordian III:	Æ.2.
87.D.	do.	sest.
88.E.	do.	sest.
89-90.J.	Valerian:	ant?
91.J.	Gallienus:	sest.
92.J.	Postumus:	Æ 2?
93.B.	Victorinus:	ant.
94.J.	do.	ant.
95.B.	Tetricus (sic):	ant.
96-98.F.	do.	ant.
99-102.J.	Tetricus Snr:	ant.
103.E.	Tetricus Jnr:	ant.
104.J.	Quintillus:	ant.
105.J.	Probus:	ant.
106.B.	Carausius:	ant.
107-9.J.	do.	ant.
110.J.	Allectus:	ant.
111.B.	Maximianus Herculius:	follis.
112.H.	Maximian. -	
113.B.	Constantius I:	Æ 3.
114.J.	do.	Æ.
115.J.	Maximin Daia:	follis.
116.B.	Constantinus I:	Æ 3.
117.H.	do.	Æ 4.
118.H.	do.	Æ 3.
119-21.J.	do.	Æ.
122.B.	Crispus:	Æ 3.

123.G. Helena: Æ 4.
124-6.J. Urbs Roma Issue. Æ 4.
127.B. Constantinus I: Æ 3.
128-131.J. do. Æ 3.
132.B. Constans: Æ .
133-4.J. do. Æ .
135.B. Constantius II: Æ 3.
136-7.H. do. Æ 4.
138.B. Magnentius: Æ 3.
139-143.J. do. Æ .
144.H. Julian: Æ 4.
145.J. Valentinian: Æ 3?
146-7.H. do. or Valens: Æ 4.
148.I. Valens: gold solidus.
149.B. Gratian: Æ 3.
150-52.J. do. Æ .
153.J. Theodosius: Æ .
154- J. Several minims.

H. South Shields.

1.	Claudius:	aur.
2.	Nero:	aur.
3-4.	do.	den.
5-6.	Galba:	den.
7-18.	Vespasian:	den.
19.	do.	Æ 2.
20.C.	do.	den.
21.C.	do.	Æ 2.
22-26.	Titus:	den.
27-29.	Domitian:	aur.
29-33.	do.	den.
34-37.	do.	Æ 2.
38-39.	Nerva:	den.
40-41.	Trajan:	aur.
42-63.	do.	den.
64-75.	do.	sest.
76-82.	do.	Æ 2.
83-85.	Hadrian:	aur.
86.D.	do.	aur.
87-108.	do.	den.
109-113.	do.	sest.
114-16.	do.	Æ 2.
117.	Sabina:	den.
118-19.	Antoninus Pius:	aur.
120-135.	do.	den.
136-142.	do.	sest.
143-45.	do.	Æ 2.
146-151.	Faustina I:	den.
152-3.	do.	sest.
154-6.	do.	Æ 2.

Note. C = PSAN., 3, v, pp.56-7.
D = ibid., 4, iv, pp.290-1.
E = ibid., 3, i, p.258.
F = ibid., p.118.
G = ibid., p.49.
Otherwise the coins are taken from Blair's list (AA., 2, x, pp.275-310), which includes the hoard of 12 aurei and 200-300 denarii found in 1879 (ibid., 3, viii, p.219).

In addition the excavators found three pre- Imperial coins, two Greek and one Roman, and a Belgic coin of Tasciovanus (PSAN., 2, ii, p.115).

157-67.	M.Aurelius:	den.
168-70.	do.	sest.
171-2.	do.	Æ 2.
173.	Faustina II:	den.
174-5.	do.	sest.
176.	do.	Æ 2.
177.E.	do.	sest.
178.C.	L.Verus:	sest.
179-81.	Lucilla:	den.
182-8.	Commodus:	den.
189-91.	do.	sest.
192.	do.	Æ 2.
193.	Crispina:	den.
194-209.	Severus:	den.
210-13.	Julia Domna:	den.
214-222.	Caracalla:	den.
223.	Plautilla:	den.
224-30.	Geta:	den.
231.	Macrinus:	den.
232-37.	Elagabalus:	den.
238.	Aquilia Severa:	den.
239-40.	Julia Soaemias.	den.
241-54.	Severus Alexander:	den.
255.	do.	plated den. ?
256-60.	Julia Mammaea:	den.
261-2.	Maximinus:	den.
263-9.	Gordian III:	den.
270.	Philippus I:	den.
271-2.	Trajanus Decius:	den.
273.	Volusian:	den.
274.	do.	sest.
275-9.	Valerian:	den.
280-302.	Gallienus:	ant.
303-4.C.	do.	ant.
305.	Salonina:	ant.
306.	do.	ant.
307.	Saloninus Caesar:	ant.
308-18.	Postumus:	ant.
319.C.	do.	ant.
320-29.	Victorinus:	ant.
330-41.	Tetricus Snr:	ant.
342-3.C.	do.	ant.
344-53.	Tetricus Jnr:	ant.
354-76.	Claudius II:	ant.
377-8.C.	do.	ant.
379-81.	Quintillus:	ant.
382.	Aurelian:	ant.
383-4.	Tacitus:	ant.
385-88.	Probus:	ant.
389.	Diocletian:	follis.
390-99.C.	do.	folles.

400-1.	Maximianus Herculius:	folles.
402.C.	do.	follis.
403-4.	Constantius Chlorus:	folles.
405-7.	Helena:	Æ 4.
408-9.	Theodora:	Æ 4.
410.	Galerius:	follis.
411-30.	Carausius:	ant.
431-8.	Allectus:	ant.
439.	Maximinus Daia:	follis.
440C.	do.	follis.
441-3.	Licinius:	Æ 3.
444.	Constantinus I:	follis.
445-71.	do.	Æ 3.
472.C.	do.	Æ.
473-8.	Constantinopolis Issue:	Æ 4.
479-82.C.	do.	Æ 4.
483-91.	Urbs Roma Series:	Æ 4.
492-3.C.	do.	Æ 4.
494-5.	Pop.Romanus:	Æ 4.
496.	Fausta:	Æ 4.
497.C.	? do.	Æ 4.
498-511.	Crispus:	Æ 3.
512-13.C.	do.	Æ 3.
514-15.	Delmatius Caesar:	Æ 3.
516-31.	Constantinus II:	Æ 3.
532-35.C.	do.	Æ 3.
536-41.	Constans:	pecunia maiorina.
542-54.F.	do.	Æ 3.
555.C.	do.	Æ 3.
556.	do.	Æ 3.
557-8.	Constantius II:	pecunia maiorina.
559-80.	do.	Æ 3.
581.C.	do.	Æ 3.
582-3.C.	Constantine Family:	Æ 3.
584-94.	Magnentius:	pecunia maiorina.
595-7.	do.	Æ 3.
598-9.	Decentius:	pecunia maiorina.
600.	Julian:	Æ 3?
601.	do.	Æ 3?
602-6.	Valentinian:	Æ 3?
607-15.	Valens:	Æ 3?
616.C.	do.	Æ 3.
617-24.	Gratian:	Æ 3?
625.C.	Theodosius:	Æ 3.
626.	Honorius:	Æ 3?
627.	Arcadius:	Æ 3?

Blair adds: " A large number of coins of rude workmanship-minimi- of all sizes, some very small, have been found." (loc.cit., p.310).

J. Seaton Carew.

1.	Augustus:	Æ 2.
2.	Claudius:	Æ 2.
3.	Vespasian:	Æ 2.
4.	Titus:	Æ 2.
5.	Domitian:	Æ.
6-7.	Hadrian:	sest.
8.	Severus:	den.
9.	Severus Alexander:	?plated den.
10.	Gallienus:	ant.
11.	do.	ant.
12-13.	Postumus:	ant.
14.	Tetricus Jnr:	ant.
15.	Claudius II:	ant.
16.	Numerianus:	ant.
17.	Carausius:	ant.
18-19.	Theodora:	Æ 4.
20-23.	Constantinus I:	Æ 3.
24-6.	Constantine Family:	Æ 3.
27.	Constantinopolis Issue:	Æ 4.
28-9.	Urbs Roma Series:	Æ 4.
30.	Crispus:	Æ 3.
31-3.	Valentinian I:	Æ 3.
34-6.	Valens:	Æ 3.
37.	Gratian:	Æ 3.

5 or 6 minims.

Sources: AA., 1, i, p.110.
ibid., 2, x, pp.108-110.
PSAN., 2, i, p.356.

APPENDIX III

B I B L I O G R A P H Y I

Plate I, the Distribution Map of Microlithic Flint Sites in County Durham, is based on the following sources:

1. Archaeologia Aeliana, 4th ser., i, p. 25.

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4. Coupland, C. A Microlithic Flint Industry on the Durham Coast, Proc. Prehist. Soc. E. Anglia, VI (1931), iv.

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6. Elgee, F. Early Man in North-East Yorkshire, Gloucester, 1930.

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9. Proceedings of the Society of Antiquaries of Newcastle, 3rd ser., i, p. 272.

10. Raistrick, Dr. A. The Distribution of Mesolithic Sites in the North of England, Yorks. Arch. Journal, XXXI (1934), pp. 141-156.

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23. PSAN., 1-4 — Proceedings of the Society of Antiquaries of Newcastle-on-Tyne, series 1-4.

24. Trechmann, C. T. — A Supposed Implement of Quartzite from beneath the Boulder Clay of the Durham Coast, Geol. Mag., LXV (1928), p. 25.

25. — Victoria County History of Durham, I London, 1905.

APPENDIX III.

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